

Adapting to climate change in the Mediterranean: Some Questions & Answers

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Context

Circe¹, an EC-funded 4-year research project, aims at developing for the first time a comprehensive assessment of climate change impacts in the Mediterranean area.

CIRCE's rationale does not take climate impacts as direct consequences of climate changes: the causal relationship is much more complex since a given climate change leads to very contrasted impacts according to existing policies as well as to socio-economic and political responses.

This paper freely draws on some findings from CIRCE's first stakeholders meeting², organised by IDDRI in October 2007. A high-level, focused dialogue among a small group of selected participants, this meeting was articulated around two key questions:

❶ **Business models, sector-wide transitions and socio-economic irreversibilities: is there room for manoeuvre?**

❷ **Succeeding where we failed: can the climate challenge be turned into an opportunity?**

These questions were examined with regard to three sectors (agriculture, energy and tourism) and two themes (ecosystems protection and urban & regional planning). Important cross-cutting issues for the Mediterranean such as water management, regional security, international migrations, etc., were dealt with in the discussions along the two days.

The following questions & answers therefore owe a lot to the meeting participants, although its limits and potential misinterpretations are the sole responsibility of the author.

¹ Climate change and impact research: the Mediterranean environment (www.circeproject.eu)

² List of participants, detailed report from the stakeholder meeting, as well as presentations delivered by speakers, are available at www.circeproject.eu, or at www.iddri.org

Adaptation in the Mediterranean: why is it necessary?

As it appears in IPCC's 2007 report, the Mediterranean is a climate change vulnerability "hotspot". It is hence often stated that climate change is the greatest challenge to regional sustainable development in the 21st century. Indeed, it is and will increasingly be a major driver of environmental and socio-economic changes in the Mediterranean. Increased water scarcity, for example, would critically raise the vulnerability of a number of countries that are already under heavy water stress, and would have widespread impacts on "water poor countries"³.

At the same time, climate change is only one among a wide range of such drivers (including

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economic, sectoral, cultural, political, etc.). Several of these may well be far more determining for Mediterranean societies than climate change per se – depending on issues, contexts and time frames.

It does not seem necessary to decide whether climate change is the greatest challenge or an additional one: time will tell, and in any case it has to be addressed. What is certain is that the region is on course for an unstable, dirty and expensive future under all reasonable climate scenarios. The present situation, as well as long-term projections, are highly unsustainable. In most cases, climate change reinforces these trends. Even though climate change is likely to have some positive effects, there is no example at hand where climate trends would reverse or even ease such unsustainable situations.

Therefore, all Mediterranean societies and businesses will need to adapt, on a continuum between those directly affected by changes in climate to those indirectly affected by climate-

driven socio-economic changes. It should specifically be underlined that if our societies turn out to be serious about keeping greenhouse gas emissions at a manageable level⁴, adaptation will also be about adapting to future mitigation policies.⁵ These could have major and structural effects on the way Mediterranean societies live and do business. In many cases, synergies will exist between mitigation and adaptation options. Nevertheless, there will undoubtedly be circumstances under which adaptation and mitigation policies shall be antagonistic: thorny decisions will then have to be made.

Adaptation capacity in the Mediterranean: is it high or low?

The Mediterranean has had to deal with, and adapt to, serious climate stresses throughout history. Chronic water scarcity and heat waves, for example, have been described in some places for well over 2 000 years. Besides, basically all societies and economic sectors around the Mediterranean have experienced changes of unprecedented magnitude and speed over the last century. In that sense, they all have demonstrated immense adaptation capacities.

In today's world, we actually have little knowledge about the capacity of current, discussed or planned adaptation efforts to cope successfully with future climate change. A number of heavy assumptions already circulate in the adaptation community: for example, that the rich have higher adaptation capacity than the poor; that adaptation capacity is higher at the local level; or that the private sector can adapt more easily than the public sector.

What can be asserted is that adaptation capacity probably varies substantially between sectors, places and populations. And that there is already some evidence that some of these largely over-estimate their own adaptive capacity. In particular, major governance issues, especially in Southern Mediterranean countries, will most likely severely hinder timely and efficient adaptation.

Finding out if the above mentioned assumptions rely on evidence-base science, or if they are rather clichés that need to be challenged, requires additional detailed research linking global and regional issues to local case studies. CIRCE shall be an important contribution to this end.

3 Countries where water availability is less than 1 000 m³ / year / person (namely Jordan, Tunisia, Algeria and Egypt).

4 E.g. aiming at a +2°C target.

5 In that regard, the Mediterranean is not an isolated region but one that is deeply immersed and integrated in global governance and the world economy.

Adaptation strategies and instruments: what can we say about what to do?

In terms of “who should do what”, adaptation raises numerous challenging questions on the relative roles of individual versus cooperative actions, market-driven vs. policy-driven adaptations, anticipatory vs. ex-post adaptation, local vs. national or international policy making. What is more, adaptation strategies also range from short to long term endeavours, from collective choices to specific, ad hoc initiatives, and from marginal changes in day-to-day practices to major sector-wide transitions and ultimately comprehensive re-assessments of the current development models, challenging the very way we think about future.

It is quite clear however that there is no single, one-size-fits-all solution at hand. Rather, a portfolio of technologies, initiatives and policies is required, that re-emphasizes the need to link economic development with sound environmental and natural resources management.

To name only a few, capacity building, insurance mechanisms and incentive policies, subsidi-

for action. It calls for improved science on impacts, which often requires collaboration from all stakeholders including the industry.

If adaptation is about societies more than about nature and climate, it is crucial to better understand human reasoning. We can actually build on 30 years of empirical research on public perception of risk, a field of its own in the social sciences. We have learnt that different types of risks are perceived in different ways: for instance, people tend to overestimate the risk of dying from a terrorist attack compared to a heart attack. They also weigh more costs than benefits – a crucial information for climate change adaptation. What about the risk of suffering from climate change and the costs and benefits of anticipating it?

Is the need for adaptation really bad news... or can it be turned into an opportunity?

As to whether climate change can be turned into an opportunity through adaptation to accomplish long-needed transitions, there is no easy answer. The array of opportunities actually varies considerably. It is quite obvious that climate change will severely constrain local development and hence the variety of choices available. It is also clear that adaptation will take time and will require significant investments – even though business as usual would undoubtedly cost more in the long run.

But opportunities do exist. Firstly because climate change will have positive effects: there will not only be losers but also winners. More importantly, because climate change invites Mediterranean societies to re-examine a number of development models, from the largest scale to sector- or place-specific cases. Increasingly, the adaptation debate points out climate change as a lever to reorient what are commonly called “absurd policies” and associated unsustainable trends.⁶ Changing such policies and reversing those trends is seen as a first, key step to climate change adaptation. To

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dies, market frameworks, food security and social safety nets are of outstanding importance. “Mainstreaming” adaptation into up-coming policy reforms, including at the EU-level as with the Common Agricultural Policy, is essential. Indeed, they may strongly constrain the development paths not only within Europe but in Southern and Eastern Mediterranean countries. Urban and regional planning can also take us a long way into adaptation, and lots of measures that should be adopted to fight air pollution in cities are actually good for climate change adaptation as well. The value of services provided by various terrestrial and coastal ecosystems around the Mediterranean, and therefore the importance of keeping them healthy and functioning, should be better understood, assessed and factored in decision making.

Generally speaking, there is a need for more elaborated assessments of climate change impacts on all economic sectors as a first step

⁶ Such as the ones captured by the “virtual water” concept: Southern Mediterranean countries are net exporters of water to Northern Mediterranean if agricultural water inputs are taken into account.

some extent, adapting to future climate change implies to adapt first to current climate variability, and even more simply to current climate. However, there are people/sectors/places that benefit from unsustainable policies, so that using climate change as a lever to sustainability will raise oppositions and require politically painful choices.

In any case, sustainable ecosystem management is clearly brought back to the centre of the debate on climate change by the adaptation agenda. Threats on ecosystems are not direct consequences of climate change, but primarily of other heavy trends like water pollution, land use change and resources overexploitation. Climate change only reinforces present negative trends. It calls for better policy implementation to succeed where we largely failed so far in the Mediterranean: managing biodiversity and natural resources in a sustainable way. In a sense, one could even argue that there is little news in what climate change brings to the Mediterranean ecosystems issue.

Finally, as has historically always been the case when it comes to sustainable development, there is a lot of wishful thinking about adaptation. Since the scientific community started discussing the subject, and since it emerged on the political agenda, constraints have increased and available options have reduced. Decision makers are still to be convinced and climate change is still to be turned into a business opportunity for adaptation efforts to really take off. It would be naïve to assume that adaptation will happen just because it should, because it is in most people's best interest either individually or collectively. ●