

The water crisis, its causes, and consequences in the Sahel Region

List of Contents

Introduction	4
1. Global Water Crisis.....	5
1.1. Overview of global water crisis	5
1.2. Causes and impacts of global water crisis	5
2. What is the Sahel region?	7
3. Water Crisis in the Sahel region	9
4. The Causes and Consequences of the Water Crisis in the Sahel Region.....	10
4.1. The impact of armed conflicts.....	10
4.2. The impact of climate change	12
4.3. Migration as a consequence.....	13
4.4. Relationship between armed conflicts, climate change, migration, and human rights	13
5. The Sahel G5	15
5.1. Background	15
5.2. Climate and development report	15
5.3. Water security and services	16
5.4. Rural water services, quality, and sanitation in the Sahel G5	17
6. The United Nations and Its Actions	17
6.1. Cross border cooperation for stability and development	18
6.2. Preventing and resolving conflicts and building peace.....	18
6.3. Promoting inclusive and equitable growth and increasing quality access to basic services	19
6.4. Enhancing natural resource management, increasing resilience to climate change, and reducing malnutrition and food insecurity.....	19
6.5. Promoting access to renewable energy.....	20
6.6. Empowering women and youth.....	20
7. The African Union and Its Actions – The 9th World Water Forum and the Dakar Declaration	21
7.1. Introduction	21
7.2. Dakar Declaration: A Blue Deal on water and sanitation security for peace and development	21
7.3. The actions of the international community.....	23
Conclusion	25
References	27

List of Figures

Figure 1: Sahel region, Africa	8
Figure 2: Death rates from unsafe water sources, 2019	10

Introduction

Nowadays, we can confidently say that clear drinking water is one of the biggest treasures and priorities in a human's life. In developed countries, people consider the possibility of one day simply running out of water that gives us life less than in some other countries, where this problem is prominent. According to the United Nations Children's Fund (henceforth UNICEF) (2020), four billion people — almost two thirds of the world's population — experience severe water scarcity for at least one month each year. Furthermore, over two billion people live in countries where water supply is inadequate. Therefore, in this study, I try to engage with the roots of the problem: what water crisis is, what it exactly means and how the situation is looking right now. Following this, my research would be focusing on a specific region where the problem is more complex, The Sahel region in Africa. Here, I try to elaborate what the Sahel region is and some basic information of this part of Africa to be able to give a more detailed picture of the situation. Then the water crisis problems will be highlighted, along with what other parts of life it affects. Here, I will specifically focus on civil wars, clash of tribes, migration, the insecurity of women and children. In connection with this, the importance of prevention actions or the lack of them done by international organizations such as the United Nations and its smaller bodies or the African Union will be investigated.

The purpose of this study is to find out what the main consequences of the water crisis are in The Sahel region in Africa and what can be done to prevent more damage happening concerning this area.

The method I will be using is secondary research, as collecting data and analyzing their content on my own from this huge of an area would be rather challenging. I plan to carry out my research in three main areas, two focusing on the water crisis globally and then in The Sahel region, then the actions of international organizations will be observed. Finally, conclusions will be drawn regarding the effects of water crisis in The Sahel as well as the actions taken by the most relevant international organizations to moderate these effects.

1. Global Water Crisis

1.1. Overview of global water crisis

It is easy to think that since 70% of earth is covered in water, we will always be rich in water. However, we must reflect on the fact that out of this only 3% of this huge number is freshwater. Meaning the water we drink, bathe in, irrigate the fields with is unimaginably rare. What's more, two thirds can be found in sources unavailable to us or frozen in glaciers. According to World Wide Fund for Nature (henceforth WWF) (2022), a total of 2.7 billion people experience water scarcity for at least one month of the year, while 1.1 billion people globally lack access to clean water. For 2.4 billion people, insufficient sanitation is an issue since it exposes them to cholera, typhoid fever, and other water-borne diseases. Every year, diarrheal diseases alone take the lives of two million people, predominantly children. Water and sanitation cannot be separated at the human level. Together, they are essential for lowering the burden of sickness on the planet and enhancing population health, educational attainment, and economic production (UN, 2019).

Numerous water systems that support vibrant ecosystems and a growing human population are under stress. As a result of pollution or drying up, rivers, lakes, and aquifers are becoming unusable. The world's wetlands have been destroyed by more than half. More water than any other source is used by agriculture, much of it is wasted due to inefficiencies. Water and weather patterns are changing because of climate change, resulting in shortages and droughts in some regions and floods in others. This issue will only worsen if consumption continues at its current pace. Two-thirds of the world's population could experience water shortages by 2025. Additionally, ecosystems all over the world will suffer more (WWF, 2022).

According to the United Nations (henceforth UN) (2019), water is essential for healthy ecosystems, socioeconomic development, food and energy production, and human existence, which is at the heart of sustainable development. As the vital link between society and the environment, water is also at the core of adaptation to climate change.

1.2. Causes and impacts of global water crisis

There are four main causes of global water crisis listed by WWF (2022) which are the following: pollution, agriculture, population growth and climate change.

As for pollution, many sources can be at fault. These include pesticides and fertilizers coming from farms, industrial waste and untreated human wastewater. Since many pollutants can filter into groundwater, we cannot consider this safe from pollution either. When it comes

to toxic substances from industrial processes, before their impacts are fully understood, they may take years to accumulate in the environment and food chain. In other cases, some impacts happen right away, like when water becomes contaminated by dangerous germs from human waste and becomes unsafe to drink or swim in (WWF, 2022).

According to the data of WWF (2022), 70% of the freshwater that is available for use in agriculture is used, but 60% of it is lost due to leaky irrigation systems, ineffective application techniques, and the growth of crops that are thirstier than the conditions in which they are cultivated. As a consequence of the wasteful water use lakes, rivers and underwater sources dry out. India, China, Australia, Spain, and the United States are just a few of the many food-producing nations that have reached or are about to surpass their water resource limits. In addition to these, agriculture is responsible for considerable freshwater pollution that are harmful to humans and other life forms because they contain fertilizers and pesticides (WWF, 2022).

The number of people on earth has more than doubled in the past 50 years, according to WWF (2022). This rapid increase has altered water habitats all over the world and led to a significant loss of biodiversity. It has also been accompanied by economic development and industrialization. 41% of the population of the world now resides in river basins that are experiencing water stress. As freshwater use is increasing at unsustainable rates, concern over water availability grows. Additionally, these newcomers require clothing, food, and housing, which puts more strain on freshwater resources due the manufacturing of goods and energy.

Last but not least, we must mention climate change. Weather and water patterns will change all over the world as humans continue to add more carbon dioxide and other greenhouse gases to the atmosphere. Floods and droughts will both increase in frequency in different regions, WWF (2022) says. In some places, glaciers and snow packs will disappear, hurting the freshwater supplies to those towns downstream. Together, these changes will result in less water being accessible for global cities, ecosystems, energy production, agriculture, and cities.

The impacts global water crisis has on our planet are at a dangerous turning point. Since 1900, wetlands all around the world have been lost by about 50 % Wetlands contain dense populations of creatures, including mammals, birds, fish, and invertebrates, and provide fertile grounds for many of these species. They are among the planet's most productive environments. The cultivation of rice, a food essential for half the world's population, is also supported by wetlands. Additionally, they offer a variety of ecosystem services to humanity, like as flood management, storm protection, water filtering, and recreation (WWF, 2022).

Another area of life that is influenced by the water crisis is damaged ecosystems. In times of water scarcity, natural landscapes frequently suffer. Formerly the fourth-largest freshwater lake in the world, the Aral Sea is located in Central Asia. According to WWF (2022), the sea has lost an area the size of Lake Michigan in just three decades. Due to the increased pollution and water use for farming and power production, it is now as salty as an ocean. The sea has receded, leaving behind contaminated land. Food is in short supply as a result of this ecological catastrophe, which has also increased infant mortality and decreased life expectancy for the local population.

Finally, we must mention the billions of people lacking water. A healthy human life requires clean freshwater, but 1.1 billion people lack access to it and 2.7 billion endure water scarcity for at least one month of the year. Two-thirds of the world's population could experience water shortages by 2025. People cannot get enough water to consume, wash, or feed crops when there is water shortage, which may result in economic loss. Additionally, poor sanitation, which affects 2.4 billion people, can result in cholera, typhoid fever, and other water-borne illnesses, including those that are fatal (WWF, 2022).

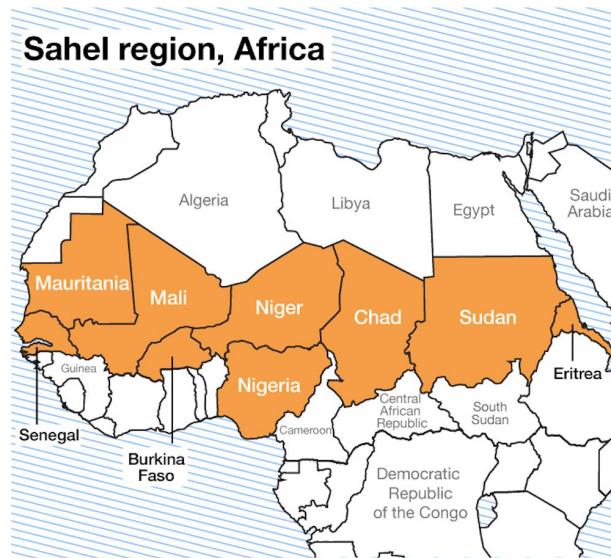
There are many regions and parts of the world that suffer from all the consequences of the water crisis, such as the Amazon, the Arctic, Madagascar, Congo Basin, Eastern Himalayas and the list could go on. One of the areas with the most complex problems is The Sahel region in Africa.

2. What is the Sahel region?

To be able to get a full understanding of the situation of the Sahel region, we must examine the area, the geography, the natural history, and a few characteristics of the country before the focus will be put on the water crisis and the consequences it has in this specific region of Africa.

Africa's Sahel region (Figure 1) is a 3,860-kilometer-long arc-shaped geographical mass that spans the length of the continent from east to west, immediately south of the Sahara Desert (Suleiman, 2017). The Sahel is seen as a region in-between the northern desert and the southern savannas. Another way to describe it is as a steppe habitat. The area has been inhabited and used by humans for a very long time, and it has contributed significantly to the growth of communities and even a massive global religion. The Sahel region served as a physical and cultural border and witnessed the expansion and advancement of numerous civilizations and ways of life. The Sahel itself, though, has been evolving since the end of the last Ice Age, or for roughly 12,000 years (Ferguson – Helmer, 2022).

Figure 1: Sahel region, Africa



Source: UNDP, 2021

Since then, there have been cycles of growth and contraction in the Sahara Desert, which in return have an impact on the Sahel. When the region saw an increase in rainfall around 10,000 years ago, settlement increasement was encouraged. A few thousand years later, as the rains in the arid regions became less frequent, people migrated south to the Sahel. The Sahara regained its full desert state some 5,000 years ago, which is likely to have influenced the emergence of early civilizations in neighboring areas (Ferguson – Helmer, 2022).

According to Suleiman (2017), the Sahel region has different geographical definitions. It typically extends from Senegal on the Atlantic coast through parts of Mauritania, Mali, Burkina Faso, Niger, Nigeria, Chad, and Sudan to Eritrea on the Red Sea coast. The Sahel is a cultural and historical border between the Middle East and sub-Saharan Africa. This indicates that it is the meeting point of indigenous and traditional civilizations from the south and Arabic Islamic, and nomadic cultures from the north.

In a time when violent criminal and political movements frequently operate beyond national borders, concerns abound over the region's huge areas, which are frequently outside the control of the state. Additionally, the Sahel region is plagued by political unrest, poverty, and natural disasters. Due to famines, religious extremism, anti-state uprisings, and trafficking in weaponry, narcotics, and people, the Sahel has recently gained international attention. These changes are the result of both national and international processes. They continue to be significant obstacles for the area in 2017, pointed out by Suleiman (2017).

3. Water Crisis in the Sahel region

With erratic rainfall and recurrent droughts, the Sahel is one of the most water stressed regions in the world. Since the region's temperature is rising 1.5 times faster than the global average, the consequences of climate change are only making these unfavorable environmental circumstances worse (Bhardwaj, 2021).

As a result, a severe drought is now occurring every other year, as observed by Ibrahim Thiaw, UN Special Advisor for the Sahel (Thiaw, 2022), as opposed to the previous frequency of every 10 years. Furthermore, sporadic rainfall downpours that wash away soil and diminish land fertility are increasing in frequency. Longer dry or wet spells generally have negative effect on the region's economies since they are not resilient enough to withstand extremely harsh climate influences.

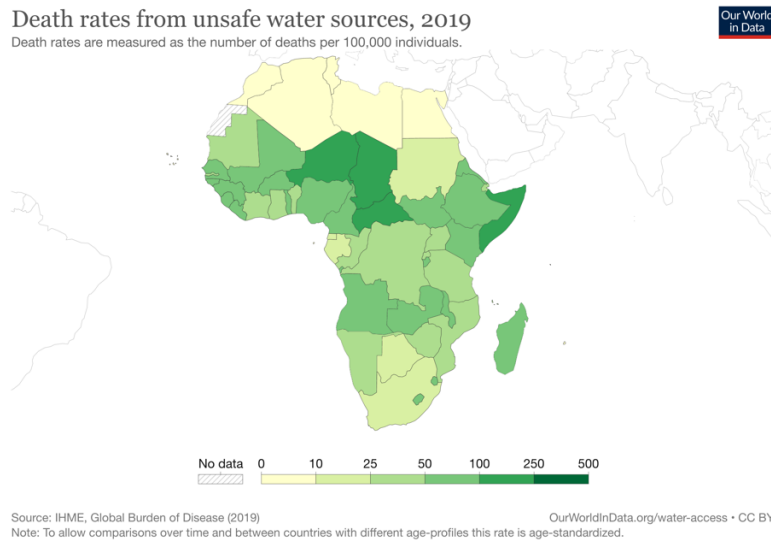
According to Bhardwaj (2021), unsuccessful developments initiatives, pollution of surface waters, water diversion for irrigation, subpar agricultural practices, lack of urban water infrastructure, degradation of wetlands and rivers, and the absence of cogent policies are some additional elements that have accelerated the degradation of water resources in the Sahel.

These unsustainable practices reveal themselves, according to the Food and Agricultural Organization (FAO) of the UN (2022) in the formation of deep gullies, of crusts that water cannot penetrate, of rock-hard layers and changing sand-dunes that drown settlements, wetlands and farms. Additionally, the conventional manner of using and supplying water from open wells is becoming unsustainable due to the decline in the surface table. Therefore, to drill boreholes that can extract drinkable water, deep drilling must be done. To avoid overusing and contaminating the groundwaters in a short amount of time, this calls for technical know-how and the tight criteria.

Figure 2 illustrates the number of deaths from unsafe water sources across Africa. It shows the number of deaths per 100,000 individuals. As it is shown, the least affected countries are Algeria, Egypt, Libya, Morocco, and Tunisia. Based on this figure, the most affected countries are almost all from the Sahel region: Burkina Faso, Chad, Niger, Nigeria, Mali, and Mauritania. The only countries heavily affected that are not in the Sahel region are the Central African Republic and Somalia. As the figure suggests, in 2019 between 250,000 and 500,000 people have died from unsafe water sources in a few countries of the Sahel region, in the rest between 100,000 and 250,000 (GBD, 2019).

Water crisis has causes and other consequences besides the high death rates from unsafe water sources, which will be discussed in the next part of the paper.

Figure 2: Death rates from unsafe water sources, 2019



Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study (GBD 2019)

4. The Causes and Consequences of the Water Crisis in the Sahel Region

Besides the natural causes of the water crisis, there are different aspects of life, such as wars or external and internal conflict, which have effect on the water crisis. Nevertheless, these could be listed as consequences among migration, or even female and child abuse.

For more than 10 years, the Sahel has been plagued by security crisis that has expanded to other parts of West Africa and threatens the lives and livelihoods of almost 80 million people who live there today (Cook, 2014).

One of the most tragic victims of the crisis is water, with many communities completely cut off from water access as a result of a mix of rising violence, diminishing resources brought on by climate change, and poor management of water sources, as Cook (2014) pointed out.

4.1. The impact of armed conflicts

At first, it is presented how armed conflicts have impacted water access in Africa. Patrick Youssef, the regional director for Africa of the International Committee of the Red Cross says that disintegration can be seen the soonest when it comes to a war or major violence. There are three options for people whose lives have been affected by the war: move outside of the country and take up refugee status, move within the country or stay in their homes with nothing

or very low incomes. The displacement puts a ginormous weight on communities where the resources are already limited, and places pressure on infrastructure as well, since they are growing rapidly in numbers (Youssef, 2021 cited by Cook, 2021).

With 55 million internally displaced people¹ in 2021, they have exceeded the previous record and the number is only rising. The source of the problem is that it is rather difficult to get water supplies to those who need them in locations like Tigray and throughout Ethiopia, Mozambique, and Burkina Faso. In addition to the displacement, a lack of infrastructure investment can be observed, which results in a significant number of individuals not having access to water. 400 million people only in sub-Saharan Africa struggle to get access to clean, pure water, according to Youssef (2021 cited by Cook, 2021).

Those who actually need access to water lose it when war or violence seizes control of broad tracts of territory, whether under state control or non-state armed organizations. In Africa, the land used for farming, fishing, or transhumance (the seasonal movement of cattle from one grazing area to another) is taken from the three main economic communities of herders, farmers, and fishers. People in the Sahel, for instance, are often extending their temporary activities as the land they have access to changes in addition to changing their trajectory. The social cost of it will be felt by families, communities, and traditions. Thus, it is clear that the absence of clean water resources in these locations has an impact on even the social fabric. (Youssef, 2021 cited by Cook, 2021).

The direct connection between a lack of water access and protection difficulties for the most vulnerable categories of populations, such as women and children, is one aspect that frequently goes ignored. They are often the ones in charge of obtaining water and they are compelled to enter hazardous areas where they are occasionally the targets of rape or other sexual assault. This is most likely the result of the fact that they must travel great distances in risky conditions in order to acquire waters inside their own villages. People will still travel up to 10 kilometers in September 2021 to obtain two barrels of water, as Youssef (2021 cited by Cook, 2021) stated.

Youssef (2021 cited by Cook, 2021) also knows that there is not enough evidence to say that water directly causes violent conflicts, if not entirely. However, armed conflict undermines traditional justice in communities, leaving no room for intercommunity mediation. Traditional leaders frequently act as mediators between communities that struggle to equally distribute

¹ Internally displaced persons are persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border (UN, 1998).

water resources in accordance with people's demands. When this breaks down, it increases local tensions and instability, which feeds into more violence and the dynamics of violence, which are frequently regrettably permanent (Youssef, 2021 cited by Cook, 2021).

Again, due to the widespread displacement in nations like the Democratic Republic of Congo (DRC) and Burkina Faso, communities are under increasing strain, some of which are rejecting the displaced, which can result in local violence and unresolvable disputes. We can only imagine the significant impact that a community's lack of water supplies will have on social cohesiveness after having coexisted peacefully for hundreds of years (Youssef, 2021 cited by Cook, 2021).

4.2. The impact of climate change

Access to water is made even more difficult by environmental threats and climate change due to the scarcity that is brought on by rising temperatures, says Youssef (2021, Cited by Cook, 2021). The Sahel, the Sahara due to desertification, and the Horn of Africa, where a severe locust infestation has severely impacted all facets of agriculture, are the regions where this phenomenon can be observed most frequently. That is another major worry because their effects just make people's current vulnerabilities and challenges worse.

Although there isn't a direct casual correlation, some of the animals that people used to rely on are disappearing or can no longer withstand the harsh weather conditions as a result of the ecosystem degrading more and more. Because they take place within communities, confrontations between farmers and herders in some parts of Africa probably result in more injuries and fatalities than genuine armed battles, according to Youssef (2021 cited by Cook 2021). Unimaginable number of people have been slaughtered in this way in Burkina Faso and Mali.

Since the 1970s droughts, The Sahel has faced severe poverty. Environmental degradation and political unrest have made the situation even worse. The Sahel is experiencing a 1.5 times greater increase in the temperature than the rest of the world. The region experiences unpredictable rainfall, and rainy seasons are getting shorter while floods are happening more frequently. Agricultural productivity, the amount of pastureland that is available and the size of significant water bodies are all being affected by drought and unpredictable weather and climate conditions. Around 65% of the cultivable land in the Sahel is thought to be degraded (UN, 2021).

4.3. Migration as a consequence

Migration, both inside countries and beyond borders, has long been a feature of Sahelian culture. However, despite the fact that migration is always multi-casual, climate change is influencing migratory patterns in a variety of ways, including increasing people's propensity to move and the circumstances under which they will do so. According to studies (e.g. Nawrotzi – Bakhtsiyarava, 2016), for instance, droughts may make it harder for rural Sahelians to use migration as coping mechanism because they may lack the means needed to shift (UN, 2022).

During the agricultural off season, a large number of agriculturalists in nations like Niger and Burkina Faso that are impacted by changes in rainfall travel in search of employment or alternate means of income. Rural residents in nations like Burkina Faso and Senegal, especially in border villages, often migrate to neighboring nations as a means of coping with climate change. The COVID-19 epidemic has restricted access to these migration routes by border closures and other movement restrictions, despite the fact that the demand to migrate in response to the Sahel's declining resource availability is expanding (UN, 2022).

According to the UN (2022), however, extended dry seasons are putting more strain on water and land, forcing them to change their patterns and move further south in search of more fertile pastures. Similar to agricultural regions, some coastal regions with falling fish stocks as a result of a combination of climate change, overfishing and other environmental, economic and socio-political issues see a migration of fishermen to regions with stronger stocks. The Sahel region has unique human rights challenges as a result of all these and other migration-related changes brought on by climate change. Addressing the negative effects of climate change on human rights in the area requires an understanding of these difficulties.

4.4. Relationship between armed conflicts, climate change, migration, and human rights

The negative effect of climate change, especially the slow-onset catastrophes like desertification and drought that force people to flee their homes, can cause conflict or make it worse. Although not direct causes of refugee movements, climate change, environmental degradation, and natural catastrophes are increasingly interacting with the factors that motivate refugee migrations, as acknowledged in the Global Compact on Refugees (UN, 2018a). In a similar line, the UN Support Plan for the Sahel (2018) has highlighted how the combination of climate change and the population boom can worsen the security and peace situation and even force people from their homes in peril. The capacity of governments to respond to the negative

effects of climate change, including slow-onset and sudden-onset disasters, can be hampered by ongoing armed conflicts (OHCHR, 2021).

Armed conflicts in the Sahel have a long history and many causes, but they can be made worse by the changing climate, which may then force people to migrate. As a result of rising resource rivalry, which has altered patterns of migration and livelihoods, The Office of the United Nations High Commissioner for Human Rights (henceforth OHCHR) has recognized the possibility for higher levels of armed conflict in the Sahel (OHCHR, 2021).

For instance, violent conflicts are a prominent factor in migration to, from, and within Benue State in Nigeria, where people have felt the effects of climate change. These conflicts, which primarily involve farmers and herders that are brought on by a lack of available land resources with climate change as a distant cause, are made worse by ethnic and religious diversity, extreme poverty, and a lack of access to economic and social rights, according to OHCHR (2021). Additionally, according to research (IOM, 2021), about 178 000 individuals moved in 2019 as a result of disputes between Fulani pastoralists and Hausa farmers in Nigeria's northwestern states.

Some academics (e.g. Brunk – Gronenborn, 2004 cited by Freeman, 2007) have hypothesized possible links between the growth of armed groups like Boko Haram in the Sahel and climate change effects, namely the Sahelian region's decreasing Lake Chad. They contend that the potential of recruitment by such groups is increased by the lack of viable alternative livelihoods and anger over government inactivity in the face of environmental destruction. As formerly nomadic populations settle in traditional farming zones and all people diversify their livelihoods, resource rivalry grows, restricted mobility can also lead to violence (OHCHR, 2021).

Approaches based on human rights can lessen conflict brought on by climate change. The resolve disputes between farmers and herders in the Sahel, participatory approaches that prioritize trust, peacebuilding, and shared ownership of interventions are essential. Conflicts over resources have been reduced, for instance, in Niger and Burkina Faso, where local conventions regulating farmers' and herders' rights and obligations were developed with their input. Local conflict management groups have also aided in the peaceful allocation of limited resources in the face of climate change in Burkina Faso and Guinea (OHCHR, 2021).

5. The Sahel G5

5.1. Background

In response to the growth of armed and violent extremist groups and the deteriorating security situation in the area, the G5 Sahel Joint Force was formed in 2017. By combining and stepping up their national efforts to combat security threats, the G5 Sahel countries' heads of state – Burkina Faso, Chad, Mali, Mauritania, and Niger – launched this initiative to improve the safety and security of their citizens and create a favorable environment for the socioeconomic development of the region (OHCHR, 2017).

5.2. Climate and development report

The report I will be examining in the next part of the essay was released in 2022 June by the World Bank. The Burkina Faso, Chad, Mali, Mauritania, and Niger countries are included in the G5 Sahel Countries Climate and Development Report (CCDR). An individual macroeconomic and poverty analysis has been conducted for each of the G5 nations (World Bank Group, 2022).

Among the least developed nations in the world are Burkina Faso, Chad, Mali, Mauritania, and Niger (together known as the “G5”). As the region continues its shaky recovery from the COVID-19 pandemic's economic and social effects, it is currently dealing with a number of crises and difficulties, including increased political instability, rising insecurity, and a growing food security crisis that is currently being made worse by rising global energy and food prices as a result of the conflict in Ukraine. The region is experiencing significant output losses and a decline in the accumulation of human capital, and potentially disastrous ecological and economic tipping points as a result of the increasingly frequent and severe climate shocks (World Bank Group, 2022).

The report conveys three important messages, first, the G5 countries have enormous prospects for resilient and low-carbon growth. Second, the most effective way to adapt to climate change and the best plan for achieving development objectives in a way that is sustainable and beneficial is through rapid, resilient, and inclusive growth. Third, the price of inaction is much higher than the price of taking action (World Bank Group, 2022).

In five distinct sectors or areas – institutions, climate financing and risk mitigation, energy, landscapes, and cities – the report offers comprehensive recommendations and policy prescriptions for achieving development and adaptation to goals. Not every industry or problem in these nations is attempted to be covered by the five subjects. Instead, they were chosen

because each of these areas is urgently in need of investment and reforms, has the ability to quickly stimulate sustainable economic growth over the next five years, and is now extremely exposed to and vulnerable to the effects of climate change (World Bank Group, 2022).

5.3. Water security and services

For the upcoming three years, the following have been suggested by the CCDR for the security of rural water. Firstly, the management of water resources must be improved, and the information and support for resilient water storage infrastructure planning needs developing. By enhancing water governance and formalizing a framework for integrated water resources management, water production may be increased (World Bank Group, 2022).

By 2030, three main policy recommendations have been suggested. Firstly, the numerous existing hydraulic structures, such as dams, hydro-agricultural infrastructure, and water delivery system should be evaluated and repaired if necessary. Secondly, to encourage quick economic growth and sustainable development, a multi-sectoral approach to watershed planning that includes all interested parties should be used. Lastly, the diversification and strengthening of all possible water sources must be focused on. This can be done by leveraging both ground and surface water, or constructing large- and medium-sized, multipurpose storage facilities in addition to collecting and storing rainwater locally. Another recommendation is investing in environmentally friendly strategies to control flows and lessen flooding, such as restoring forests and wetland areas. Last but not least, by using integrated water resources management plans, water extraction and use are coordinated (World Bank Group, 2022).

The CCDR (2022) suggests the following steps for rural water services, quality, and sanitation during the following three years. In order to outstandingly increase coverage – exceptionally in high climate risk areas – water, sanitation and hygiene (WASH) investments should be objectively expanded. Then, assistance for sector institutions in creating action plans to implement the essential regulatory, institutional, and policy reforms for increased sustainability has been mentioned as another solution. In order to provide long-term resilience to threats connected to climate change and other factors, assistance for service providers in creating risk management and emergency response plans is needed. Another point is increased water quality monitoring can help identify the growing risks that waterborne illness, droughts, and floods pose to water sources. Lastly, finance sector diagnostics should be given for each country that pinpoint the most important barriers to better sector performance and climatic resilience (World Bank Group, 2022).

In the case of water services, the following policy recommendations for actions by 2030 has been made. First, the support of health and educational institutions in developing the skills of present and future water and sanitation professionals in light of climate change, including the creation of young professionals' programs to encourage the engagement of women and young people. Moreover, by using private water kiosks and vendors, for example, and by avoiding depleting or contaminating water supplies, safe and sustainable water and sanitation services can be provided (World Bank Group, 2022).

5.4. Rural water services, quality, and sanitation in the Sahel G5

More than 37.5 million people, or 43.5 percent of the population, do not have access to basic drinking water services in the G5 Sahel, and 74.6 percent do not have access to basic sanitation facilities. These percentages increase to 56.2 percent and 84.8 percent, respectively, in rural areas. Open defecation is practiced by about 60 percent of rural residents in the G5, increasing the danger of water contamination as floods are made worse by climate change. The Sahelian people will be more resilient to water scarcity if they have greater access to safe and sustainable WASH services (World Bank Group, 2022).

Additionally, it will lessen the risks posed by waterborne illnesses like cholera, schistosomiasis, and other diarrheal illnesses, the incidences of which have been proven to rise in response to increased rainfall and warmth. While the ability of water to dilute pollutants diminishes when water availability falls, higher temperatures increase the concentration of bacteria and algae in water supplies (World Bank Group, 2022).

The amount of money needed in total, as well as the high rate of population increase in the area, to attain universal access to water supply and sanitation services is significant. Along with infrastructure investment, the World Bank should work to design and implement crucial institutional, policy, and regulatory reforms necessary for increased sector performance, operational effectiveness, and cost recovery. The objectives are to strengthen resilience to threats associated to climate change, make the industry more appealing to private finance, and make the most of the region's limited water supplies (World Bank Group, 2022).

6. The United Nations and Its Actions

The United Nations, henceforth the UN, has worked out a Support Plan for the Sahel countries in 2018. The UN Support Plan for the Sahel, which focuses on Burkina Faso, Cameroon, Chad, The Gambia, Guinea, Mali, Mauritania, Niger, Nigeria, and Senegal, has as its overriding objective stepping up efforts to hasten shared prosperity and long-lasting peace in the region.

The goal Support Plan, which covers the years 2018 through 2030, aims at assisting in putting the African Union Agenda 2063 and the 2030 Agenda for Sustainable Development (UN, 2015d) into action (UN, 2018b).

The six priority areas that are the base of the support plan are the following: cross border cooperation, prevention and sustaining peace, inclusive growth, climate action, renewable energy, women, and youth empowerment. The next part of the essay will discuss these in detail (UN, 2018b).

6.1. Cross border cooperation for stability and development

By bolstering local, national, and regional authorities' and actors' capacities to improve governance, ensure the delivery of social services and fundamental rights, restore and improve security, stability, and resilience in cross-border regions, the goal in this case has been to foster human security and resilience to shocks and threats in the Sahel (UN, 2018b).

In order to make risk-informed policy decisions, limit the effects of catastrophes and hazards, and plan for recovery, the first idea is to provide governments and regional bodies with information systems and capacities. Second, the encouragement of the Lake Chad Basin Commission Member States' continuous initiatives to successfully implement their Stabilization Strategy and Program, including the creation of a plan for Lake Chad recharge. The strengthening of national and regional institutions, including the G5 Sahel (Burkina Faso, Chad, Niger, Mali, and Mauritania), as well as local governance, accountability and social cohesion and participation of cross-border communities in development, is another major objective. This goal is to support effective governance at cross-border regions for improving security, stability and resilience. Facilitating the implementation of a safe, regular and responsible migration and movement program, particularly through implementing well-planned and managed migration policies in the 10 UNISS countries is another crucial element. The support for Member States to repair degraded land, especially by putting the Great Green Wall into place, is the last point (UN, 2018b).

6.2. Preventing and resolving conflicts and building peace

Building peace and addressing the underlying causes of conflicts and violent extremism are the goals in this situation. To achieve these goals, concrete results in access to justice, decent governance, social cohesion, and reaction to threats to human security must all be achieved (UN, 2018b).

In order to prevent conflict, violence, combat, terrorism, crime, and violent extremism, among other things through education, development programs, and intercultural and interreligious dialogue, the first objective is to build local infrastructure for peace. The second goal is to strengthen the capacity of national institutions and communities to do so. The necessity of enhancing the rule of law, access to justice, and human rights, especially the administration of justice, is discussed next. Support for initiatives aimed at eradicating gender-based violence and battling corruption is particularly stressed. To be able to promote peace and social cohesion in significantly conflicted communities, institutional capacity for citizen involvement, mediation, and trust building needs to be strengthened (UN, 2018b).

6.3. Promoting inclusive and equitable growth and increasing quality access to basic services

In this case, addressing the persistent socioeconomic marginalization, vulnerabilities, and restricted access to basic services is intended to strengthen and transform the economies of the region's member states (UN, 2018b).

Through vocational training, technical innovation, skill development, and entrepreneurship growth, the first stage is to encourage economic growth, good jobs, and sustainable livelihoods with a focus on woman and young people in particular. Promoting high-quality universal health coverage is also critical, with a focus on ensuring that people have necessary drugs, vaccines, and services for sexual and reproductive health. Implementing nationally relevant social protection systems, such as cash transfers and social safety nets, for the population living in extreme poverty is another crucial element. Last but not least, support national initiatives to help all students – girls and boys – complete quality primary and secondary education that is equitable and leads to relevant learning outcomes, including expanding already-existing nutritional and school feeding programs (UN, 2018b).

6.4. Enhancing natural resource management, increasing resilience to climate change, and reducing malnutrition and food insecurity

Building institutional and individual resilience to shocks and vulnerabilities to climate change will aid in the implementation of nationally determined contributions and secure food security for all Sahelians. Through regional programs like the Climate-Smart Agriculture and Resilient Pastoralism Program, this can be accomplished through rural women's resilience to the effects of climate change their communities' capacity to adapt empowers them and promotes social

cohesion. To prevent and manage disputes between farmers and pastoralists, another way is to encourage land use planning and improved management of the land and water resources. The final step is to support national efforts to safeguard marine and coastal ecosystems, with a focus on infrastructure for effective fish stock management and monitoring, control, and surveillance of illicit fishing (UN, 2018b).

6.5. Promoting access to renewable energy

The objective is to increase on-grid and off-grid alternatives to enable access to reasonably priced, environmentally friendly, and trustworthy energy services that can support both economic growth and essential services. In order to significantly enhance the Sahel's energy mix, improved access to inexpensive, clean, sustainable, and dependable energy services is the first priority. It is also essential to assist Member States creating policies that encourage private investment in renewable energy sources and the development of energy efficiency. Another crucial element is to support the growth of micro and small business in the installation, upkeep, and maintenance of renewable energy facilities. This includes assisting newly established small- and medium-sized enterprises (SMEs) with energy efficiency and creating enabling economic environments for long-term sustainable operations. In order to boost food yield, lower post-harvest loss, and encourage food processing, it is imperative that clean, food production value chain must be supported by the sustainable energy production. This includes agriculture, fisheries and pastoralism (UN, 2018b).

6.6. Empowering women and youth

Here, the main objective is to overcome the barriers that prevent women and young people from realizing their full potential and from being empowered to serve as guarantors of peace and development in the Sahel. Increasing the number of women and young people participating in leadership roles at all levels of decision-making in political, economic, and public life is an important aspect. In accordance with national law, it is crucial to support legislation that would grant women equal access to economic resources as well as ownership and control over land and other types of property, financial services, and inheritance (UN, 2018b).

7. The African Union and Its Actions – The 9th World Water Forum and the Dakar Declaration

7.1. Introduction

According to FAO (2022), President Macky Sall, President of Senegal and current Chairman of the African Union, formally began the World Water Forum on Monday, March 21, 2022 in Diaminadio, close to Dakar, on the theme of water security for peace and development. The ceremony was attended by more than 2000 people from all over the world, including country leaders, presidents of the World Bank, the World Water Council and the Director General of UNESCO². Via videocall, Ursula von der Leyen, the President of the European Commission and Dr. Akinwunmi Adesina, President of the African Development Bank were also present.

Following the lead of the Senegal River Development Organization (OMVS) and the Gambia River Development Organization (OMVG), leaders emphasized the necessity of fostering cooperation in the shared waters management and emphasized the importance of using water as a tool in rural and urban areas to reach development, for the creation of jobs for young people, for the fight that migration is facing, as well as for the construction of robust resilience mechanism for peace and security internationally (9th World Water Forum - Dakar, 2022).

Globally, the political segment's statements called for greater financial mobilization for water and sanitation and underlined the significance of applying science – including information sharing to water concerns in order to ensure the strict management of this priceless and vital resource for life (9th World Water Forum - Dakar, 2022).

In addition to the political leaders' comments, four more statements were given by young people from nations who recently hosted the World Water Forum. These young people were from South Korea, France, Brazil, and Senegal. They urged the authorities to act in order to turn the Response Forum's suggestions into detailed action plans (9th World Water Forum - Dakar, 2022).

7.2. Dakar Declaration: A Blue Deal on water and sanitation security for peace and development

In the declaration (9th World Water Forum - Dakar, 2022) ten main pillars are being discussed and the stakeholders call upon the international community to:

- guarantee the right to water and sanitation for all,

² United Nations Educational, Scientific and Cultural Organization

- ensure availability of the resources and resilience,
- ensure adequate funding,
- ensure inclusive water governance,
- enhance cooperation.

In the next part of the essay, these will be discussed in detail.

Firstly, they point it out that they are guided by the principles and the ideals of the Charter of the United Nations. The challenges of water and sanitation for development, improved livelihoods, and poverty eradication are highlighted by how crucial it is to recognize water as essential for people and nature. As a result, their commitments to take immediate action to address these challenges must be renewed and strengthened. The Sustainable Development Goals (SDGs), in particular SDG6's aim to "ensure availability and sustainable management of water and sanitation for all", is stressed as being crucial for their achievement. The UN resolution 64/292 (2010), the Paris Climate Agreement (UN, 2015c), the Sendai Framework for Disaster Risk Reduction (UN, 2015a), the Daegu Declaration (2015), and the establishment of the High-Level Panel on Water: International Decade for Action "Water for Sustainable Development" (2018) are also mentioned as being mindful of their commitments regarding water and sanitation. Reaffirming the importance of Africa Agenda 2063 and the Africa Water Vision for 2025 on access to water resources and high-quality sanitation in Africa and around the world is another crucial issue (9th World Water Forum - Dakar, 2022).

They are equally committed to realizing their common goal of a society where everyone has access to clean water and adequate sanitation as fundamental human rights, as well as the respect for other associated rights. They are also aware that in order to combat water stress, maintain ecosystem sustainability, and promote equitable growth, resilience in the face of climatic, demographic, health, and food changes as well as availability of water in both quality and quantity is necessary. They believe it is essential to acknowledge the urgent need to pay more attention to water issues in the rural world as a way to reduce inequality, create opportunities for youth and women, foster development, generate employment, and effectively combat the reasons that cause migrations, whether it be national or international. Additionally, they express concern about the lack of money for investments required to meet SDG6 commitments. Last but not least, they agree on the necessity to use water as a tool for the following: cooperation for peace, establishing solidarity between people and countries and integration on a regional level. This can be done through multiple tools such as the promotion of dialogue, stability, peace and enhanced coordination and partnership, regarding specifically

the Covid-19 pandemic, which has highlighted their shared destiny (9th World Water Forum - Dakar, 2022).

7.3. The actions of the international community

As it has been mentioned before, the stakeholders are calling upon the international community in five main points to act for the cause.

Firstly, to guarantee the right to water and sanitation for all. This means they suggest increasing the rate at which everyone has access to clean water and sanitary facilities by using integrated and inclusive initiatives, mobilize all actors within the proper legal frameworks. Another important aspect is to encourage the efficient application of international humanitarian law, especially the supplemental protocols to the 1949 Geneva Conventions (1949) that guarantee the protection of water and sewage infrastructure that are essential during times of conflict (9th World Water Forum - Dakar, 2022).

The next point is to ensure availability of the resources and resilience. Firstly, they highlight the importance of implementing sustainable management strategies to protect ecosystems and water resources while ensuring their resilience to climate change and population pressures. To encourage change toward more sustainable and ethical production and consumption practices, they hope to increase awareness of these challenges. Additionally, they want to safeguard wetlands, encourage the preservation of conventional water systems, and encourage the recycling and reuse of treated water (9th World Water Forum - Dakar, 2022).

The third important aspect is to ensure adequate funding. The first piece of advice under this point was to mobilize sufficient public financial resources, along with development partnerships, in order to invest in infrastructures for water and sanitation and to promote “blue” and “green” jobs, particularly for young people, women and rural areas. They also recommend supporting creative finance methods and private sector involvement in water and sanitation. Additionally, they stress the significance of supporting the successful implementation of the Addis Ababa Action Agenda on Financing for Development (2015 b), particularly through investments in infrastructure for water and sanitation. Finally, they promote global financing approaches to encourage increased funding for water sanitation (9th World Water Forum - Dakar, 2022).

The fourth pillar is to ensure inclusive water governance. Here, the idea to promote diverse and concerted management strategies as well as transparent, effective and inclusive water and sanitation management services at the appropriate level has risen. Additionally, they support the implementation of integrated management plans for the wise, equitable, and sustainable use

of water resources, promoting a balance between socioeconomic development, resources quality preservation, and the preservation and conservation of ecosystems. They believe it is critical to encourage more alignment between water policies and those pertaining to, among other things, agriculture, rural development, health, biodiversity, energy, and industry. Finally, for a more sustainable management of water resources and habitats, it is critical to design water-related public policies based on knowledge, encourage innovations, and create and build the capacities of all categories of stakeholders (9th World Water Forum - Dakar, 2022).

The fifth, and last aspect is to enhance cooperation. In this point, it is vital to give water issues special consideration in bilateral and multilateral cooperation, particularly at sub-regional, regional, and international levels. Supporting basin groups' initiatives for equitable, sustainable, and integrated water resources management is crucial. Enhancing mutually instrumental cooperation and coalition in the management of transboundary basin, particularly aquifer basins, is another important factor. This can be done, in part, by encouraging the sharing of knowledge, expertise, and best practices. Lastly, in the true spirit of hydro-diplomacy, to make cooperation, coordination, and dialogue the cornerstone of dispute settlement (9th World Water Forum - Dakar, 2022).

Conclusion

This scientific paper has been conducted to get a wider view of the water crisis in The Sahel Region of Africa and to examine the actions taken by the most relevant international organizations to moderate the effects of this problem. Water crisis in the Sahel Region is one of the most urging problems in the world.

The problem is severe, as it roots back to multiple reasons and causes multiple problems. The most urging ones are proven to be climate change, migration, internal and external conflicts, assault against women and children, issues with health and hygiene, and an overall underdevelopment of the country. What is more crucial is that all of these reasons and consequences are connected to each other, build on each other or result from each other. Climate change has a negative effect on water shortage that is already present in the country due to the lack of underdevelopment. The lack of water and climate change combined affect migration, which has consequences on external and internal conflicts as well. These include sexual and violent attacks directed at women and children, who must experience this because of the water shortage and migration. The water shortage also is a direct cause to hygiene problems.

There are multiple suggestions and plans worked out in order to help to ease the severe and compound problems of the Sahel.

One of them, that is placed and acts regionally is the G5 Sahel, that was formed as response to the growth of armed and violent extremist groups and the deteriorating security situation in the area. In collaboration with the World Bank Group, they have developed the Country Climate and Development Report, in which macroeconomic and poverty analysis has been conducted for each of the G5 nations. It has three main messages and explores five main areas; the report offers comprehensive recommendations and policy prescriptions for achieving development and adaptation to goals.

The following data analyzed is the United Nation's a Support Plan for the Sahel countries that was worked out in 2018. In this plan, multiple aspects have been analyzed such as: cross border cooperation, prevention and sustaining peace, inclusive growth, climate action, renewable energy, women, and youth empowerment. Here, it is stated that these are plans and actions they wish to fulfil by 2030.

The last data monitored is the African Union, specifically the 9th World Water Forum and the Dakar Declaration. During the forum, the importance of using water as a tool in rural and urban areas to reach development was mentioned, for the creation of jobs for young people, for the fight that migration is facing, as well as for the construction of robust resilience mechanism

for peace and security internationally has been mentioned along with the importance financial mobilization for water and sanitation. As for the Dakar Declaration, ten main pillars are being discussed and the stakeholders call upon the international community to: guarantee the right to water and sanitation for all, ensure availability of the resources and resilience, ensure adequate funding, ensure inclusive water governance, and enhance cooperation. These all suggest that peace is the key to safe water, and safe water is the key to peace.

In conclusion it can be said that the problem is more and more urging with each day that passes, based on the number of how many people are being severely negatively affected by the water crisis in the Sahel. Even though there is more attention that is being brought to this specific area, there are multiple factors that make the job of international or local organizations challenging to a greater extent. With the current conflicts of the world, there might be some hardships fulfilling the plans set by 2030, but with the hard, prosperous work of the people hopefully can bring a brighter future for The Sahel Region.

References

- African Union Commission (2015). *Agenda 2063, The Africa We Want*. Available at: https://au.int/sites/default/files/documents/36204-doc-agenda2063_popular_version_en.pdf [Accessed 1 Nov. 2022].
- Bhardwaj, B. (2021). Struggle to Survive: Water Crisis in Sahel Region. *The Kootneeti, 11th March* Available at: <https://thekootneeti.in/2021/03/11/struggle-to-survive-water-crisis-in-sahel-region/> [Accessed 1 Nov. 2022].
- Brunk, K., and Gronenborn, D. (2004). Floods, droughts, and migrations: The effects of late Holocene Lake level oscillations and climate fluctuations on the settlement and political history in the Chad Basin. In: M. Krings, & E. Platte (Eds.). *Living with the lake: Perspectives on history, culture and economy of Lake Chad (Studien zur Kulturkunde)* Cologne, Germany: Rüdiger Köppe Verlag. Vol. 121, pp. 101–132 [Accessed 1 Nov. 2022]
- Cook, P. (2014). How can water drive peace in the Sahel? *Geneva Solutions*. Available at: <https://genevasolutions.news/explorations/the-water-we-share/how-can-water-drive-peace-in-the-sahel> [Accessed 1 Nov. 2022].
- Cook, P. (2021). What does war do to water and how can we respond? *Geneva Solutions*. Available at: <https://genevasolutions.news/explorations/the-water-we-share/what-does-war-do-to-water-and-how-can-we-respond> [Accessed 1 Nov. 2022].
- Ferguson, A. and Helmer, M. (2022). Sahel History & Location. *What is the Sahel?* Available at: <https://study.com/learn/lesson/sahel-history-location.html#:~:text=The%20region%20became%20a%20key,after%20being%20annexed%20by%20Egypt.> [Accessed 1 Nov. 2022].
- Freeman, L. (2017). Environmental Change, Migration, and Conflict in Africa: A Critical Examination of the Interconnections. *The Journal of Environment & Development* Vol. 26 No. 4 p. 351-374 DOI 10.1177/1070496517727325 [Accessed 1 Nov. 2022]
- Food and Agriculture Organization of the United Nations. (2022). *World Water Forum: President Macky Sall officially opened the 9th edition*. [online] Available at: <https://www.fao.org/africa/news/detail-news/en/c/1479936/> [Accessed 1 Nov. 2022].
- Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019). Results. Seattle, United States: Institute for Health Metrics and Evaluation

- (IHME), 2021. Available at: <https://ourworldindata.org/grapher/death-rates-unsafe-water?region=Africa> [Accessed 1 Nov. 2022]
- High Level Panel on Water (2018). International Decade for Action “Water for Sustainable Development” 2018-2028. Available at: <https://sustainabledevelopment.un.org/content/documents/hlpwater/05-InternDecadeActionWaterSustDev.pdf> [Accessed 1 Nov. 2022]
- International Committee of the Red Cross (1949). *The Geneva Conventions of 12 August 1949*. Available at: <https://www.icrc.org/en/doc/assets/files/publications/icrc-002-0173.pdf> [Accessed 1 Nov. 2022]
- International Organization for Migration (IOM) (2021). *Environmental Migration, Disaster Displacement and Planned Relocation in West Africa*. IOM. Geneva. https://environmentalmigration.iom.int/sites/g/files/tmzbd11411/files/documents/environmental-migration-disaster-displacement-in-west-africa_final.pdf [Accessed 1 Nov. 2022]
- International Water Resources Association (IWRA) (2015). *Daegu Declaration*. Available at: https://www.iwra.org/wp-content/uploads/2022/02/DAEGU-DECLARATION-signatures_.pdf [Accessed 1 Nov. 2022]
- OHCHR (2017). *Project supporting the G5 Sahel Joint Force with Implementation of the Human Rights and International Humanitarian Law Compliance Framework*. (online) Available at: <https://www.ohchr.org/en/countries/africa-region/project-supporting-g5-sahel-joint-force-implementation-human-rights-and-international-humanitarian> [Accessed 1 Nov. 2022].
- Outcome of the 9th World Water Forum, "Dakar 2022". A "blue deal" for water security and sanitation for peace and development (2022). 9th World Water Forum, Dakar, 2022. Available at: <https://www.worldwaterforum.org/en/a-blue-deal-for-water-security-and-sanitation-for-peace-and-development> [Accessed 1 Nov. 2022].
- Suleiman, M. (2017). Sahel region, Africa. *The Conversation*, 28 February. Available at: <https://theconversation.com/sahel-region-africa-72569> [Accessed 1 Nov. 2022].
- Thiaw, I. (2022). Confronting the Growing Drought Risk. *Project Syndicat*, 22 July. Available at: <https://www.project-syndicate.org/commentary/drought-risk-outpacing-current-mitigation-efforts-by-ibrahim-thiaw-2022-07> [Accessed 1 Nov. 2022].
- UNESCO (2021). *UNESCO in brief*. Available at: <https://www.unesco.org/en/brief> [Accessed 1 Nov. 2022].

- UNICEF (2020). *Water scarcity*. [online] Available at: <https://www.unicef.org/wash/water-scarcity#:~:text=Key%20facts,where%20water%20supply%20is%20inadequate> [Accessed 1 Nov. 2022].
- United Nations (1998). *Guiding Principles on Internal Displacement*. Commission on Human Rights, Fifty-fourth session, Item 9 (d) of the provisional agenda. Available at: <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G98/104/93/PDF/G9810493.pdf?OpenElement>
- United Nations (2010). 64/292. *The human right to water and sanitation*. General Assembly, Sixty-fourth session, Agenda item 48. Available at: <https://digitallibrary.un.org/record/687002?ln=en> [Accessed 1 Nov. 2022]
- United Nations (2015a). 69/283. Sendai Framework for Disaster Risk Reduction 2015–2030. *General Assembly, Sixty-ninth session Agenda item 19 (c)*. https://www.preventionweb.net/files/resolutions/N1516716.pdf?_gl=1*bjwngd*_ga*MjA3OTEzMTk2My4xNjY3NDAxNTA1*_ga_D8G5WXP6YM*MTY2NzQwMTUwNS4xLjAuMTY2NzQwMTUwNS4wLjAuMA [Accessed 1 Nov. 2022]
- United Nations (2015b) *Addis Ababa Action Agenda of the Third International Conference on Financing for Development*. Third International Conference, Financing for Development. Available at: https://sustainabledevelopment.un.org/content/documents/2051AAAA_Outcome.pdf [Accessed 1 Nov. 2022]
- United Nations (2015c). *Paris Climate Agreement*. Available at: https://unfccc.int/sites/default/files/english_paris_agreement.pdf [Accessed 1 Nov. 2022]
- United Nations (2015d). *General Assembly Transforming our world: the 2030 Agenda for Sustainable Development*. Seventieth session Agenda items 15 and 116 Available at: <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N15/291/89/PDF/N1529189.pdf?OpenElement> [Accessed 1 Nov. 2022]
- United Nations (2018a). *Report of the United Nations High Commissioner for Refugees: Part II Global compact on refugees* General Assembly Official Records, Seventy-Third Session, Supplement No.12 Available at: https://www.ohchr.org/sites/default/files/Documents/Issues/OlderPersons/GCR_English.pdf [Accessed 1 Nov. 2022]

- United Nations (2018b). “UN Support Plan for the Sahel, Working together for a prosperous and peaceful Sahel.” Available at: https://www.un.org/africarenewal/sites/www.un.org.africarenewal/files/English%20Summary%20Report_0.pdf [Accessed 1 Nov. 2022]
- United Nations (2021). *Human Rights, Climate Change and Migration in the Sahel*. Available at: <https://www.ohchr.org/sites/default/files/2021-11/HR-climate-change-migration-Sahel.pdf> [Accessed 1 Nov. 2022]
- UNDP (2021). *Sahel Challenges are Opportunities for Collaboration between UNDP and JICA*.| United Nations Development Programme. [online] Available at: <https://www.undp.org/africa/news/sahel-challenges-are-opportunities-collaboration-between-undp-and-jica> [Accessed 3 Nov. 2022].
- World Bank Group (2022). *G5 Sahel Region: Country Climate and Development Report*. Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/37620/P17734308632c80a0b8170f1a6d6df3790.pdf?sequence=1&isAllowed=y> [Accessed 1 Nov. 2022]
- World Wildlife Fund (2022). *Water Scarcity | Threats | WWF*. [online] Available at: <https://www.worldwildlife.org/threats/water-scarcity> [Accessed 1 Nov. 2022].