



**2022-2023**

**Model Arab League**

**BACKGROUND GUIDE**

**Council of Arab Environmental Affairs Ministers**



**[ncusar.org/modelarableague](https://ncusar.org/modelarableague)**

Original draft by Olivia Hirsch, Chair of the Council of Environmental Affairs Ministers at the 2023 National University Model Arab League, with contributions from the dedicated staff and volunteers at the National Council on U.S.-Arab Relations

Honorable Delegates,

Welcome to the 2022-2023 Model Arab League season! My name is Olivia Hirsch. I am currently a junior at Northeastern University getting a degree in Political Science with minors in Public Health and Criminal Justice. This year I have the pleasure of being your chair of the Council of Arab Environmental Affairs Ministers at the National University Model Arab League (NUMAL) conference, as well as the Northeast Regional Model Arab League (NERMAL) conference hosted by Northeastern University in Boston, Massachusetts. This is my third year participating in Model Arab League. While it is my first year chairing for the national conference I had the privilege to chair NERMAL last year. I am super excited to be chairing this committee as environmental issues have drastic and immediate effects in the MENA region, and require complex analysis by minds in the Model circuit.

This council debates the most pressing environmental issues in the MENA region. The lives put at risk by these issues are a uniting force between Arab league nations. I want to emphasize that active participation is vital for delegates' success during the conference. It is important to work with other delegates to come to new and effective solutions to these topics. Each delegate should come to committee prepared to debate all of the topics. This means you should all be doing lots of research to ensure you thoroughly know each topic and your country's stances on the topic. Delegates should be able to strike a balance between pursuing their Member State's interests and the Arab League's interests as a whole. The background guide serves as a starting point but your research should expand well beyond this background guide. Delegates should also come to the conference acquainted with parliamentary procedure. There are resources available on the National Council's website.

Lastly, I want to remind all delegates to be respectful of their fellow delegates during the entire conference. We are all students and this conference should be a positive learning experience for all. I look forward to meeting all of you and hearing your debate!

Best,  
Olivia Hirsch

## **Topic I Evaluating the effects of droughts and how they relate to food production and food access in the MENA region.**

### **I. Introduction to the Topic**

#### **a. General Background**

Droughts are defined as “a period of abnormally dry weather sufficiently prolonged for the lack of water to cause serious hydrologic imbalance in the affected area”.<sup>1</sup> As the Earth's temperature has continued to rise, drought has become more frequent and severe across the world from the United States to the MENA region. The Palmer Drought Severity Index<sup>2</sup> uses available temperature and precipitation data to quantify long-term droughts. Even though this technology is available, droughts are not on the forefront of many countries' agendas and is not always used to help prepare nations for droughts.

According to the United Nations Committee to Combat Desertification (UNCCD) from 1970 to 2019, droughts represented 15 percent of natural disasters, and they accounted for approximately 650,000 deaths during that time period, causing the land to dry up and stunt the growth or destroy the crops altogether.<sup>3</sup> This leads to extreme economic burden on farmers and the loss of food for millions who depend on these crops. This makes areas and countries who are already experiencing food insecurity, or vulnerability, face consequences that will forever change the landscape of their future.

According to the United Nations, nearly one in three people are considered to be food insecure.<sup>4</sup> Each year, this number continues to dramatically increase from human caused climate change, especially considering worldwide droughts. The UN does not predict that the world is on track to meet Sustainable Development Goals (SDG) 2, Zero Hunger by 2030 and predicts that more people will become food insecure and those that currently are, will have their situation deteriorate further. Simultaneously food prices have steadily been going up with droughts not helping the situation as they make it harder to yield maximum crops from their land.

#### **b. History in the Arab World**

The MENA region is considered to be the driest region in the world. This makes it extremely susceptible to droughts as the land already gets less rain and has less natural water resources than

---

<sup>1</sup> [https://www.weather.gov/bmx/kidscorner\\_drought](https://www.weather.gov/bmx/kidscorner_drought)

<sup>2</sup> <https://climatedataguide.ucar.edu/climate-data/palmer-drought-severity-index-pdsi>

<sup>3</sup> <https://news.un.org/en/story/2022/05/1118142>

<sup>4</sup>

<https://www.un.org/en/global-issues/food#:~:text=Nearly%20one%20in%20three%20people,people%20in%20just%20one%20year>

other parts of the world. In fact, the region only has 2% of the world's renewable water supplies and is home to 12 of the most water scarce countries in the world.<sup>5</sup> Over 472 million people live in the MENA region, with population trends only going up. The average water availability is 1,200 cubic meters a year, 6 times below the global average. Even without global warming, the increasing population would put a strain on the minimal natural resources available in the region so the Earth heating up just accelerates this process.

Between 2007 and 2010 the MENA region experienced a prolonged drought episode that created a sharp decline in food production, with the most affected regions being Eastern Syria, Northern Iraq and Iran. Periods of drought like this are only predicted to become worse as global warming continues. In the 1980s and 1990s drought was a main factor in the Sudan famine, showing how many Arab League nations have experienced the effects of prolonged drought. As so many of the Arab League countries are already extremely water scarce, it leaves them reliant on nations with greater abilities to produce crops for consumption and trade, as they can no longer do it on their land. One third of the Arab region's land is agricultural land, yet 70% of the region's agriculture production is on rain-fed land making production very dependent on rainfall which is declining in the region, which annually already gets less than the average rainfall. The region is also the second lowest in land productivity (value of gross agricultural land per hectare of agricultural land), leaving room for improvement to increase crop yields.

### **c. Solutions: Past, Present, Future**

There is currently a project funded through the USAID Middle East bureau called MENADrought. It is currently in Jordan, Morocco, and Lebanon and focuses on drought management and planning. The project is focused on making region/country specific solutions as it has been shown that droughts effects are region/country specific. This means that one solution would not work for all countries. While making solutions, keep in mind the varying level of drought preparedness and accessibility of infrastructure across the League. The three pillars of this project are: monitoring early warning signs, vulnerability and impact assessments, and mitigation response and preparedness<sup>6</sup>. The three pillars allow a well-rounded approach to mitigating and stopping droughts.

The Council can look at whether creating public-private partnerships to help implement drought prevention techniques would be beneficial in MENA countries. Country specific differences and vulnerabilities should be considered when creating solutions as all countries come from a different perspective on this issue. It is also important to remember that a multi-step approach may be needed to fully deal with this topic, addressing both short-term and long-term solutions.

---

<sup>5</sup> <https://www.climatelinks.org/blog/mena-rising-drought-challenge>

<sup>6</sup> <https://www.climatelinks.org/blog/mena-rising-drought-challenge>

## II. Questions to Consider in Your Research

- Has your country suffered from prolonged droughts in recent years?
- Has your country passed any legislation relating to droughts?
- Has anyone from your country publicly made any statements relating to droughts or food production?
- What crops does my country produce? Has the yield gone down in recent years?
- Are there any social, political, and/or economic considerations my country should take into account that would relate to how my country would respond to droughts?

## III. Questions a resolution might answer?

- In what ways can League member states increase their drought preparedness and prevent the loss of more crop yields?
- What level of foreign or international aid should the League as a whole accept or should member states accept?
- Are there any incentives the League should offer to help stop droughts and increase food production in the region?

## IV. Additional Resources

- [Cloud Wars: Mideast Rivalries Rise Along a New Front](#)
- [MANAGING LIVESTOCK IN DROUGHT-PRONE AREAS OF THE MIDDLE EAST AND NORTH AFRICA: POLICY ISSUES](#)
- [The Middle East and North Africa: Prospects and challenges | OECD-FAO Agricultural Outlook 2018-2027](#)
- [ENVIRONMENTAL CHALLENGES IN THE MENA REGIONi By Iyad Abumoghli – Director of UNEP Faith for Earth Initiative Adele Goncalves](#)

## **Topic II Analyzing the effects of deforestation on natural resources and biodiversity across the region.**

### **I. Introduction to the Topic**

#### **a. General Background**

As industrialization and capitalism have grown so has deforestation, devastating the world's forests and contributing to the erosion of our ozone layer. The FAO estimates that over 30 million acres of forestland are destroyed each year, leading to fears that a majority of forests could be destroyed in the next ten years if these trends continue. The destruction of forests destroys global ecosystems, leading many animals to become extinct and tree species to become extinct. This practice majorly decreases the biodiversity of plant and animal species across the global environment as a whole.

Additionally, deforestation affects the availability of natural resources. Trees and lumber are vital resources not just for humans, but for a majority of living creatures. The impact trees alone have on the effects of climate change can not be understated. They act as the first defense against climate change by absorbing billions of tons of carbon dioxide emissions each year,<sup>7</sup> providing flood prevention by the ability to soak up water and moisture, maintaining soil security, and enhancing the ability to grow and maintain crops - which, as a region experiencing increased droughts, is incredibly vital. As deforestation continues at its current rate, the world will begin to see a rise and have to solve other public health issues such as starvation, recurrent flooding, etc.

This issue occurs worldwide. One extreme case is happening in the Amazon Rainforest, where experts estimate around 17% of the rainforest has been destroyed by deforestation. It is predicted that if 20%-25% of the forest becomes deforested then the Amazon will not be able to support its rainforest ecosystems and will disappear<sup>8</sup>, causing huge environmental impacts. This is just one jarring example of the climate crisis that is deforestation and why nations must take more concrete actions. Another thing to consider is that the destruction of the Amazon and similar forests also have devastating effects on indigenous populations, quickly dwindling their pool of resources in regions they have called home for hundreds of years. Deforestation is also closely linked with desertification, which is the transformation of once fertile land into desert, as deforestation causes the land to become warmer and drier in many places. Desertification is also becoming increasingly prevalent and challenging in the Arab Region.

---

<sup>7</sup> <https://insidearabia.com/woodlands-of-the-middle-east-missing-the-forest-for-the-trees/>

<sup>8</sup> <https://climatedataguide.ucar.edu/climate-data/palmer-drought-severity-index-pdsi>

## **b. History in the Arab World**

While the MENA region is known now for its large deserts, there used to be large parts of the region that were covered in forests many years ago. Now mountains, like the Levant mountains, are depleted of their once luscious trees and have turned into desert lands with sparse trees. This indicates a problem in the Arab world of chronic deforestation caused by a lack of consideration of the consequences of not maintaining the forest to some degree. By cutting down a majority of the forests and not attempting to re-plant them, the Arab world has been left especially vulnerable to desertification and the effects of climate change. In Saudi Arabia only just over 1% of land is forest, leaving them without the natural resources and biodiversity forests has. The region itself is incredibly homogenous, with mainly dry and arid land, which has led many areas to be eroded and unable to sustain a forest.

At COP26 over 100 countries pledged their support behind the Glasgow Leaders Declaration on Forests and Land use, including Arab League nations<sup>9</sup>. This was one of the first times nations publicly pledged to end deforestation, yet there is still skepticism as to how countries will fulfill their pledges. The League of Arab States has not taken any concrete action as a whole to combat deforestation and its effects, even though they are so widely felt throughout the region. Since much of the Arab world lost most of its forests many years ago, governments may not see the importance of this issue, but they must become aware that it is vital that they rehabilitate their land to be suitable for forests as that helps the land become suitable for crops. This will help the region become more biodiverse and help the region become less vulnerable to climate change.

## **c. Finding a Solution to the Problem: Past, Present, and Future**

It is important for Arab League countries to figure out ways to regain forest cover before more of their land falls to desertification and becomes unusable for food production. There has not been a league wide consensus on how to tackle this issue as some governments prioritize it more than others. A couple nations have taken initiatives to preserve their plants. First, in Abu Dhabi they have started to prioritize protecting mangrove trees on the coast as they help protect the land from erosion and floods. Second, in Jordan there have been a few baby forests planted to help Jordan regain the trees they used to have<sup>10</sup>. In Israel reforestation has been a success with over 250 million trees being planted since 1990, resulting in Israel being the only country in the world with more trees now than it had in 1990<sup>11</sup>. These are three different techniques that have been

---

<sup>9</sup> <https://www.arabnews.com/node/1959886/business-economy>

<sup>10</sup>

<https://news.mongabay.com/2022/06/in-jordan-the-middle-east-s-first-miyawaki-style-baby-forests-take-root/>

<sup>11</sup>

<https://aardvarkisrael.com/the-reforestation-of-israel/#:~:text=Since%201900%20roughly%20250%2C000%2C000%20trees.now%20grown%20to%20around%208.5%25>

implemented in nations with similar geographical makeups as the Arab League states and should be critically looked at to see if these strategies could be implemented league-wide. Another example is the Argan tree forests in Morocco that help provide economic opportunities to Moroccans<sup>12</sup> as they can live in temperatures up to 50 degrees Celsius and help slow desertification, making them a perfect leader in this discussion.

Many practices in the Arab world may make it difficult to take definitive action to help stop deforestation and desertification. Overgrazing, an increase in drought, illegal logging, and wars have all led to increasing deforestation over recent years. It is critical that the council take definitive action to combat deforestation and preserve natural resources across the nation.

## **II. Questions to Consider in Your Research**

- How many, if any, forests does my country have?
- What regulations are in place to regulate logging, commercial use, and other uses of forests that could lead to deforestation?
- How can my country increase its biodiversity and forest land?
- What are the considerations, social, political, and economic, to think about when creating a plan to combat deforestation in my country?
- What natural resources does my country have and how quickly are they depleting?

## **III. Questions a Resolution Might Answer**

- How should the Arab League as whole handle deforestation, the desertification it creates, and the natural resources it takes away?
- What, if any, help from foreign/international businesses should the Arab League take to help combat this issue?
- How do droughts look different in Arab League members and how does that affect the League-wide response?

## **IV. Additional Resources**

- [ENVIRONMENTAL CHALLENGES IN THE MENA REGIONi By Iyad Abumoghli – Director of UNEP Faith for Earth Initiative Adele Goncalves](#)
- [Woodlands of the Middle East: Missing the Forest for the Trees](#)
- [https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/j.1523-1739.2006.00398.x?casa\\_token=3WfuGvfpcGMAAAA%3ABYLYfLYWrWsbZFy6wrZG5pBCaVhfnMe2Om3v1DuM0vKDPHgWolp7-JhQBRJmo9ixhf1mDTiNwSaoTH2x](https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/j.1523-1739.2006.00398.x?casa_token=3WfuGvfpcGMAAAA%3ABYLYfLYWrWsbZFy6wrZG5pBCaVhfnMe2Om3v1DuM0vKDPHgWolp7-JhQBRJmo9ixhf1mDTiNwSaoTH2x)

---

<sup>12</sup> <https://www.weforum.org/agenda/2022/06/argan-forests-sustainable-deforestation/>



### **Topic III: Assessing the waste management infrastructure in the Arab region and devising means to make it more efficient and sustainable.**

#### **I. Introduction to the Topic**

##### **a. General Background**

There are historically two different types of waste management systems, centralized and decentralized. Centralized systems revolve around a centralized waste management treatment plant that acts as a final destination of waste from other outlying waste destinations.

Decentralized systems do not function under a centralized waste management treatment plant, forgoing the transportation chain from one site to another. Across the world waste management infrastructure varies in effectiveness across all its steps, the nature of which, poses a threat to the environment and the health of humans. These infrastructures are supposed to combat and lessen the threat of both toxic and human waste although failing in multiple areas. While toxic pollution poses a more immediate threat to the environment and humans, the mismanagement of human waste also has startling negative effects on communities around the world, making regulation so important.

In the United States, the Environmental Protection Agency (EPA) has left the management of oil and gas waste up to individual states. This has resulted in varying levels of regulations and practices, causing differing levels of environmental damage done throughout the nation<sup>13</sup>. This type of management has shown to be ineffective in creating sustainable and efficient practices, failing to ensure safety from long-lasting environmental impacts. There have been instances of mixing between toxic and human waste and, if they are not tracked and handled correctly, it can lead to toxins and human waste leaking into water supplies, creating a huge crisis.

It is vital that there is not only a uniform categorization of waste but that they are managed in similar ways. This would allow waste to be managed in a more sustainable and effective way in a more efficient and sustainable manner, instead of being forgotten about in landfills leaving residents near these huge landfills in unsafe living conditions.

##### **b. History in the Arab World**

The Arab World is not consistent in the quality of waste management infrastructure as there has not been League wide action taken on this issue. This has left the decisions up to individual

---

<sup>13</sup> [https://earthworks.org/issues/waste\\_management\\_infrastructure/](https://earthworks.org/issues/waste_management_infrastructure/)

governments and many governments seem to have adopted similar infrastructure and legislation. However, waste management overall has been categorized across the MENA regions as having insufficient jurisdiction, and lack of control, technical, and financial resources<sup>14</sup>. This topic seems to have fallen to the back of many nations' agendas compared to other current issues. There seems to be miscommunication at every level of the waste management process, from being collected, transported, and deposited. Another issue is that in the MENA region the main disposal method of waste landfills. Many of these landfills are simply “waste dumps” which means they are a non-sanitary landfill where municipal solid waste is dumped without regulations in effect to protect those living by the landfills<sup>15</sup>. Many of the landfills in the MENA region are close to or have reached their capacity, creating an almost immediate issue of what to do with the waste that continues to be produced.

Another main contributor to waste in the MENA region is the number of refugees that move between nations. In just Lebanon, it is estimated that 15.7% of the country’s total municipal solid waste is due to refugees. In Saudi Arabia, there is a lack of waste disposal facilities which leads to overfull and unsanitary facilities that are leading to environmental and health issues in communities that live near these landfills. Tunisia has also recently converted to a decentralized system, however many municipalities are still reliant on financial and physical help from the government to manage their waste as they were not adequately set up for this transition<sup>16</sup>. The Ministry of Local Affairs and the Environment did develop an integrated strategy of solid waste management for 2020-2035, yet it is vital that these strategies are implemented correctly, so municipalities are set up for a sustainable and efficient future. Qatar and the United Arab Emirates have also established solid waste management projects, but it is too early to assess their efficacy. Governments need to start realizing that waste cannot just be left as “waste” and that if managed correctly it can help produce a more sustainable lifestyle and if managed incorrectly can have horrific health impacts.

### **c. Finding a Solution to the Problem: Past, Present, and Future**

As discussed earlier there has never been a high urgency in creating effective legislation and practices for waste management among Arab League nations. There is a need for League-wide action on creating legislation and framework to sustainably manage waste so governments understand the importance of this issue. The Council should look to gain public awareness and educate them on how to correctly manage waste. It does seem that countries are slowly starting

---

<sup>14</sup> <https://link.springer.com/content/pdf/10.1007/978-3-030-18350-9.pdf>

<sup>15</sup>

[https://link.springer.com/chapter/10.1007/978-3-319-71389-2\\_9#:~:text=Saudi%20waste%20managemen%20system%20is,within%20the%20next%20ten%20years](https://link.springer.com/chapter/10.1007/978-3-319-71389-2_9#:~:text=Saudi%20waste%20managemen%20system%20is,within%20the%20next%20ten%20years)

<sup>16</sup> <https://www.csis.org/analysis/decentralized-waste-management-mena-countries-lessons-tunisia>

to take action but these actions must be pushed on to ensure countries do not back out of what they agree to.

The Council should consider extended producer responsibility, which would place more physical and/or financial responsibility on producers<sup>17</sup>. While companies will most likely never take full responsibility, creating incentives for them to reduce their environmental impact and be more efficient could be beneficial. Any solution also needs to consider every part of waste management: collection, transfer, transport, treatment, disposal, and cleaning. If one part is mismanaged it can throw the whole process into chaos. Some goals to consider are to try to reduce the amount of household and similar waste produced per inhabitant by 10 percent, increase the material recycling rate of household and similar waste to 20 percent, increase the quantity of household and similar waste subject to organic or energy recovery to 40 percent, and reduce the landfilling of municipal solid waste by 60 percent over time. These aims are important to consider in any resolutions brought forward by the council.

## **II. Questions to Consider in Your Research**

- What is the current state of waste management infrastructure in my country?
- Does my country have a centralized or decentralized system?
- Are there any public-private partnerships that already exist in this area in my country?
- What could make my country's waste management infrastructure more sustainable and efficient?
- What regulations and/or legislation have my country passed regarding waste management and how is it enforced?

## **III. Questions a Resolution Might Answer**

- What is the best strategy for how the League should handle this issue? Should there be one framework, country-specific or somewhere in between?
- Are there any partners multiple League members use to help with their waste management?
- How can the League continue to develop and have sustainable/healthy waste management practices and infrastructures?

## **IV. Additional Resources**

---

17

[https://www.oecd.org/env/tools-evaluation/extendedproducerresponsibility.htm#:~:text=Extended%20Producer%20Responsibility%20\(EPR\)%20is,disposal%20of%20post%2Dconsumer%20products](https://www.oecd.org/env/tools-evaluation/extendedproducerresponsibility.htm#:~:text=Extended%20Producer%20Responsibility%20(EPR)%20is,disposal%20of%20post%2Dconsumer%20products)

- [Characterization and Planning of Household Waste Management: A Case Study from the MENA Region](#)
- [ENVIRONMENTAL CHALLENGES IN THE MENA REGIONi By Iyad Abumoghli – Director of UNEP Faith for Earth Initiative Adele Goncalves](#)
- [Medical Waste Management in MENA | EcoMENA](#)
- [Waste Management in MENA Regions](#)
- [Regional network for integrated waste management in the MENA region](#)

## **Topic IV: Examining the effect of extreme heat and devising strategies to combat wildfires and resource loss.**

### **a. General Background**

Extreme heat is an increasing issue all over the world bringing with it an increase in wildfire frequency and intensity. During the summer of 2022, the U.S. and Europe recorded record-breaking temperatures that caused at least 85 large fires across over three million acres in thirteen states. Additionally, it was predicted that 60 new record highs were to be set in 20 states by the end of July<sup>18</sup>. With more extreme heat comes more wildfires and power outages that can leave millions displaced and in dangerous living situations. In June 2022 both India and China recorded extremely high temperatures that made it feel like the end of August instead of the beginning of June. Global warming is making heat waves and fires more common, with researchers finding that climate change made a record-setting heat wave in India in March 2022 30 times more likely than if there was no human-caused climate change<sup>19</sup>. In 2021 wildfires in the U.S. burned just over 7 million acres. From 2012 to 2021 there were an average of 70,000 wildfires annually<sup>20</sup> and burned an average of 7.4 million acres every year, with 2015 having the most fires and acres burned.

Heat waves are becoming increasingly frequent because of climate change. There has been an increasing public health problem caused by heat waves. Extreme heat has become the primary cause of weather-related mortality in the U.S. This trend is likely to spread across the world as climate change shows no signs of stopping.

In the United States, California has seen some of the most extreme wildfires ever in the past few years, leaving hundreds of thousands of people displaced and firefighters constantly having to put out new fires. Germany's Max Planck Institute has said that some cities may become inhabitable by the end of the century because of the increase in extreme heat seen worldwide. Many regions that are experiencing more extreme heat than they have ever seen are less prone to dry and extreme heat than the MENA region. This is a worrying indicator that the MENA region may be quickly becoming a dangerous place to live because of extreme heat.

### **b. History in the Arab World**

---

<sup>18</sup> <https://www.cbsnews.com/news/heat-wave-wildfires-california-nevada-arizona-texas-britain/>

<sup>19</sup> <https://www.worldweatherattribution.org/climate-change-made-devastating-early-heat-in-india-and-pakistan-30-times-more-likely/>

<sup>20</sup> [https://www.epa.gov/climate-indicators/climate-change-indicators-wildfires#:~:text=Since%201983%2C%20the%20National%20Interagency.year%20\(see%20Figure%201\).](https://www.epa.gov/climate-indicators/climate-change-indicators-wildfires#:~:text=Since%201983%2C%20the%20National%20Interagency.year%20(see%20Figure%201).)

The Arab World is warming at twice the pace of the global average<sup>21</sup>. This is an alarming indicator that governments need to take immediate action or be left with uninhabitable land. The MENA region is the hottest region in the world, with a mainly dry and arid climate. This leaves the region susceptible to higher temperatures than most of the world, with climate change just increasing these temperatures. In late June 2022, Iran recorded 52 degrees Celsius (126 degrees Fahrenheit) and had temperatures remain high throughout July 2022. If these trends continue, they could bring chronic water shortages and the inability to grow crops because of the droughts this heat would cause. The region is already prone to droughts and struggling now as its freshwater supplies become scarcer. These hypotheticals of losing resources at a faster pace because of the heat are already becoming realities in the MENA region.

In June 2021 in Iraq, citizens broke out in protest because the electricity in the country has become increasingly unstable as the temperatures climbed to record highs, leading to at least three Iraqi deaths<sup>22</sup>. The same issue has plagued Lebanon. In July 2022, citizens protested at the Ministry of Energy because of power cuts, forcing citizens to either get generators or live in extreme heat without electricity or air conditioning<sup>23</sup>. In December 2021 wildfires also raged in Lebanon destroying some of the already limited forests in the nation. The governments in charge in these nations are who the citizens blame for the power outages and for not putting in reforms to avert the crisis. While all of this is happening the drought and fires brought by these extended periods of extreme heat are causing resource loss in an already resource-scarce region, begging the question of how much longer can the Arab world go on without taking concrete action to combat extreme heat. The League should look towards immediate and long-term solutions as this issue is not going away.

### **c. Finding a Solution to the Problem: Past, Present, and Future**

The citizens of the MENA region have dealt with bouts of extreme heat for many years, yet the region still does not have the necessary infrastructure to combat these temperatures. One way to help adapt to living in increasingly hot conditions is to create public awareness before the drought starts and get the technology to detect early signs of a heat wave/drought. France made a National HeatWave Plan after a heat wave in 2003 killed almost fifteen thousand people, which makes citizens aware of a heat wave before it hits so they are prepared<sup>24</sup>. Nations like Iran, Saudi Arabia, and the UAE are all signers of the Paris agreement to stop climate change, showing a good sign of governments pledging action against climate change but they must follow through to help stop this extreme heat. The council should consider incentives to get other nations to agree to the Paris Climate Accords or similar agreements.

---

<sup>21</sup> <https://foreignpolicy.com/2021/08/24/the-middle-east-is-becoming-literally-uninhabitable/>

<sup>22</sup> <https://www.bbc.com/news/world-middle-east-57693688>

<sup>23</sup> <https://www.arabnews.com/node/2131646/middle-east>

<sup>24</sup> <https://www.france24.com/en/20150701-france-paris-heat-wave-alert-deadly-2003-summer-guidelines>

It also cannot be ignored that regional cooperation on this issue would be beneficial to all. The MENA region is very homogenous and therefore suffers from similar issues like resource loss from these heat waves. Implementing climate-smart agriculture can increase crop resilience in high heat, help to reduce food insecurity in the region, and help to counter resource loss<sup>25</sup>. There are private companies that have been working to develop this agriculture technology that could be an avenue for the Council to work with. The World Bank also pledged in its first-ever Climate Change Action Plan (2016-2020) to work with countries to help deliver this smart agriculture and keep countries in line with the Paris Agreement<sup>26</sup>. Whichever way the Council decides to proceed, it is imperative that the solutions are well-rounded for both short and long-term issues brought on by extreme heat. The Council could also discuss relief measures needed for those currently affected by this extreme heat.

## II. Questions to Consider in Your Research

- What have the temperatures been in my country during the most recent summer? What is my country's record high?
- How has my country handled the current extreme heat and wildfires, if they have had wildfires?
- Is my country's power grid equipped to handle increasingly high temperatures or have there been power outages?
- What have my country's leaders said to address the extreme heat and what climate change agreements have they signed?
- What are the main resources my country has lost from extreme heat and droughts?

## III. Questions a Resolution Might Answer

- How can member nations of the Arab League agree on an agreement to combat extreme heat and attempt to regain resource loss?
- What safeguards can the Arab League put in place to be prepared for even higher temperatures, if they were to come?
- Should the Arab League look at what other countries have done or created unique region-specific plans?

## IV. Additional Resources

- [Articles Implications for workability and survivability in populations exposed to extreme heat under climate change: a modeling study](https://www.growfurther.org/dry-but-important-climate-smart-agriculture-in-the-middle-east-and-north-africa/)

---

<sup>25</sup>

<https://www.growfurther.org/dry-but-important-climate-smart-agriculture-in-the-middle-east-and-north-africa/>

<sup>26</sup> <https://www.worldbank.org/en/news/infographic/2021/06/22/climate-change-action-plan-2021-2025>

- [ENVIRONMENTAL CHALLENGES IN THE MENA REGIONi By Iyad Abumoghli – Director of UNEP Faith for Earth Initiative Adele Goncalves](#)
- [Extreme Heat: The Urgent Climate Impact | Middle East Institute](#)
- [Business-as-usual will lead to super and ultra-extreme heatwaves in the Middle East and North Africa | npj Climate and Atmospheric Science](#)