

Implications of “dangerous” climate change on agricultural ecosystems and agrobiodiversity?

- EU has proposed to set the target of global actions to limit the rise in near-surface air temperature to a maximum of 2°C relative to the pre-industrial value in order to avoid the so-called “*dangerous*” climate change.
- What are the implications for this temperature limit to agricultural ecosystems and agrobiodiversity?
- It is clear that different agricultural ecosystems and agrobiodiversity species may have different levels of temperature tolerance and responses, and hence a single temperature parameter threshold may be inappropriate or inadequate to characterize the limit of risk or the vulnerability of the agricultural ecosystems and agrobiodiversity species to climate change

Multi-dimensional threshold

- Apart from temperature threshold, other factors, such as *associated changes in precipitation and in large scale atmospheric circulation patterns, as well as socio-economic change, population, settlement patterns, water demands, human choices and behaviour, etc.*, could also play a significant role in determining the final magnitude and timing of adverse impacts on agricultural ecosystems and agrobiodiversity species. The vulnerability or the risk can be very low or high depending on how the other factors develop as a consequence of both climate change and socio-economic choices.
- Thus, other than a single temperature threshold, it is more appropriate to consider, assess and capture the "**multi-dimensional threshold**" for both climatic and non-climatic factors that will cause the impacts on agricultural ecosystems and agrobiodiversity..