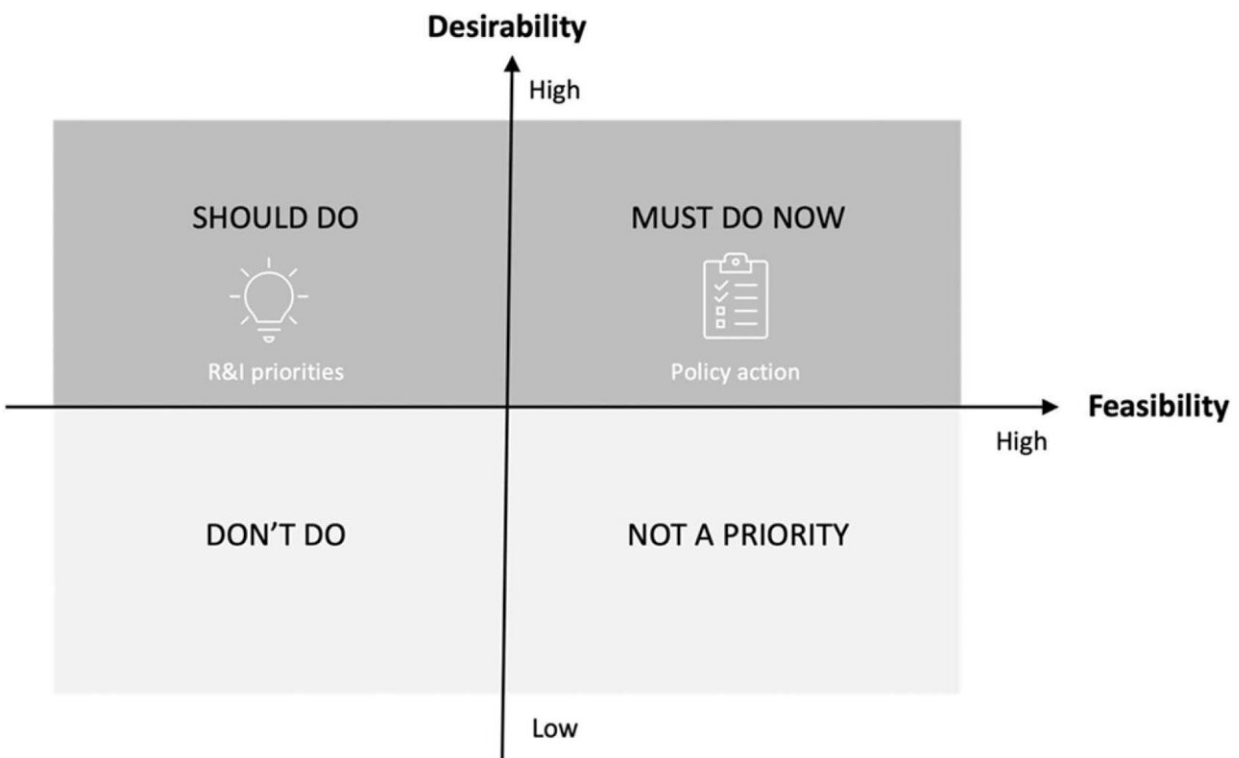


Study finds climate change exacerbates the food gap between North and South Mediterranean countries

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Policy interventions: desirability and feasibility. Credit: *Land Use Policy* (2022). DOI: 10.1016/j.landusepol.2022.106263

The Mediterranean region is widely acknowledged as one of the most exposed in the world to the effects of climate change, water scarcity,

biodiversity loss and land degradation, coupled with a nutrition transition of its populations.

Such agri-food system challenges are complex and closely interconnected: To overcome limitations linked to addressing each of them in isolation, a study led by Marta Antonelli, a scientist at the CMCC Foundation—Euro-Mediterranean Center on Climate Change looks comprehensively at some of the most pressing food-related social, economic, and [environmental challenges](#) in the Mediterranean area.

The study contributes to a better understanding of the Mediterranean's agri-food dynamics in order to assess its progress towards the 2030 Agenda for Sustainable Development in the region. The [empirical findings](#) are based on the results of a Delphi survey, which is an iterative social science technique for gathering opinions, conducted between 2017 and 2018 drawing upon the expertise of about 60 practitioners, experts, and academics, from 19 Mediterranean countries.

By adopting an integrated, comprehensive purview of the agri-food system, the study has, at first, identified the main challenges, trends and driving forces of agri-food systems in the Mediterranean over the short (2020) and medium (2030) term.

Results suggest that the gap between the countries in the South (Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Tunisia, Turkey) and the North of the Mediterranean (France, Greece, Italy, Portugal, Spain) in terms of challenges posed in [water management](#), farming systems and the agri-food value chain is expected to grow.

Experts agree that climate change is going to play a key role in the future of both sides of the Mediterranean, but with a differential impact in the sub-two regions. Perspectives are gloomier for the South than for the North and while the North is deemed capable of addressing, although not

reversing, present negative trends and to strengthen the positive ones, still the multiple challenges the South is exposed to makes the overall balance negative or mixed at the best.

In particular, water-related challenges will persist in the South Mediterranean, linked to an expected higher annual agricultural freshwater withdrawal, both in the short and medium term.

Also nutrition-related challenges will exert a growing pressure especially in the Southern Mediterranean countries. Dietary trends show the abandonment of the Mediterranean diet—which has been recognized to bring benefits for both human and planetary health—due to multifactorial influences including lifestyles changes, food globalization, as well as socio-cultural factors. In the opinion of the experts, the prevalence of overweight will increase.

Moreover, experts suggested that vulnerability to climate change will significantly affect both the North and the South of the region, particularly in the longer term: [climate change](#) exacerbates environmental pressures exerted by [land-use change](#) (such as, urbanization, agricultural intensification), pollution and declining biodiversity, which are likely to impact the livelihoods of people in the entire basin, in terms of environmental security but also in socio-economic terms, by possibly triggering famines, migrations and conflicts.

The study also assesses the desirability and feasibility of alternative policy responses to the challenges the region has to face, and provides informed, evidence-based recommendations that might help different stakeholders to take action.

In these terms, the top priorities identified through the survey include improving [public health](#) by providing routine health education at school;

stopping routine use of antibiotics in healthy animals to promote growth and prevent [infectious diseases](#), as prescribed by the WHO; fostering employment opportunities for rural youth; involving farmers in the use of new technology in agriculture to raise efficiency; addressing technological and managerial innovation gap through increased collaboration with the research community.

The work is published in the journal *Land Use Policy*.

More information: Marta Antonelli et al, The future of the Mediterranean agri-food systems: Trends and perspectives from a Delphi survey, *Land Use Policy* (2022). [DOI: 10.1016/j.landusepol.2022.106263](#)

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