

Migration and WEF Nexus interconnections in Insular Regions: Insights from Greece

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Greece: an insular state with resource vulnerabilities and dynamic migratory flows

- Insular countries face challenges in maintaining adequate supplies for water, energy, and food demands, which become more nuanced as international migratory flows change
- Greece is home to the most inhabited islands in the EU and, in parallel, at the forefront of an international refugee crisis and significant migration flows
- To understand the pressures Greece's water, energy and food systems are facing from both insularity and migration can be the key for island nations to identifying and capturing opportunities to increase WEF Nexus security and resilience, and improve migration management

Objectives

- Identify interconnections between water-, energy-, and food-related challenges as they relate to underlying conditions as insularity and migration
- Analyze Greece's background and context, focusing on links between WEF challenges, and migration flows
- Discuss findings and provide recommendations that highlight integrative planning and decentralized initiatives to improve the security and resilience of the WEF Nexus

WEF challenges and migration flows in insular regions

Water

- Islands rely on rainwater and groundwater
- Climate change and population growth put harsher pressures
- Their often-small communities provide autonomy

Energy

- Import of fossil fuels
- Much higher oil prices
- Economic uncertainty for local businesses
- Specific energy requirements of island industries result in economic consequences

SDGs for SIDS*



Food

- Climate change and population growth: stress on food systems and islands' survivability
- Increasing tourism and service industries favor lower-cost food imports

Migration

- Climate change: significant changes in migration patterns
- 'Mixed migration' trends with people immigrating and emigrating
- Studies do not consider resource implications for insular regions due to migration

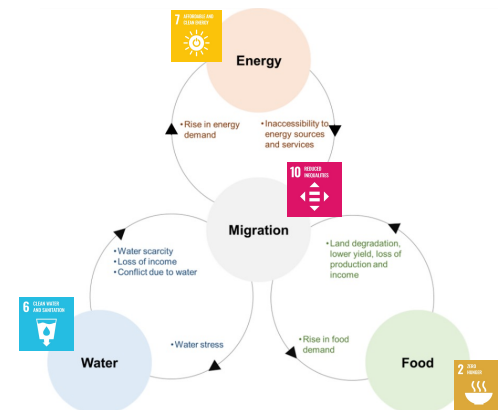


Figure 1. Interconnections between water, energy, food, and migration

Greece – WEF challenges and recent migration flows



- 9,837 islands
- 18.8% of national territory
- 222 inhabited
- 4 Regions comprised of islands

Water

- Limited water resources
- High demand peaks in summer due to tourism
- Groundwater supplies: primary water provider
- Transfers by tankers in less populous islands
- Water imports led to 'leakages'
- Uncoordinated short-term practices

Energy

- Electricity cost much higher than in mainland
- 33 islands in Aegean remain unconnected from the mainland system by 2020
- Large amounts of imported energy sources
- Increasing use of wind and solar photovoltaic power generation (300% from 2010 to 2015)

Food

- Decrease in agriculture, and food production due to increase of tourism
- 40-50% of products from protected designations of origin produced in islands
- Growing aquaculture sector, but 95% of fishing stocks are overfished
- Increased desertification and accelerated destruction of the agricultural sector

Migration

- Increased inward migration flows after 1990
- 2015-2016: one million refugees / forced migrants crossed borders with Turkey to Aegean Islands
- Inadequate conditions in refugee camps, social unrest

Conclusions

- Considering the case of Greece through a WEF Nexus lens reveals many interconnections, between Nexus factors, underlying political and economic challenges and the recent migratory flows
- At an island level, the WEF Nexus can reveal opportunities for local management initiatives, which may produce more resilient results comparing to national-level challenges
- Greece must take into account the WEF Nexus in planning for the sustainability of its tourism sector and ability to accept refugees and asylum seekers in its islands
- The many interconnections between the WEF Nexus, the recent triggering event of refugee crisis, and underlying challenges, highlight the need for systems-based research.
- An objective framework that measures the impact of migration on WEF resource systems, interconnections, and associated externalities could contribute as a foresight mechanism in the decision making process and the development of effective policies

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