

Title : Poverty and climate change in South and East of Mediterranean ,
causes, consequences et perspectives

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Abstract:

The objectives of the paper:

According to the IPCC AR6 report, The global temperature over the past 10 years has warmed 11 degrees more than during the pre-industrial era (1850-1900). Greenhouse gas concentrations were higher in 2019. Climate change is rapid, intensifying, and affecting all regions of the world. If emissions of CO₂, methane and other greenhouse gases are not reduced, the goal of limiting the temperature increase to 1.5 degrees will be out of reach. The ice caps continue to melt, and the sea level continues to rise. The negative effects of climate change are an intensification of extreme events such as tropical cyclones, sea level rise, heavy precipitation or drought and heat waves. These effects have an impact on nature and biodiversity through the loss of mountaintop ecosystems, tropical coral reefs and coastal wetlands, but also on the lives of certain populations: between 3.3 and 3.6 billion people are highly vulnerable, particularly in Africa, South Asia, Central/South America, the Arctic and on small islands. These negative effects create alarming risks: a lack of water and food that raises the question of food security; increased poverty; environmental migration and the extinction of certain species which, in the warmest countries, is multiplied by 10 when global warming increases from 1.5 to 3 degrees.

The contribution of the research:

This paper makes the link between physical basis of climate change, the socio-economic consequences and the financial solutions to mitigate and adapt to climate change.

There are solutions to reduce greenhouse gas emissions such as energy transition or new technologies. Besides, it is no longer enough to cut CO₂ emissions, we must also remove them from the atmosphere. Our article will explore how solutions coming from nature will safeguard both ecosystems (land and sea) and human well-being. For this, there are economic and financial instruments such as carbon markets (mandatory and voluntary). Ecosystem services must be valued in order to motivate investors to participate in their conservation and restoration. We will therefore focus on the role of sustainable finance, which accounts for about 12 trillion dollars. There has been a change in investor mentality, a willingness to reorient banks to stop financing fossil fuels by 2050. Financial flows are 3 to 6 times lower than the levels needed by 2030 to limit warming to less than 1.5°C or 2°C, but there is enough capital in the worlds to fill the investment gaps. Private sector alignments will be driven by public sector signals. In 2008, a green climate fund was supposed to raise \$100 billion per year to finance adaptation in

developing countries. This amount has never been reached. By 2030, developing countries will need \$127 billion per year and by 2050, it will be \$300 billion per year according to the latest IPCC report.

Summary of the methodology and the results:

Our work focuses first on the socio-economic consequences of climate change, particularly on the most vulnerable populations, often the poorest people, in the southern and eastern Mediterranean. We then develop the transmission channels of these effects through the analysis of the primary needs for all human life, namely water, agriculture and food, including fishing. We develop the observed and expected evolution and the factors impacting both supply and demand, as well as the resulting equilibrium prices and quantities.

We finally suggest policy recommendations and the objectives to be achieved to mitigate these harmful effects of climate change and show the economic and financial constraints. We conclude our work with realistic ways to achieve the desired objectives despite the lack of funding that characterizes the impacted countries and populations.

As in many other regions, the impact of climate change on southern and eastern Mediterranean countries is more harmful for populations that are already fragile and potentially close to the poverty line. Climate change further exacerbates their vulnerability and accentuates their level of poverty. The most affected are also those in more vulnerable situations, belonging to locally poor communities, including women, children and the destitute elderly.