

**2021-2022**

**Model Arab League**

**BACKGROUND GUIDE**

**Council of Arab Environmental Affairs Ministers**

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**Original draft by Bree Cowan, Chair of the Council of Environmental Affairs Ministers at the 2022 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 2021-2022 Model Arab League season! My name is Bree Cowan. I am currently a senior at Converse College pursuing degrees in Politics, Spanish, and Psychology. This year, I have the pleasure of serving as the chair of the Council of Arab Environmental Affairs Ministers at the National University Model Arab League (NUMAL) conference, as well as the Southeast Regional Model Arab League (SERMAL) conference in Spartanburg, South Carolina at my very own Converse College. This is my fourth year with Model Arab League, and it will be my third year acting as chair. At last year’s conference, I had the opportunity to debate in this committee, which opened my eyes to its importance to the Arab League. Environmental issues have severe implications for the MENA region and thus deserve critical analysis by some of the best and brightest minds in the Model.

Model Arab League has provided me with so many unique and exciting opportunities, including a study abroad trip to Morocco! Apart from these travel opportunities, one can expect to improve skills that are important in the professional world, especially in diplomacy, policy, academia, and international relations. The skills you learn while going through the process from research to drafting solutions will stick with you throughout your professional career and the contacts you make will provide ample support in later years. It is my hope that you leave this conference with confidence in your abilities and new knowledge of Middle Eastern and North African politics.

I would like to take a moment to explain the expectations that we have for you as debaters. First and foremost: research, research, research. Perhaps the most important part of Model Arab League is gaining in depth knowledge on the prescribed topics. These topics are selected based on their pertinence to the Arab League. As such, delegates are expected to reflect the interests of their Member States as well as the Arab League as a whole. This background guide can and should be used as a starting point, but your research should expand far beyond what is written herein. Second, please reference the available resources and become acquainted with parliamentary procedure. The National Council provides a lot of material regarding the rules and procedures during conference; this will be beneficial to first time delegates, or even for experienced delegates who may wish to polish their knowledge. Third, come prepared to speak! The only way other delegates will know what you spent weeks to months working on is if you present your ideas during our committee sessions. With your representation of any Member State in the Arab League, you are an integral part of the committee sessions.

Please email me at [blcowan001@converse.edu](mailto:blcowan001@converse.edu) if you have any questions or concerns! I am more than happy to help. Happy researching!

Best,

Bree Cowan

**Topic I: Devising ways to increase public-private sector cooperation on 'green energy' in ways that align with the Arab Initiative for Sustainable Development.**

**I. Introduction to the Topic**

**A. General Background**

Green energy is defined as, “any energy type that is generated from natural resources, such as sunlight, wind or water,” but that also does not produce pollution.[[1]](#footnote-0) [[2]](#footnote-1) In the past few decades, the emphasis on developing green sources of energy have increased due to the rapid depletion of nonrenewable energy sources such as coal, oil, and natural gas, and the harmful effect that these fossil fuels have on the environment. Even with more focus on green energy, the field of study remains underdeveloped and underinvested. The United Nations has made great strides on establishing an international institutional framework for sustainable development in the 17 Sustainable Development Goals (SDGS) set forth in the Agenda 2030.

International dialogue on sustainable development owes its beginnings to the United Nations Rio Earth Summit of 1992, and the subsequent conferences in Johannesburg (2002), Rio de Janeiro (2012), and New York (2015), the latter being the setting where the SDGs were officially adopted as the agenda for 2030.[[3]](#footnote-2) Specifically, SDG7 states a mission to, “ensure access to affordable, reliable, sustainable and modern energy for all.”[[4]](#footnote-3) Some of the targets that the guidelines set out to be achieved are “7.2 increase substantially the share of renewable energy in the global energy mix” and “7.a enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.” indicated by the international financial flow to developing countries.[[5]](#footnote-4)As part of achieving this goal, the United Nations regularly holds events, seminars, conferences, forums, and classes to assist in the implementation process. Further, the UN routinely highlights publications sharing best practices and frameworks for implementation of the SDGs.

One way in which to expand renewable energy source capacity and usage is through private and public sector cooperation. Private sector involvement is essential to expanding renewable energy resources and the infrastructures and technologies required to harness the energy. By including the private sector in the consideration and implementation of sustainable development initiatives, the League can ensure that there are no overlapping regulation conflicts and maintain an open dialogue with different industries of the private sector.

**B. History in the Arab World**

The MENA region is among the most affected by the looming crisis caused by harmful sources of energy such as fossil fuels. Already a volatile climate, the effects that come with extracting and burning fossil fuels exasperate an already dire situation. In fact, a report by Greenpeace places several GCC cities among the top 50 most polluted cities in the world, with Dubai and Riyadh at the top of the list.[[6]](#footnote-5) Even with the looming threat, the MENA region severely lacks tangible progress toward renewable, clean energy. According to the journal *International Politics and Society*, investment in green energy has increased nine times within the past ten years.[[7]](#footnote-6) Some Arab countries have begun the transition to green energy sources and have set lofty goals: Morocco aims to have 50% of its electricity produced by renewable energy by 2030, and the UAE and Oman have plans to achieve 30-35% green energy in their total energy mix by 2050. Saudi Arabia’s Vision 2030 aims to produce at least 30% of its energy from renewable sources, especially nuclear and solar energy.[[8]](#footnote-7) The United Arab Emirates has even announced plans to create a zero-carbon, zero-waste urban community called Masdar City in Abu Dhabi, as a model of modern sustainable living[[9]](#footnote-8). Still, other oil rich GCC countries remain at 100% for total installed capacity of energy coming from fossil fuels.[[10]](#footnote-9) Further, many Arab League Member States face many institutional and political barriers to any sort of progress on renewables. In 2015, renewable power production, including energy produced by hydropower, failed to exceed 6%.[[11]](#footnote-10) In a January 2019 summit held in Beirut, Lebanon the Arab League, along with the International Renewable Energy Agency (IRENA) and the Regional Centre for Renewable Energy and Energy Efficiency (RCREEE) implemented the PACE plan, with the commitment from participating States to increase the Arab region’s installed renewable energy production capacity from 12 GW to 80GW by 2030.[[12]](#footnote-11) However, as can be seen in the 2020 IRENA report, many Arab states are expected to fall well short of the agreed upon target before 2030.

The League of Arab States has also been historically engaged in sustainable development dialogues. On October 25, 2001, the League of Arab States adopted a regional framework for sustainable development entitled the Sustainable Development Initiative in the Arab Region (SDIAR).[[13]](#footnote-12) In a 2002 statement to the United Nations, Mrs. Fatima Salah El Din Helmi El Mallah, former director at the Department of Environment and Sustainable Development reinforced the Arab League’s commitment to international documents and declarations such as Agenda 21 and the World Summit on Sustainable Development (WSSD).[[14]](#footnote-13)

The danger that lies ahead is due to the scarcity of water in the MENA region. Most forms of renewable energy need only two things to produce it: water and land.[[15]](#footnote-14) Because the MENA region suffers most heavily from water and food insecurity, the production of renewable energy must not interfere with other commitments made within international documents and declarations, and Member States must be careful to not divert valuable resources to other sustainability efforts at the risk of leaving water scarce populations vulnerable.

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

When developing potential solutions, it is important for Member States to consider the SDIAR framework. The Arab League has recommitted itself to sustainable development, and emphasised the need for a shift to green energy throughout the MENA region. Still, regional cooperation as well as public-private sector cooperation has failed to gain definitive traction. Wealthy GCC countries such as Saudi Arabia and Oman have already begun the trend toward renewable energy production, but most countries in the region remain well behind the goals set out in the 2030 agenda.

Moving forward, potential solutions should discuss what regional approaches may be beneficial for developing renewable energy for domestic use and commercial exportation. The Arab League must decide whether regional or league wide cooperation will be more beneficial in establishing the infrastructure necessary to produce renewable energy. Additionally, Member States must devise a plan for how to increase private sector interest in sustainable energy development alongside individual governments. This should be done by mainstreaming environmental issues and considerations in other sectors of a Member State’s economy to allow for better cooperation between stakeholders.

Discussions should include how to overcome the challenges associated with implementing individual and international sustainable development plans. With many countries and states already investing into renewable energy sources, it is important to coordinate those campaigns with the private sector and with the Arab League as a whole. The League has struggled to move beyond declaratory statements into the realm of on the ground progress, which will prove to be the next step in achieving sustainable development goals.

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

* Does my State have an individual action plan or framework in place for sustainable development?
* How has my State progressed in regards to the SDIAR?
* How much renewable energy does my Member State currently produce?
* What does my Member State do to encourage private sector participation and cooperation toward sustainable development?

**III. Questions a Resolution Might Answer**

* How can the Arab League encourage private sector involvement in achieving the goals outlined in the Sustainable Development Initiative?
* In what ways can the Arab League further develop individual Member States’ storage capacity and infrastructure for green energy production?
* Does the Arab League need to reassess previously set goals and commitments in regards to the total production of green energy?
* How often should sustainable development plans be assessed on a league-wide and individual Member State basis?

**IV. Additional Resources**

[**The Future We Want**](https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/66/288&Lang=E)

*This document is a resolution adopted by the United Nations on July 27, 2012. In it, the UN General Assembly reconfirmed the organization’s commitment to sustainable development and a future of renewable green energy. It discusses expectations and best practices set and agreed upon by all parties. It also discusses the mechanisms of implementation of the goals outlined within the document.*

[**A Roadmap for Renewable Energy in the Middle East and North Africa**](https://www.oxfordenergy.org/wpcms/wp-content/uploads/2014/01/MEP-6.pdf)

*This document is a publication by The Oxford Institute For Energy Studies. It is a wonderful source of information addressing the barriers to and path toward renewable energy in the MENA region. The paper is especially helpful with its considerations on ways to promote renewables within the region.*

[**The Rise of Renewable Energy in the MENA Region**](https://repository.upenn.edu/cgi/viewcontent.cgi?article=1071&context=sire)

*Another report published by the University of Pennsylvania regarding the governmental policies regarding Arab energy resources. The author focuses on the attitudes and behaviors toward renewable and non-renewable energy by analyzing Egypt and the United Arab Emirates.*

[**Renewable energy in the arab world : transfer of knowledge and prospects for Arab cooperation (fes.de)**](https://library.fes.de/pdf-files/bueros/amman/11667.pdf)

*This is a large research project published by an author in Amman, Jordan. It provides an overview of renewable energy and future opportunities for diversification and increasing member states’ capacities.*

**Topic II: Assessing the effect of environmental warfare in current and post-conflict States.**

**I. Introduction to the Topic**

**A. General Background**

War and conflict can have devastating effects on the environments in which the fighting occurs. High intensity conflicts lead to sharp increases in CO2 emissions and damage to sensitive geographical landscapes due to the vast utilisation of fuel and large scale vehicle movement.[[16]](#footnote-15) There are also dangers of pollution and contamination of air, soil, and water supplies. Environmental warfare is defined as, “deliberate and illegal destruction, exploitation, or modification of the environment as a strategy of war or in times of armed conflict,”[[17]](#footnote-16) such as the case of Qayyarah, northern Iraq where the Islamic State enacts a scorched-earth policy. This policy is detrimental to food security and livestock, especially in vulnerable rural communities.[[18]](#footnote-17) It is important to note the difference between active and passive environmental warfare. Active environmental warfare refers to the actual weaponization of the environment and using the environment to wage war.[[19]](#footnote-18) Passive environmental warfare, on the other hand, refers to the indirect effects that conflict has on the degradation of the environment. Passive warfare does not violate international law, except in cases where the damage is widespread and long-lasting.[[20]](#footnote-19) Active environmental warfare can be deemed a violation of international law even when there has been no direct damage to the environment. This distinction is important in regards to the application of different internationally recognized laws and whether any party accused of being involved in an act of environmental warfare can be found guilty.

In addition to harmful CO2 emissions and scorched earth policies of current military operations, past aggression toward environmental landscapes includes the United States’ involvement in the Vietnam War. In 1974, it was revealed that the United States invested $21.6 million through a method known as cloud seeding in order to modify the weather and cause flooding to the Ho Chi Minh Trail, causing rainfall to trend 30% above average.[[21]](#footnote-20) Following this application of ‘weather warfare’ the Soviet Union submitted a draft to prohibit all forms of environment and climate modification for military use, which was unanimously accepted by the General Assembly, apart from five abstentions including the United States.[[22]](#footnote-21) In addition to the aforementioned documents, the UN General Assembly designated November 6 of each year to be International Day for Preventing the Exploitation of the Environment in War and Armed Conflict, a measure that surely emphasises the necessity for international action.

The United Nations Environment Programme (UNEP) found that over the course of the past six decades, over 40% of armed conflicts have been linked to the exploitation or degradation of the environment.[[23]](#footnote-22) The United Nations document from the Rome Statute of the International Criminal Court states in Article 8, clause 2b, subclause iv that, “Intentionally launching an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilian objects or widespread, long-term and severe damage to the natural environment” is defined as a war crime and a violation of the internationally recognized Geneva Convention.[[24]](#footnote-23) Despite most of the international community agreeing upon the importance of protecting the environment during armed conflict, little has been done to ensure that these attacks are not taking place or that the effects of these attacks are mitigated and, when possible, reversed.

**B. History in the Arab World**

Environmental warfare has been used several times in the MENA region’s tumultuous history. In 2019, the number of attacks on environmental infrastructure in water scarce places such as Yemen, and large scale crop fires in States such as Iraq and Syria trended upwards, worrying experts and activists.[[25]](#footnote-24) Violent scorched earth tactics employed by ISIS throughout Iraq are excellent examples of the displacement and suffering caused by the destruction of homes, attacks on food supply lines and means of production, and burning of trees and farmland.[[26]](#footnote-25) Armed groups set 19 oil wells on fire in a town near Mosul and damage from the fighting caused chlorine and a sulphur dioxide gas leak, causing the hospitalization of over 100 civilians.[[27]](#footnote-26) Prolonged conflict throughout the region has devastated an already volatile and vulnerable environment.

Events in Palestine provide another example of an Arab League Member State that has been a victim of environmental warfare in the form of agricultural terrorism. In May 2018, one Palestinian farmer named Maher Karaje suffered at the hands of Israeli settlers when Karaje’s entire livelihood was taken before his eyes: over 450 grapevines were slashed and left to dry out weeks before harvesting season.[[28]](#footnote-27) From this attack, Karaje lost 80,000 shekels (equivalent to $23,000USD) in profit from the grapes that he would have harvested and sold, and incurred an additional cost required to rebuild the infrastructure of his vineyard. Other similar attacks have been carried out allegedly at the hands of Israelis, leaving thousands of Palestinian farmers without their farmlands.[[29]](#footnote-28) These attacks on agriculture are part of a wider theme of targeting the means of food production and food security within these vulnerable spaces.

Another aspect of environmental warfare is the weaponization of water resources and water infrastructures. The MENA region is already prone to water scarcity, and water stress is likely one of the number one causes of conflict in the region.[[30]](#footnote-29) Aggressors have begun targeting water supplies and water systems in vulnerable States. This method of warfare is used by violent extremist organizations, governments, and other non-state actors to weaponize water. Scholar and author Marcus King defines six ways in which water resources are being weaponized in the Arab region, with the most common and applicable being the strategic weaponization (in the form of seizing dams or other water sources), tactical weaponization by targeting military assets or interests, and coercive weaponization (by using psychological terrorism or extortion).[[31]](#footnote-30) In his research, Dr. King found strategic weaponization to be the most common form of water weaponization.

One of the main issues in the Arab region is the use of environmental warfare by non-state actors and violent extremist organizations, who in most if not all cases, do not adhere to international laws and declarations such as the Geneva Convention. Extremist groups such as the aforementioned ISIS in Syria and Iraq, and al-Shabaab in Somalia are two prime examples of groups that have been perpetrators of environmental warfare, but continue to experience relative impunity on a regional scale.[[32]](#footnote-31)

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

There are many different ways to address this topic. Debaters may find it useful to take a two pronged approach: one to address the immediate needs of Member States currently facing exploitation and degradation of their environments due to conflict, and another to address those post conflict Member States who may require rebuilding after attacks on vital environmental infrastructure, including farmland and water systems. In doing so, the Council can reference past bilateral and international treaties that may exist on environmental warfare. Using these existing documents as guides for future discussions can be beneficial in promoting League-wide cohesion.

Other solutions should focus on the restoration of water infrastructure in post conflict States. Without restoring these damaged systems, the humanitarian impacts of environmental warfare will continue to be felt on a large scale. The Council should decide how much and in what forms aid will come to those Member States in need of help. Debaters should also discuss what actions should be taken against violent extremist organizations and non-state actors who are not limited by international law.

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

* Are there any existing policies either within your State or in the region on environmental warfare?
* Has your State been affected by an attack on its environment or environmental infrastructure?
* In what ways can the Arab League bolster each member state’s respective environmental infrastructures to protect against attacks?

**III. Questions a Resolution Might Answer**

* Should the League adopt league-wide measures to prevent further attacks on or damage to the environmental infrastructures of Member States?
* Will the Arab League reach its own definition of environmental warfare?
* Is an act of environmental warfare considered a punishable offense within the Arab League and if so, what are potential consequences of such an act?
* What can be done to aid struggling Member States who have been or are currently being targeted as victims of environmental warfare?

**IV. Additional Resources**

[**Targeting Environmental Infrastructures**](https://www.jstor.org/stable/pdf/26294229.pdf?refreqid=excelsior%3A4bb2c93701f1bb850d32f5b282dd7fb5)

*This is a research paper from the Security Dialogue by SAGE Journals. It covers information on different impacts of warfare on human ecosystems. It further details the international laws in place against environmental warfare, and describes the shortcomings of some of these laws.*

[**Impact of War on Development in Yemen**](https://yemen.un.org/sites/default/files/2019-09/Assessing%20the%20Impact%20of%20War%20on%20Development%20in%20Yemen.pdf)

*This is a resource specifically analysing the environmental impacts of conflict in Yemen. It is especially useful in its considerations on the targeting of infrastructure in Yemen.*

[**Climate Change, Envir Climate Change, Environmental T onmental Terrorism, E orism, Eco-Terrorism and orism and Emerging Threats**](https://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=1863&context=jss)

*This paper discusses the root causes of environmental warfare and evaluates why certain resources (such as water) are targeted. Its primary focus lies on violent extremist groups.*

[**Global Environmental Warfare**](https://www.researchgate.net/profile/J-Herndon/publication/341168573_Global_Environmental_Warfare/links/5ec86221299bf1c09ad5a40c/Global-Environmental-Warfare.pdf)

*This source explores the issue of “peaceful” environmental modification. The paper discusses why passive forms of environmental warfare should still be deemed harmful and therefore prohibited.*

**Topic III: Determining viable regional pathways to reduce the League’s dependence on oil.**

**I. Introduction to the Topic**

**A. General Background**

As the world becomes more industrialized and globalized, nonrenewable resources continue to be depleted at exorbitant rates. In fact, at the current global rates of consumption, oil reserves are expected to run out by 2052, and coal and natural gas running out by 2060.[[33]](#footnote-32) However, demand for these harmful fossil fuels has only increased through expansion of the transport and manufacturing sectors. Demand for oil has increased by an astounding 1.3%, and demand for coal and natural gas has increased by a less striking, but still significant 0.8%.[[34]](#footnote-33)It is also no secret that these resources will run out, sooner rather than later considering the continuing rise of oil production and consumption around the globe. According to Our World in Data, the world supplies of coal, natural gas, and oil are estimated to be depleted in 114 years, 52 years, and 50 years respectively.[[35]](#footnote-34) Though the specific numbers may vary among experts, the undeniable fact is that the global community is running out time to lessen its dependence on oil.

**B. History in the Arab World**

The MENA region is considered one of the most volatile and unstable due to its dependence on oil. For most Arab countries, oil makes up the largest part of their economies. For example, the Kingdom of Saudi Arabia’s petroleum reserves account for 16% in the entire world and its oil sector accounts for 87% of budget revenues, 42% of GDP, and 90% of export earnings.[[36]](#footnote-35) Many member states in the Arab League are located in the world’s Sun Belt, where access to sunlight is mostly unfettered. Yet, the region’s ability to harness energy from solar power is staggeringly underdeveloped. In 2016, IRENA projected that only 0.4% of the renewable energy produced from the MENA region was produced through solar power.[[37]](#footnote-36) This should be an immediate focus of the Arab League to increase member states’ capabilities to harness this power, which is much less harmful and more cost effective than its oil counterpart.

The Organization of Arab Petroleum Exporting Countries (OAPEC) was established as a regional intergovernmental organization between founding members Kuwait, Libya, and Saudi Arabia.[[38]](#footnote-37) OAPEC has since grown to 11 Arab members, all of which are members of the League of Arab States. Tunisia was formerly a member, but suspended its voting rights in 1987.[[39]](#footnote-38)[[40]](#footnote-39) The organization was established with the main goal of developing and maintaining a robust Petroleum industry for those countries whose main source of income is from the production of oil.[[41]](#footnote-40) Much of the current efforts of OAPEC include streamlining the transportation of crude oils and increasing Arab investment into the oil industry.

Moving forward, the League of Arab States must forge strong regional ties in support of a shift away from oil and other nonrenewable fossil fuels, much like the founders intended to protect the interests of the petroleum industry with the creation of OAPEC. In order to adapt to a world that is fastly running out of oil, the League must discuss ways in which to increase cooperation, and to strengthen existing policies and frameworks regarding the production and consumption of oil. The League should also aim to increase its capacity to produce oil alternatives.

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

One potential solution the Council may choose to explore is to conduct a League-wide assessment that will determine the current status of oil dependency in member states since no assessment of this sort has been conducted by the Arab League itself. This internal reflection grants the Council the opportunity to clearly decide the best regional pathways toward lessening oil dependency.

Other solutions might focus on the investment of time and resources into alternative energy sources. Many Arab nations spearhead scientific research in the form of grants and scholarships, but in order to make real progress, the Council might decide to divert more individual national resources toward research and development of alternative energy sources such as solar, wind, and nuclear energy. Each individual member state’s capabilities, natural climate, and available resources will determine the best viable alternative source of energy. Because different regions are equipped with different resources and capabilities, open dialogue between member states is absolutely essential to progress on this topic. The Council should identify which member states have similar goals and interests, and streamline efforts and dialogue between them.

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

* Is your Member State a large importer or exporter of oil?
* Does your Member State invest in any alternative types of fuel, and if so, what alternatives does your State employ?
* What limitations does the Arab League face to lessening its dependence on oil?
* Which other Member States in the League share similar interests or face similar challenges to your State?

**III. Questions a Resolution Might Answer**

* What is the most viable alternative to oil for the MENA region?
* How can the Arab League adapt to the challenges of more countries around the world switching more abundantly to alternative fuel sources?
* How can the League encourage research and development into alternative energy sources that will decrease the region’s oil dependency?

**IV. Additional Resources**

[**Why Are Fossil Fuels So Hard To Quit?**](https://www.brookings.edu/essay/why-are-fossil-fuels-so-hard-to-quit/)

*This is an amazing article by the Brookings Institution describing why the world depends so heavily upon oil and other fossil fuels. In it, the author also discusses the challenges to the possible alternatives to oil such as solar and wind power. It also includes important implications of the COVID-19 pandemic on the world consumption of oil.*

[**The efforts of the Arab League Education, Culture and Scientific Organization (ALECSO) in the field of renewable energy**](https://sci-hub.st/https://doi.org/10.1016/0960-1481(95)00046-M)

*This report discusses the efforts of ALECSO to promote renewable energy in the Arab region. Mainstreaming the use of renewables and the technologies involved will help the spread of oil alternatives.*

[**Life After Oil The Oil Crash?**](http://www.igpp.ucla.edu/public/mkivelso/refs/PUBLICATIONS/http___www.lifeaftertheoilcrash.pdf)

*The author of this article answers commonly asked questions about oil use and renewable energy production. It may prove valuable in identifying the numerous types of renewable energy that might be used as an alternative to oil.*

[**Analysis of oil export dependency of MENA countries: Drivers, trends and prospects**](https://sci-hubtw.hkvisa.net/10.1016/j.enpol.2009.10.062)

*This 2009 analysis is a good background source to gather statistics on decade long trends that have left the MENA region dependent on oil exports. This particular study includes seven MENA countries.*

**Topic IV: Revamping efforts at sustainable protection and management of the League’s coastal zones.**

**I. Introduction to the Topic**

**A. General Background**

Historically, most settlements are established where the water is, such was the case of the Ancient Egyptians and Nubians who settled around the Nile. A civilization thrives when its water source is clean, sustained, and managed properly and fairly. In fact, approximately 60% of all major cities are located in coastal zones.[[42]](#footnote-41) Coastal zones are also some of the most ecologically diverse regions due to the large-scale tidal action. Coastal zones offer many different challenges and opportunities than other environments and landscapes, especially as it pertains to agriculture, terrorism, and development. Coastal zones are dynamic, meaning that waves and wind cause an ever changing coast.[[43]](#footnote-42) This makes these regions very vulnerable to eustatic changes in sea level. The ever changing landscape of coastal zones leaves them extremely vulnerable to human activity and urban development. One of the most pressing issues regarding coastal zones is the unprecedented amounts of urbanization. To put things in perspective, coastal zones account for only 6% of the global surface area, yet over 38% of the total estimated global value of ecosystem services is contributed by coastal zones.[[44]](#footnote-43)

With the large amounts of urbanization come serious concerns. Apart from the obvious issue of overcrowding in major coastal cities, large rates of development and an already volatile climate outlook, coastal zones are at great risk of flooding. According to a report by the United Nations, large coastal cities can expect at least a nine fold increase in flood risk before the year 2050.[[45]](#footnote-44) Of course, this is but one issue, but it will prove to have severe consequences if the flood risk is left unmitigated. The current issue is that many coastal cities, including cities such as Ho Chi Minh City, face infrastructural difficulties in setting up flood prevention programs, and most cities are without the necessary capacities to accommodate such large numbers of citydwellers.

**B. History in the Arab World**

The MENA region is divided into three separate maritime subregions: the Mediterranean Sea, the Gulf of Aden and Red Sea, and the ROPME Sea area.[[46]](#footnote-45) Many Arab countries that lay along the Arabian Sea and the Gulf region are experiencing the effects of rising sea levels. Cities such as Doha where 96% of Qatar’s population resides are at high risk for flooding.[[47]](#footnote-46) According to the World Economic Forum 2019 Global Risks Report, 24 ports in the Middle East and 19 ports in North Africa that are vulnerable to flooding due to rising sea levels.[[48]](#footnote-47)

Another danger associated with the MENA region’s coastal cities is the trend of urbanization and unregulated coastal development for the purposes of coastal tourism. According to UNEP , 40% of the GCC coast and most of the coastal Maghreb region has already been developed.[[49]](#footnote-48) With the population expected to double by 2050, urbanization poses a large risk for coastal zones.[[50]](#footnote-49) The Arabian coast in particular is already filled with seawalls, breakwaters, and jetties, all of which are meant to counter the risk of flooding; but these structures also disrupt the natural coastal habitat. Overfishing, bycatch, and coastal soil erosion are other shared challenges for the MENA coastal cities.

Coastal management is an area of focus according to the Arab Initiative for Sustainable Development. The sixth focus, “resources management” declares a specific goal of integrating management efforts of coastal zones.[[51]](#footnote-50) Again, GCC countries such as the United Arab Emirates have made efforts to protect and more efficiently manage its coastal zones. To combat salt water intrusion into the water supplies of coastal communities, the UAE has installed numerous desalination plants across the country. These plants have indeed helped solve the issue of water salinity, but they pose potential risks, and do considerable damage as well.[[52]](#footnote-51) The Kingdom of Saudi Arabia is another country that has outlined a national plan to protect and manage its coastal zones.

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

The Council may wish to discuss solutions that include water management proposals and future city infrastructure projects that will take into account rising sea levels and other environmental challenges. As previously stated, the Arab Initiative calls for an integrated management approach. Assessment of these goals could be beneficial for the Council to discuss.

Member States should discuss potential regulatory measures to prevent the overdevelopment of coastal zones. This could be done by adopting league-wide standards or rules regarding building along coastal zones. Lastly, the Council may wish to discuss the impacts of coastal tourism, which is a developing sector in many Gulf countries.

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

* Does my state have any coastal zones?
* How do issues of coastal zones impact land-locked states?
* What standards does your member state have for coastal management?

**III. Questions a Resolution Might Answer**

* How can Member States best coordinate their individual coastal zone management strategies?
* What best practices and guidelines can be set for development and protection of coastal landscapes?
* How can the tourism industry be made more sustainable in the MENA region?

**IV. Additional Resources**

[**Towards more sustainable coastal development in the Arabian Gulf: Opportunities for ecological engineering in an urbanized seascape.**](https://sci-hub.st/10.1016/j.marpolbul.2019.03.024)

*This article discusses a few of the challenges of sustainable coastal development. I enjoy this link because within the article itself, there are many other sources hyperlinked that could prove useful for your research.*

[**The impact of climate change on coastal tourism in MENA countries.**](https://meea.sites.luc.edu/volume14/PDFS/hilmi%20Article%20MEEA%20Chicago%2027%20dec%202011_1.pdf)

*This report by the IAEA Environment Laboratories explains the role of climate change and how it impacts coastal tourism, a sector that has been growing in many Arab countries.*

# [**Emerging Technologies to Enable Sustainable Controlled Environment Agriculture in the Extreme Environments of Middle East-North Africa Coastal Regions**](https://www.frontiersin.org/articles/10.3389/fpls.2020.00801/full)

*This article explains the new technological innovations that exist to help sustain coastal regions in the MENA region. This is definitely a more scientific paper, so do not get too preoccupied with the terminology, rather than the main ideas of how to protect coastal environments.*

# [**Kingdom of Morocco Integrated Coastal Zone Management Project**](https://documents1.worldbank.org/curated/en/808171468062107931/pdf/664130PAD0P1210Official0Use0Only090.pdf)

*This link is to the Kingdom of Morocco’s proposal to the World Bank for its integrated coastal zone management project. It is a detailed account of the steps Morocco has taken toward sustainable management of its coastal zones.*

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