

Issues of Environmental Justice & Resistance in the MENA Region

IMES-MERIP Public Outreach & Education Resources
L.Hood 2023

Institute for
Middle East Studies

THE GEORGE WASHINGTON UNIVERSITY

*This activity is supported by a Title VI National Resource Center grant from the US
Department of Education

“A number of countries in the Middle East and North Africa rely on transboundary water resources. The high degree of reliance is evident in an indicator known as the dependency ratio, which is the proportion of a nation’s freshwater resources—both surface and groundwater—that comes from outside that country. Syria and Iraq depend on the Tigris and Euphrates rivers, which rise in the mountainous region of southeastern Turkey. Egypt sources most of its water from the Nile, a river basin that spans 11 countries. Jordan’s two main surface water resources, the Jordan and Yarmouk rivers, are shared with its neighbors. Israel taps into surface and groundwater resources that traverse borders with the West Bank, Lebanon and Syria. Kuwait and Bahrain’s groundwater reserves are fed by water flowing laterally underground from Saudi Arabia. This dependence on shared water resources adds complexity to water allocation decisions. Countries have different and competing interests. Relations of power are uneven between those who control the headwaters and those who are downstream, as well as between long-term users and those who seek to expand their use. Efforts to tap into shared resources can create tensions with other nations, as in 1990 when Turkey stopped the flow of the Euphrates River for a month to fill the reservoir behind the Ataturk Dam, cutting off the supply to Syria and Iraq. Tensions are also high in the ongoing conflict over Ethiopia’s new dam on the Nile. In the case of shared aquifers, the added uncertainties surrounding groundwater volumes and flows compound the challenges.”

- “Water in the Middle East: A Primer” by Jessica Barnes, MERIP Sept. 2020

Our Goals:

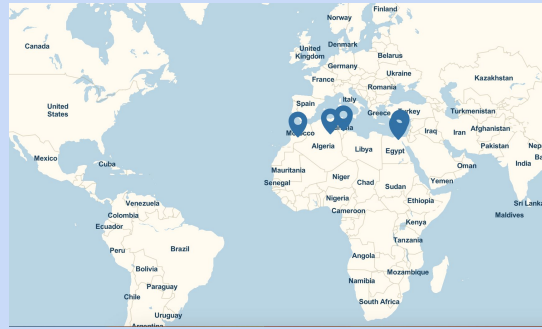
-To be able to build vocabulary & content area knowledge about environmental issues in the Middle East & North Africa (MENA) region, and to be able to expand our understanding of and develop more nuanced views of & challenge stereotypes/incomplete or inaccurate perceptions about the MENA region

TRIVIA DIRECTIONS:

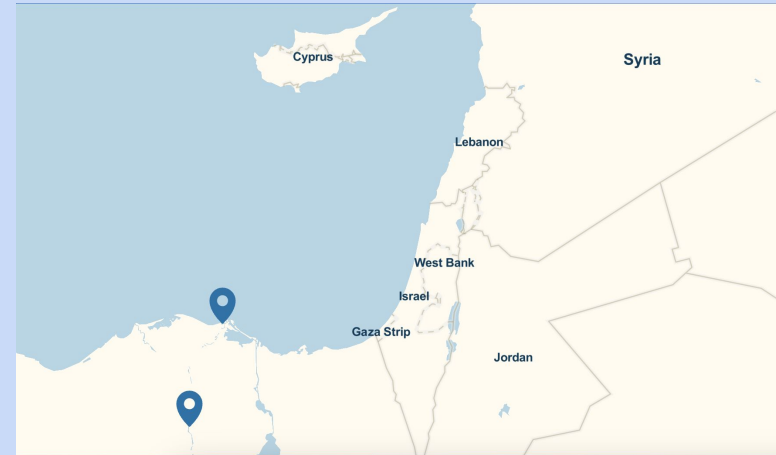
- You will be randomly assigned to teams of 3 or 4 (could use the (free) Team Shake app)
- Write your name at the top of your trivia sheet (**EACH PERSON MUST COMPLETE HIS/HER/THEIR OWN SHEET & TURN IT IN at the end of the hour today**)
- Choose ONE team leader to be the official scribe; this person's sheet will get scored by another team at the end of the game
- Create a school-appropriate Team Name
- Discuss answers to questions quietly so other groups can't "steal" your answers :)
- You may not use any resources except your teammates' combined knowledge** (no books, no notes, no handouts, no internet, no phone, etc.)
- Each member of the top three winning teams will get a prize :) - The game will take about 2 class periods
- Have fun!

****You are NOT expected to know these answers; make an educated guess based upon your prior knowledge & learn new facts when we check & correct**

Questions?



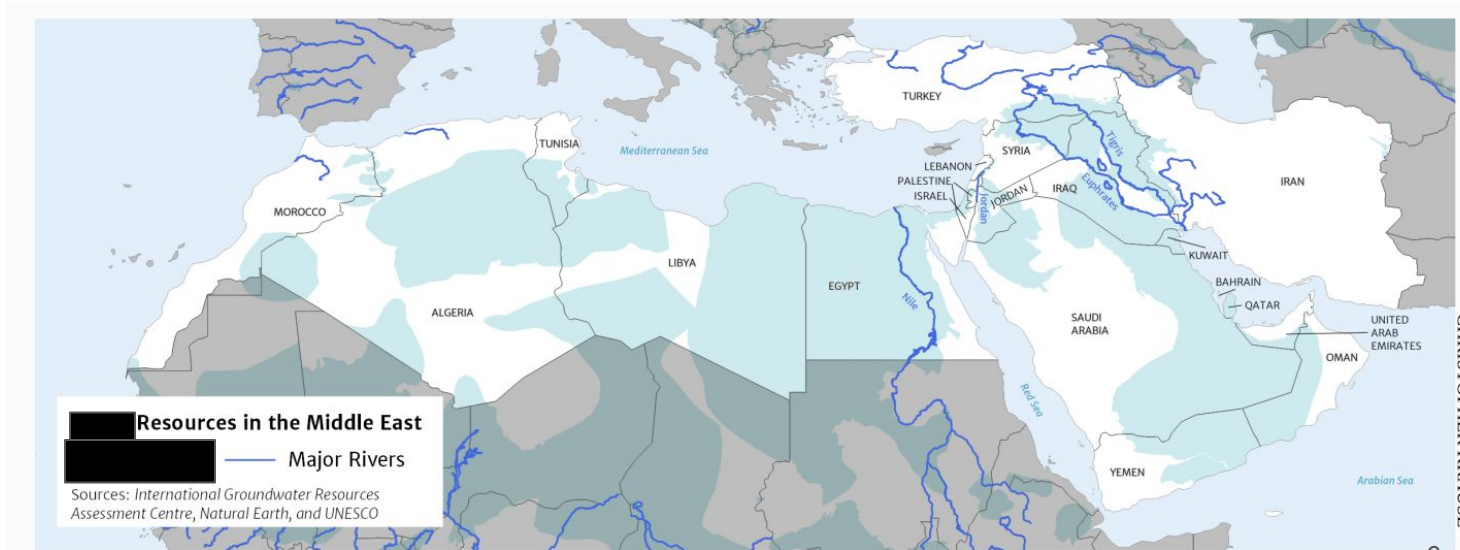
Visual Round: Name That Map



Visual Round: Question #1

Below right is a thematic map at a regional scale.

-What data is represented in light blue/aqua?



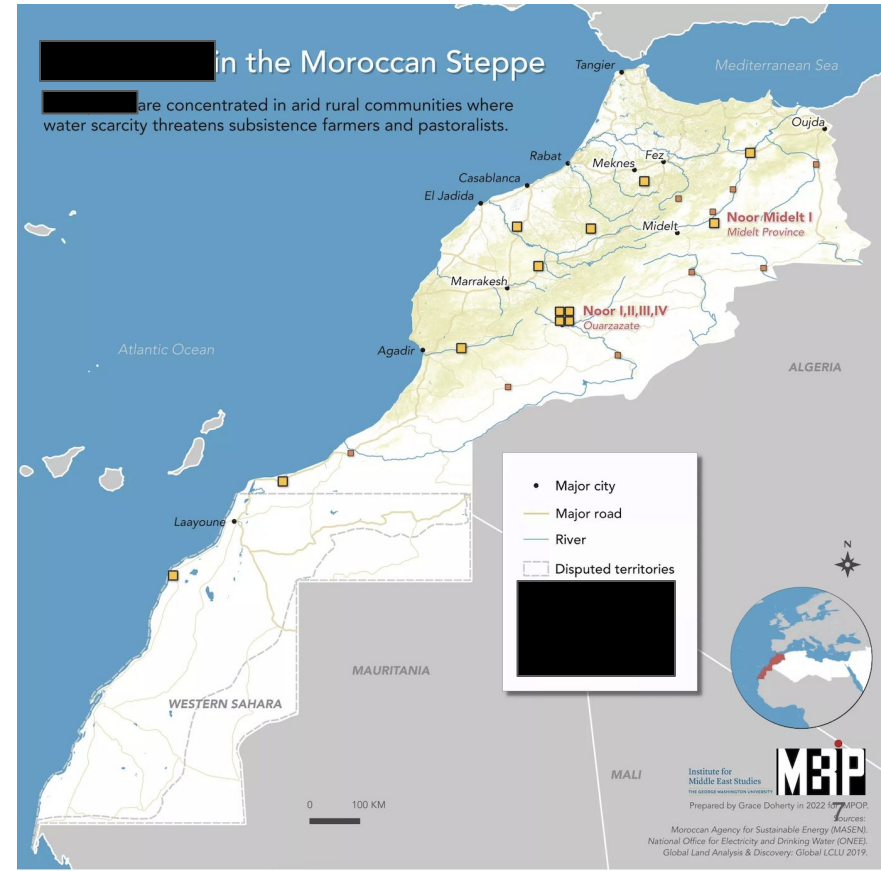
***1 point**

Visual Round: Question #2

At right is a thematic map at a regional scale.

-What data is represented by the yellow squares/symbols?

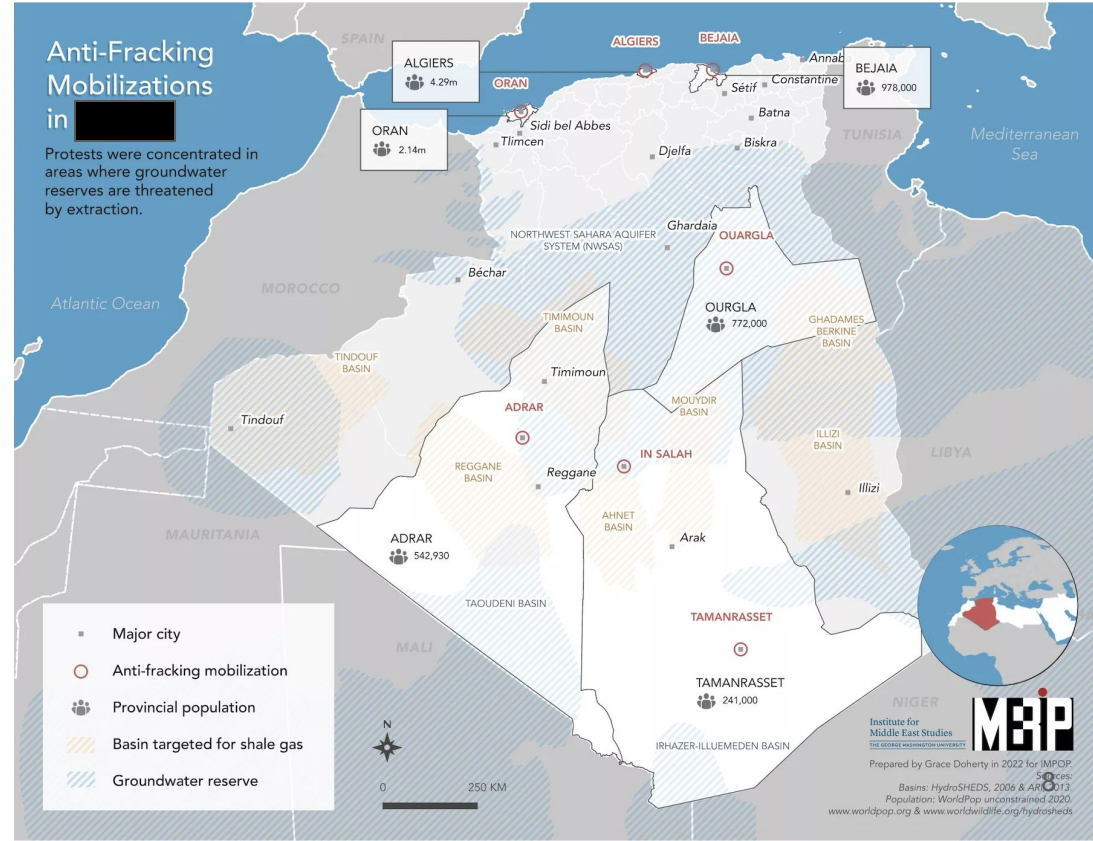
***1 point**



Visual Round: Question #3

-This thematic map at a regional scale displays anti-fracking protest movements throughout which country?

***1 point**

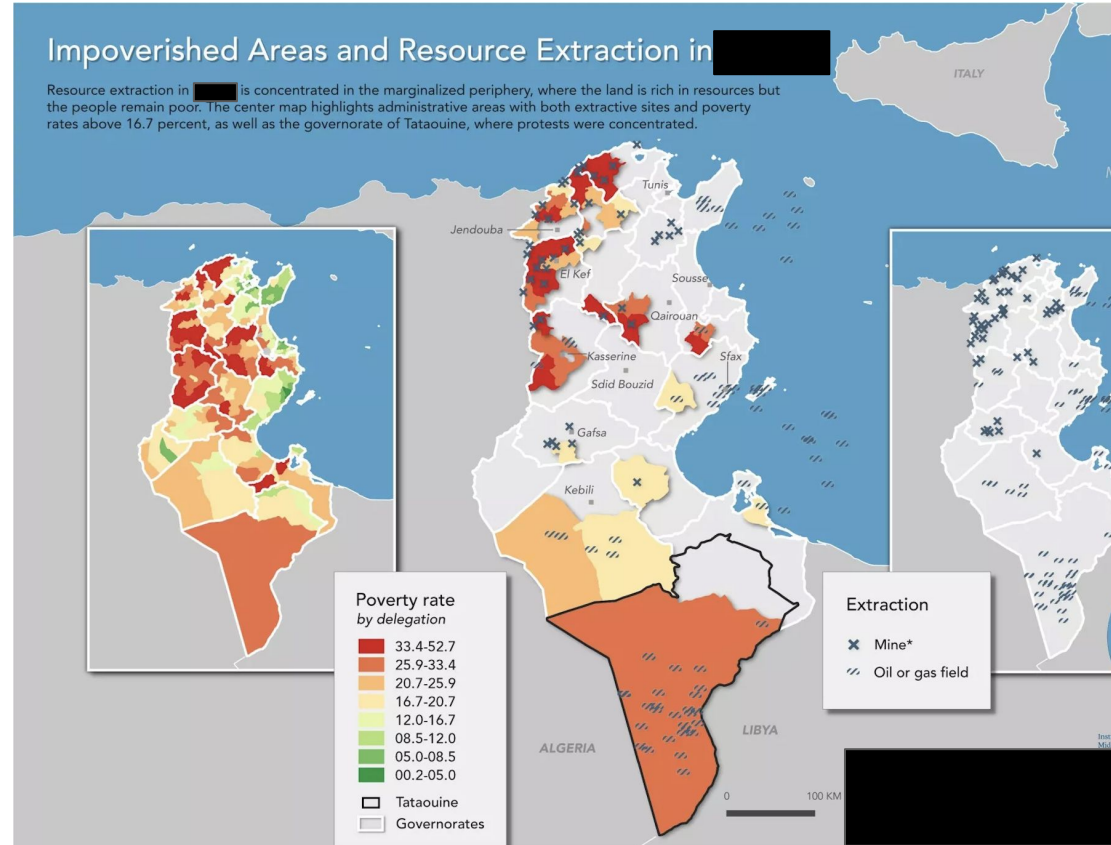


Visual Round: Question #4

-The maps at right shows
several layers of data about
poverty and resource extraction
in which country?

**Challenge question: What spatial relationship can you identify between regions of poverty and where natural resources are extracted?*

***1 point**



Visual Round: Question #5

81% of Egyptian aquaculture is located in Damietta Governorate.

Fishing communities have allied with the tourism industry
and local activists to stop the expansion of fertilizer production.

-Which river is represented on the map at right?

*Hint: It is the longest river in world.

***1 point**





The Rif Mountains, Morocco

WIKIMEDIA COMMONS/GuHKS



Photo credit: Karen Rignall



Image source: <https://imes.elliott.gwu.edu/public-outreach-and-educator-resources/impop/moroccan-farmers-battle-with-solar-complexes-for-access-to-dwindling-water-resources/>

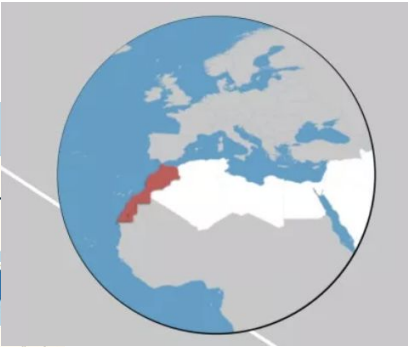
Round 1: Morocco



Photo credit: Karen Rignall



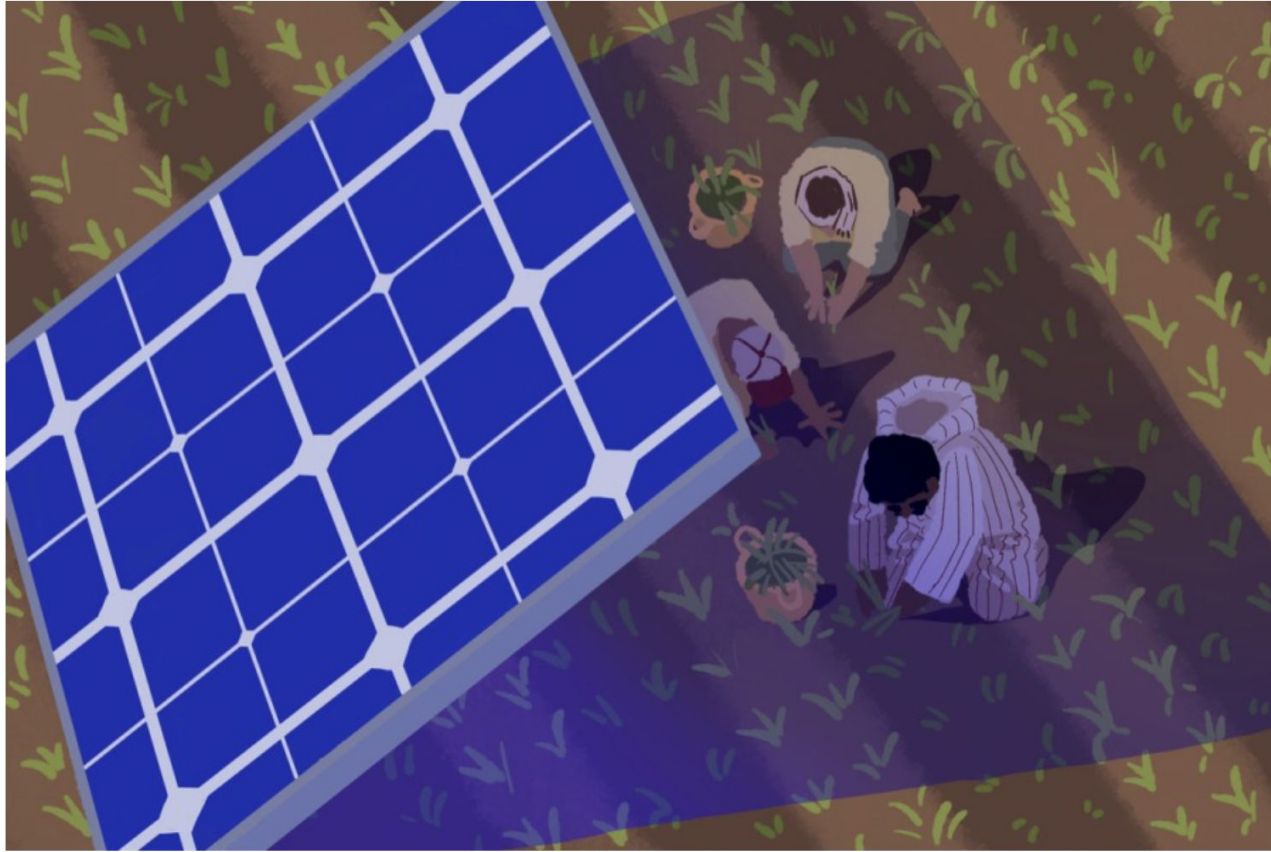
Image source: <https://imes.elliott.gwu.edu/public-outreach-and-educator-resources/impop/>



Political Cartoon

Discussion/analysis questions:

https://www.loc.gov/static/programs/teachers/getting-started-with-primary-sources/documents/Analyzing_Political_Cartoons.pdf



In Morocco, as in many water scarce countries, farmers and pastoralists compete with large energy infrastructure installations for access to water, grazing land, and other resources. Cartoon by Deena Mohamed.

Round 1: Question #1

-Which two major European powers exerted colonial influence over Morocco throughout the 20th century (1900s)?

***2 points, 1 point for each correct country**



Image credit: <https://unsplash.com/s/photos/morocco-flag>

Round 1: Question #2

-What is the name/toponym of the contested region within/adjacent to Morocco?



***1 point**

Round 1: Question #3

Competition over land and water between extraction, renewable energy, and large-scale commercial agriculture is squeezing out many rural residents who are mobilizing against large projects.

-What agricultural product is pictured at right?



***1 point**

Round 1: Question #4

Like solar energy projects, mining presents similar tensions over land and resource access and ownership for local residents, as well as having negative environmental impacts.

-What type of mine is in the background of this photo?

***1 point**



Round 1: Question #5

Morocco is home to the Noor solar plant, one of the largest solar energy producing facilities in the world. While many local residents who live near to the plant support a shift to cleaner, more sustainable energy sources, many in recent years have protested the impacts of the plant on local residents, such as the loss of access to and ownership of land, the lack of jobs the plant has produced for local people, and the lack of benefits local communities have seen from the profits the plant generates.

-Name the 3 countries that have multinational corporations involved in the Noor solar plant.



The thermosolar power plant at Noor II, Ouarzazate, Morocco, 2016. Youssef Boudlal/Reuters

***3 possible points; 1 point for each correct country** 17



Round 2: Algeria



Political Cartoon

Discussion/analysis questions:

https://www.loc.gov/static/programs/teachers/getting-started-with-primary-sources/documents/Analyzing_Political_Cartoons.pdf



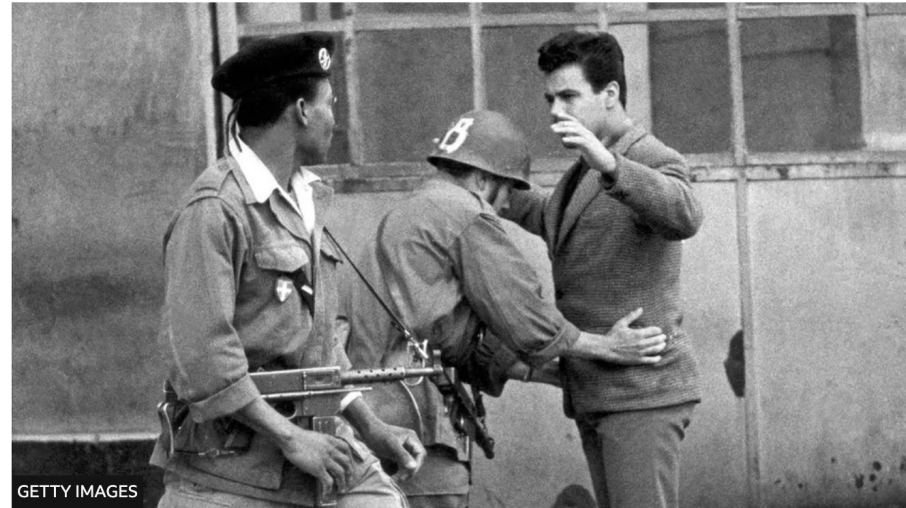
Round 2: Question #1

-Algerians wrested their national independence/sovereignty from former colonial power, France, in which decade of the 20th century (1900s)?

*Optional Hint: JFK was president of the US

***1 point for correct decade**

***Extra point for exact year**



Algerians endured a long and bitter struggle for independence

Image source: <https://www.bbc.com/news/world-africa-14118852>

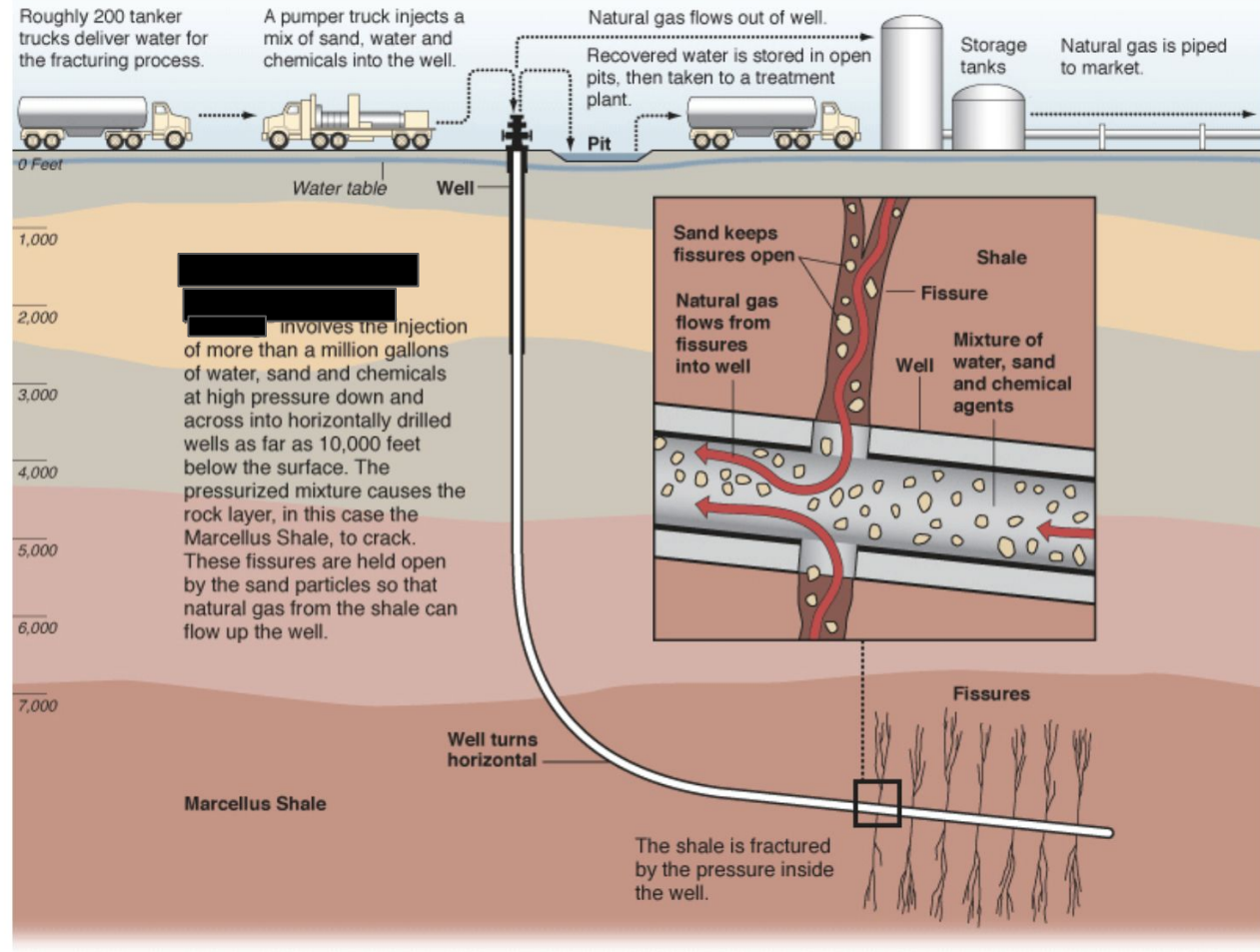
Round 2:

Question #2

-This image depicts
which energy production
process, the impetus of ongoing
protests throughout Algeria?

***2 possible points**

**(1 point for informal
term; 1 point for full
term)**



Graphic by Al Granberg

Round 2: Question #3

In 2014-2015, some Algerians (particularly in the lower-income south of the country) were concerned about the dangerous environmental impacts of fracking, such as the unsustainable intensive water usage required in the process, as well as experimental drilling that former colonial power France had forbidden in France but allowed in Algeria:



Protesters hold signs that read "National sovereignty is the red line," "Shale gas is a patriotic cause," and "We are all In Salah" on March 14, 2015, in the city of Ouargla. Photo by the author. Naoual Belakhdar

***1 point**

-Which social media platform was instrumental in helping concerned Algerians organize to protest fracking for shale gas in 2014-2015?

Round 2: Question #4

-Algeria's economy relies heavily on the export of fossil fuels (e.x. oil); a study by the US Energy Information Administration (EIA) estimates that Algeria ranks third or fourth in the world in recoverable shale gas reserves after which two countries?

*Optional hint: 1 country is in Asia, 1 country is in South America

***2 points; 1 point for each correct country**



Round 2: Question #5

-Protesters in Algeria concerned with the environmental & human health impacts of drilling for subterranean natural gas were **MOST** concerned with the potential pollution/depletion of **which precious natural resource?**

***1 point**



Round 3: Tunisia



Political cartoon

Discussion/analysis questions:

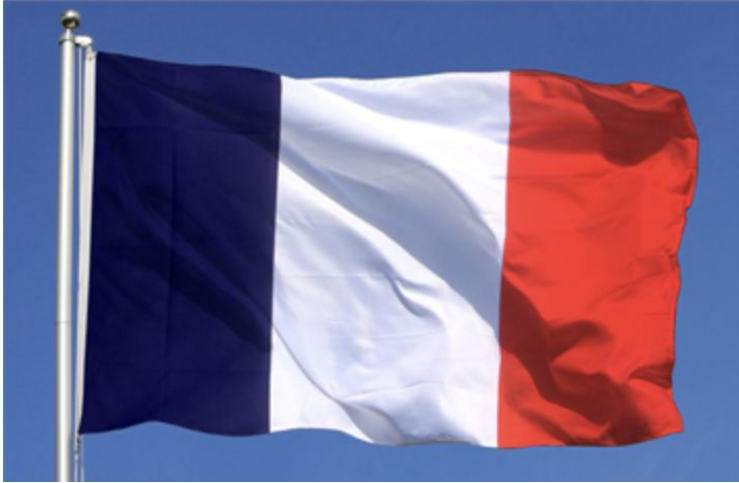
https://www.loc.gov/static/programs/teachers/getting-started-with-primary-sources/documents/Analyzing_Political_Cartoons.pdf



Wealthy urban Tunisians at a cafe; rural Tunisians protest from the country's periphery. Cartoon by Deena Mohamed.

Round 3: Question #1

-Which European power colonized Tunisia from the 1800s until its independence in 1956?



***1 point**



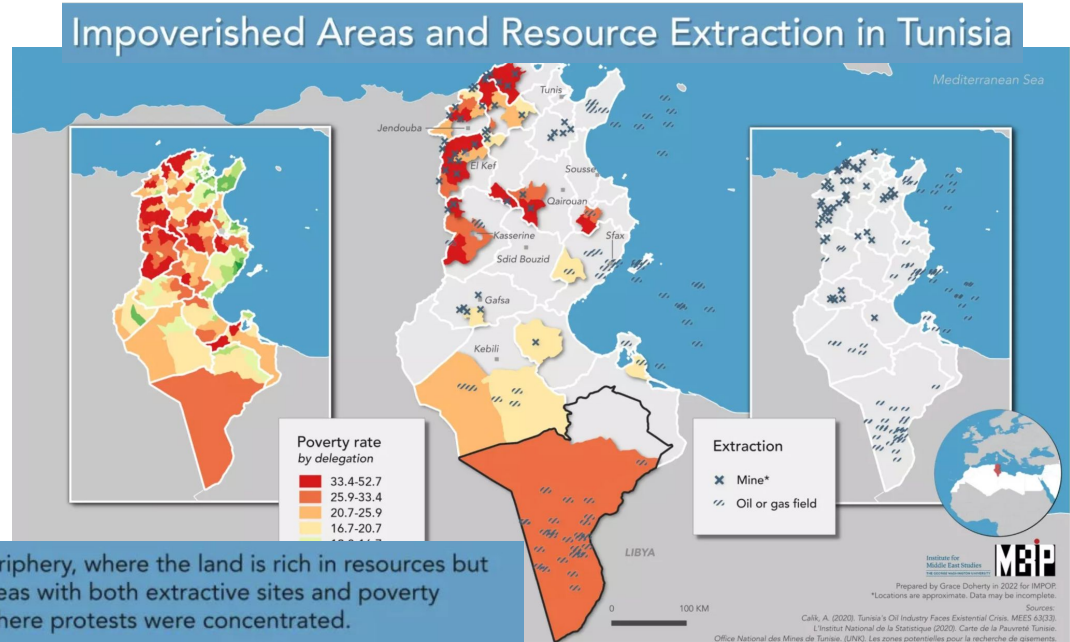
Habib Bourguiba, independent Tunisia's first leader

Round 3: Question #2

In recent years, Tunisia has experienced internal tensions due to uneven development throughout the country. Like many countries, Tunisia's cities/urban areas have higher concentrations of wealth and opportunity.

-What is the term for parts of a country outside/on the periphery of a city with lower population density, often with an agricultural economy?

***1 point**



Resource extraction in Tunisia is concentrated in the marginalized periphery, where the land is rich in resources but the people remain poor. The center map highlights administrative areas with both extractive sites and poverty rates above 16.7 percent, as well as the governorate of Tataouine, where protests were concentrated.

Round 3: Question #3

Climate change is exacerbating disasters such as forest fires wildfires in the Mediterranean region, including North Africa.

More than 30 people were killed by wildfires in Tunisia in July of 2023 during a record heat wave.

-In degrees Fahrenheit, temperatures in Tunisia reached how high in July 2023?



A once lush green landscape has been transformed – all that remains are charred trees and undergrowth
[Simon Speakman Cordall/Al Jazeera]

***1 point for being within a 5 degree (F) range**

Round 3: Question #4

-Which type of fruit is pictured below, at right?

*This fruit is produced largely in the south of Tunisia; some farmers say that the quality and quantity of the fruit is declining due to rising temperatures resulting from climate change. After olives, this product is the country's second most profitable agricultural export.

***1 point**



Photograph: Zoubeir Souissi/Reuters



Photograph: Layli Foroudi/Reuters

Round 3: Question #5

“**[THIS FOOD]**, with its various recipes, constitutes the staple food of all of the populations of the Maghreb, including Tunisia. It is for this region what rice is for most of Asia.

Visitors to Tunisian homes are invariably received around meals of **[THIS FOOD]**. But while wealthy households typically have a variety of additional meal options on hand, poorer ones often rely solely on **[THIS FOOD]**—even ‘naked’ or plain—for daily sustenance. Beyond representing traditional norms of hospitality, **[THIS FOOD]** is also rich in information on the economic, social, cultural and ecological circumstances of those who produce and prepare it...

Almost self-sufficient in cereals until the beginning of the 20th century, Tunisia now imports more than half of its food needs as dependency increases from one year to the next...”

-What food is being described,
above, and is pictured at right
(as the base of the dish)?



***1 point**



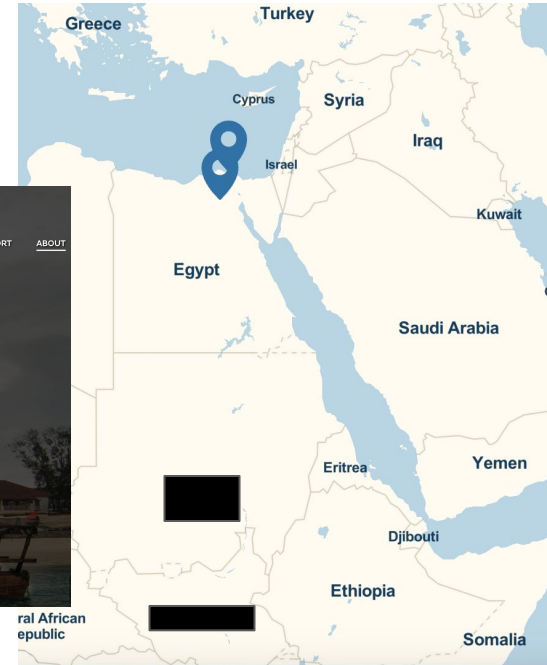
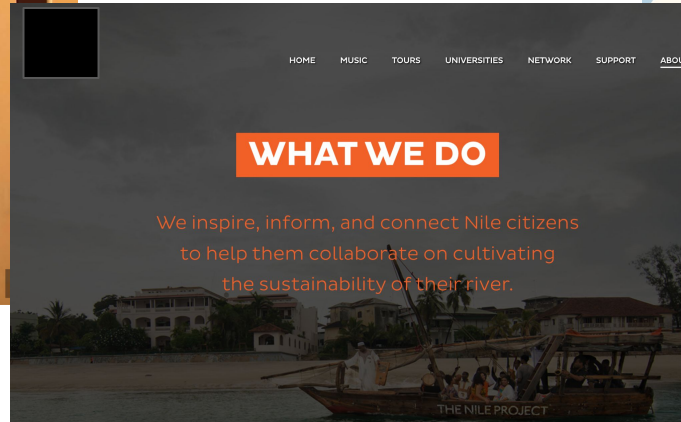
Sound Round: Voices of Resistance



Sound Round: Question #1

*Transboundary resources lead to complex strains on both people and the environment.

-The Nile River today separates Egypt from which neighboring country, which, in the past, was a part of Ancient Egypt?



*1 point for correct country

*Extra points for song title, artist, and/or album title

Sound Round: Question #2

Some have called this artist the voice of the Arab Spring (2011); this artist hails from the same country in which a street vendor selling fruit named Mohamed Bouazizi set himself on fire in protest of his own government's authoritarianism, sparking what became known as the Arab Spring— a series of pro-democracy revolutions across the MENA region. This song title translates into English as “My Word is Free”.

-In which country did the Arab Spring protests begin/originate?

***1 point for country**

***Extra points for song title, artist, and/or album title**



Sound Round: Question #3

-This American rapper and poet identifies with heritage from which Middle Eastern country that has been devastated by a civil war since the Arab Spring in 2011?

***Optional hints: The country is led by authoritarian leader President Bashar al-Assad; the capital is Damascus**

(This piece speaks to the disparate impacts of human impacts on the environment and the impacts of climate change.)



***1 point for**

***Extra points for song title, artist, and/or album title**

Sound Round: Question #4

-This Middle Eastern musician belongs to which nation of people, an Arabic-speaking group that lives under Israeli rule/formal military occupation?



***1 point for**

***Extra points for song title, artist, and/or album title**

Sound Round: Question #5

-Kurds are ethnic minority group and stateless nation, living mostly
within which 4 Middle Eastern countries?

(This artist is known for her ethnic pride and for standing up to extremist/terrorist groups such as ISIS; warfare in the region has dangerous impacts for people and the environment.)

***1 point for each correct country; up to 4 total points**

***Extra points for song title, artist, and/or album title**





Round 4: Egypt



Wheat grain cascades from cut sacks on a delivery truck at a government-operated mill in central Fayoum, Egypt, May 2022.
Islam Safwat/Bloomberg via Getty Images



Political cartoon

Discussion/analysis questions:

https://www.loc.gov/static/programs/teachers/getting-started-with-primary-sources/documents/Analyzing_Political_Cartoons.pdf



@KhalidAlbaih

A coalition of protestors including fishing communities, workers in the tourism industry, and local ruling class elites jointly opposed the fertilizer plant's construction and the firm's insistence on continued negotiations and dialogue, as the plant would damage not only local estuaries and coastal fishing zones but also mar the scenery that makes the region a tourist destination. Cartoon by Khalid Albaih.

Round 4: Question #1

-The Nile River basin spans how many countries?

***1 point**



<https://visibleearth.nasa.gov/images/71790/the-nile-egypt>

Round 4: Question #2

-In 1882, troops from which European colonial power took over Egypt?

(This imperial power would gradually exit Egypt following WW2.)

***1 point**

Round 4: Question #3

In 2008, protests erupted in the Egyptian city of Damietta against the construction of a fertilizer complex. Protesters were concerned about the impacts of fertilizer production on air and water quality, human health, the local fishing and tourist industries, and the lack of jobs and profits for locals created by the multinational factory.

-The corporation that largely owns the fertilizer complex is based in which foreign country?

***1 point**

Protesters' Concerns
Health and Environment

Declining or disappearing fish stocks 

Health risks from air and water pollution 

Protesters' Concerns
Economy

Threats to jobs in tourism and related sectors 

Subsidies that benefit foreign shareholders 

Corruption in oversight and regulation 

Round 4: Question #4

“He who does not own his food does not own his freedom,” remarked one journalist, writing in *Al-Wafd* newspaper in 2016. (What do you think about this?)

-Egypt and many other countries in the MENA region rely heavily on wheat imported from **which two currently war-torn countries**, ranked #1 and #5 in global wheat exports?

***1 point for each
correct country;
2 total possible
points**



Round 4: Question #5

“Egypt is one of the driest countries in the world. It is also the country that is most dependent on a single source of water: The Nile. The Nile River provides over 93% of Egypt’s water needs, according to Egyptian government documents.” -Sherif Mohy El Deen

-Which country
(outlined in red),
unilaterally decided
to build “The Grand
Renaissance Dam”
on the Nile River?

*This has caused
concerns about
water access for
Egypt & Sudan.

***1 point**



***Hint: The Blue Nile originates in this country**



Potash mine outside Aqaba, Jordan;
photo credit Leah Hood July 2023



Desalination plant, Oman

WIKIMEDIA COMMONS:STARSEND

Round 5: Miscellaneous MENA



The Red Sea at Aqaba, Jordan, photo credit
Leah Hood July 2023

Round 5: Question #1

-What percentage of MENA's water resources are used for agriculture?

Mallow field, Jordan 2023



Photo credit: Leah Hood, Jordan July 2023

***2 points for any team with exact percentage**

***1 point for any team within 5% points on either side of correct answer**

Round 5: Question #2

“An American church group pauses to pray where the Bible says Jesus Christ was baptized. A German choir group breaks into a hymn. Russian women donning white robes submerge themselves in the river’s still, brown waters. A French woman fills two plastic bottles with the supposed holy water to pour over the heads of babies in baptismal ceremonies back home.

What many of these religious tourists don’t know is that this water, at one of Christianity’s holiest sites, is contaminated by sewage. Government officials are well aware of the problem, yet the only warning is a small sign near the parking lot that states, among other things, that this water isn’t potable.” -NatGeo 2018

-WHICH SACRED SITE IS BEING DESCRIBED, ABOVE?

***1 point**

***Optional hint: Multiple choice**

- A) Ganges River
- B) Bdote
- C) Jordan River
- D) Tigris River
- E) Euphrates River

Round 5: Question #3

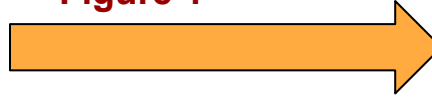
-The Dead Sea (pictured below in Jordan in July 2023) has been rapidly receding in recent decades, its water level dropping at a rate of roughly 4 feet per year, on average. What hazard– pictured in Figure 1– has become a widespread problem as water levels recede?

***1 point**

Photos credit Leah Hood, Jordan, July 2023



Figure 1



A large sinkhole in the middle of the road in the Ein Gedi area west of the Dead Sea is caused by the danger of sinkholes. (2018 photo by NPR)



Round 5: Question #4

-Which nonrenewable natural resource accounts for at least 99% of Iraq's exports?



U.S. Department of Defense



Eric Westervelt, NPR News

***1 point**

Round 5: Question #5

-The people of Syria and Iraq depend on which two rivers for much of their water supply, which stretch to the mountainous region of southeastern Turkey? (Demonstrating the complexities of transboundary natural resources)

***Hint: The region that lies between these two rivers is sometimes called “The Fertile Crescent”**

Aug 3, 2023

Baghdad from the International Space Station



United Arab Emirates astronaut Sultan Alneyadi captured this image of the city lights of Baghdad, Iraq

***2 points**
(1 point for each correct river)

The end!

- Trade official answer sheets with another team– can't score your own
- Make sure team name is written at top
- Add up other team's score after each round
- Circle sum total at top & return sheet to owner
- Point disputes? Your teacher will settle.
- Top 3 winning teams get a prize TDB by teacher