Solving the Global Water Crisis

Abstract:

There is nothing more essential to life than water. Yet, approximately 780 million people in the world lack access to clean drinking water. Without access to clean and easily accessible water families are locked in poverty for generations, which not only creates a vulnerability to diseases but also stunts the development of countries. Clean water is an integral precedent for development. Moreover, consider the multiple factors that perpetuate this global crisis:

1. Climate Change

   - It is a known fact that 40 percent of the global population lacks access to clean drinking water (UN-Water). However, according to the UNDP Turkey, that figure is expected to increase with the rise of global temperatures. Water availability is becoming less predictable in different places because of extreme, unpredictable weather patterns as a result of climate change. With the existing climate change scenario, by 2030, water scarcity in some arid and semi-arid places will displace between 24 million and 700 million people. Moreover, the UN-Water reports that this crisis coupled with climate change is the root of many other issues. Changes in water availability directly impact food security, have implications on health, and have proven the ability to trigger refugee dynamics and political instability.

2. Increasing Water Stressed Countries

   - In 2011, the UN reported that 41 countries experienced water stress. These countries are home to 2 billion people. Although not all 2 billion people are directly affected by the water shortages in their area, they certainly could be in the near future. This is true because 10 of 41 water-stressed countries have already depleted their water resources. It is projected that in 2050, at least 1 in 4 people will be affected by water shortages. The problems these countries are experiencing are rooted in the failure of institutions to ensure a regular supply, as well as inadequate infrastructure.

Moreover, in order to take both restorative and preventative measures when solving the global water crisis, it is important to invest in adaquate infrastructure, treatment technologies, and protecting and restoring water-related ecosystems.

Guide:

- Consider the following questions: How much of the poverty rate is attributable to the lack of sanitation and water accessibility in the country? Why is there a lack of sanitation and water accessibility in the country? What are possible solutions to a lack of water

sanitation in your country whether it pertains to political instability or ecological stressors?

Sources:

- https://www.cdc.gov/healthywater/global/wash_statistics.html
- http://www.tr.undp.org/content/turkey/en/home/sustainable-development-goals/goal-6-clean-water-and-sanitation.html
- https://www.unwater.org/water-facts/climate-change/
- https://www.unwater.org/water-facts/scarcity/

Finding new methods for sustainable development in urban areas

Abstract:
According to the UNDP, a projected 6.5 billion people are expected to live in cities by 2050. Urbanization is not only prominent but rapidly occurring. Moreover, urbanization is undeniably essential for socio-economic transformation and development. However, with this growth comes unintended environmental consequences and resource depletion.

Rural to urban migration in highly populated countries has resulted in a boom in what the UNDP has coined "mega-cities." These cities have become a strategic point for focused development initiatives because together, all 28 mega-cities are home to 453 million people. Cities, especially these big ones are also unique in that extreme poverty is often concentrated there, making them a vantage point in the fight to eradicate poverty worldwide. Although they can be a hub for economic development, cities can also exacerbate inequalities.

While cities only occupy about 3 percent of the Earth's land in total, they account for 60-80 percent of energy consumption and 75 percent of global carbon emissions. These numbers are only growing with rapid urbanization. Other implications of this swift growth include increased pressure on freshwater supplies, sewage, and high pollution levels. The kinds of public health concerns these environmental effects have created are detrimental. The UN reported that ambient air pollution was responsible for 4.2 million deaths in 2016 alone. Moreover, developing safe and innovative environmental infrastructure for cities is crucial.

Finally, making cities sustainable and safe can be done in many ways like ensuring access to safe and affordable housing, investing in public transportation, creating green public spaces, and improving urban planning and management. It's important that we shift our productive efficiency towards the direction in which allocative economic efficiency proves most beneficial for both the benefit of the global economy and the security of all people and invest in

environmentally sustainable infrastructure to mitigate the negative effects of cities on our world and its own inhabitants.

Guide: Consider the following questions: What regulations are necessary for shifting productive efficiency? Which factors that drove urbanization in recent history are equally relevant to contemporary urban growth? To what extent is urban growth in the region a by-product of national economic development? What statistics are needed to gather context to apply allocative efficiency for a country's resources?
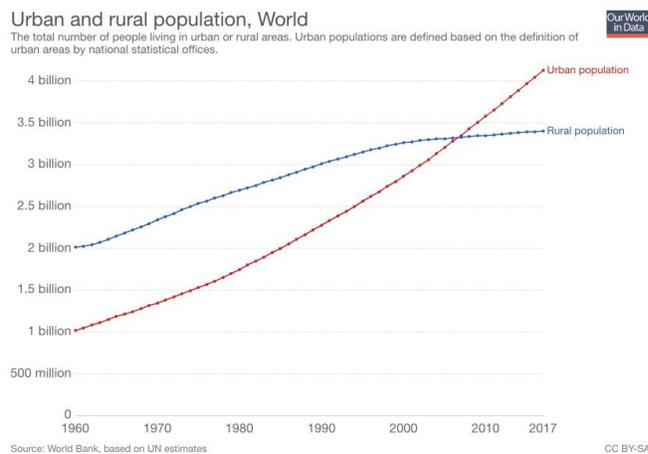
Citations:
http://www.tr.undp.org/content/turkey/en/home/sustainable-development-goals/goal-11-sustainable-cities-and-communities.html
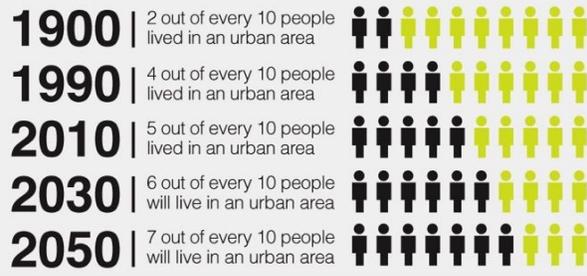https://unhabitat.org/expertise/2-urban-planning-and-design/
https://www.un.org/sustainabledevelopment/cities/
https://www.un.org/en/events/citiesday/assets/pdf/the_worlds_cities_in_2018_data_booklet.pdf

Urban and rural population, World
The total number of people living in urban or rural areas. Urban populations are defined based on the definition of urban areas by national statistical offices.

Source: World Bank, based on UN estimates   CC BY-SA

Urbanization

1900 | 2 out of every 10 people lived in an urban area

1990 | 4 out of every 10 people lived in an urban area

2010 | 5 out of every 10 people lived in an urban area

2030 | 6 out of every 10 people will live in an urban area

2050 | 7 out of every 10 people will live in an urban area

Defined by UN HABITAT as a city with a population of more than 10 million