

WATER SCARCITY IN THE MEDITERRANEAN

LiA Project Impact Showcase - Daniyal Vemuri

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PROJECT OVERVIEW

Bruegel is an economic policy thinktank based in Brussels. It aims to influence European policy in several areas, one of which is Expanding Europe's Green Global Reach.

As part of this agenda, I spent 6 weeks analysing the issue of Water Scarcity in the Mediterranean. As a shared marine ecosystem, states on the Northern and Southern shore have a common interest in tackling the impending challenge of freshwater demand outpacing constrained freshwater supply.

However, there is a dearth of focus on how Mediterranean communities will be impacted by the issue as climate change progresses, and how both top-down and bottom-up responses can be designed to tackle the issue at hand.



IMPACT ON COMMUNITIES

Rural communities relying on agriculture will be hit severely by freshwater scarcity. Agriculture makes up the majority of water withdrawal in all Southern states, with intensive irrigation used to maintain crop yields. As water becomes more scarce, crop yields are likely to fall. This will hit the livelihoods of local communities and threaten food security. Countries may turn to further crop imports to offset this, leaving them more vulnerable to external shocks.

Tourism is an important source of employment for communities particularly in the Northern Mediterranean. As temperatures rise, tourist hotspots in the Mediterranean may seek to maintain their attractiveness through offering further water-based amenities (e.g. ACs, pools). This will increase the tensions between water users (e.g. agriculture and tourism).

Importantly, communities have already experienced civil unrest due to water scarcity. This will intensify as conflicts between water users increase. Importantly, water scarcity is projected to be one of the most important drivers of climate migration - this has a huge potential to create upheaval both within and across countries in the Mediterranean.



OUTPUTS AND FUTURE IMPACT

I created content for a case study box on the Mediterranean that will be used in an upcoming Asian Infrastructure Investment Bank report.

Additionally, I created content that will be used to produce a Bruegel Policy Brief.

Excitingly, our findings will be presented to policymakers at DG MENA. This is a hugely important chance to bring this issue of water scarcity into the limelight and underline the need for policies that lay the foundations for a positive impact in alleviating water stress across the Mediterranean. DG MENA is currently working on creating a new Pact for the Mediterranean - this research will be important in ensuring that water scarcity enters the discourse around that Pact, as a key dimension that will require cross-shore collaboration.



WATER SCARCITY AND CLIMATE CHANGE

Water resources in the Mediterranean have always been unevenly distributed - Northern states are home to around 73% of freshwater resources of the Basin, but are currently equally as populous as the Southern states. Water demand is projected to double or triple by 2050, creating huge water strain concerns on both shores.

Climate change will acutely worsen the already-present issue of water scarcity. The Mediterranean is projected to warm 20% more quickly than the global average, reducing annual precipitation and increasing its variability. Dry seasons will become longer, droughts will become more frequent, and heatwaves will become more intense.

At the same time, the local hydrological cycle is being destabilised. Glaciers act as 'water banks' that stabilise water availability during the year, but these are quickly disappearing - the Pyrenees glaciers are projected to disappear by 2034. Aquifers are being depleted more quickly than they are being recharged, and suffer from saltwater intrusion as sea levels rise.

FURTHER CONSIDERATIONS

I found that any future initiatives to address water scarcity in the Mediterranean will need to put communities first, in terms of understanding their views and needs and building governance structures that give them real control over water to ensure legitimacy and compliance.

Local communities in the Mediterranean view water as an abundant resource that shouldn't be priced. Additionally, communities recognise property rights over water defined in many different ways. Crucially, particularly on the Southern shore citizens view keeping prices low as one of the key functions of government, indicating that tackling water scarcity through the often-recommended approach of pricing water may be difficult in the Mediterranean.

This being the case, there is also room to learn from local communities. Several communities across the Mediterranean have developed their own local governance systems for managing water access, such as *Huertas* in areas of Spain and *Foggaras* in the Algerian oases. Though these governance systems certainly need to be adapted for modern-scale water usage, learning from how these structures have managed water conflicts for hundreds of years offers a way for policymakers to navigate the difficulties around water scarcity adaptation in the Mediterranean.