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Projections of Future Regional Climate Change: Examples from Africa and Asia

Theory, observations, and projections of future global climate change are in general consistent. However, societal action on mitigation of climate change has been limited. In order to better inform society, there is evidence for the need to offer new projections of local and regional impacts of climate change of variables and processes with strong societal relevance. For making such projections, we use a new class of high resolution physically/biologically based models. I will present examples from Asia and Africa for projections of future regional/local climate change, including: malaria in West Africa; water availability in the Nile basin; and heatwaves in Asia. By selecting each of these examples, we identify a "hotspot" for vulnerability under the current climate, and we seek to analyze the hazard from future environmental change. The combination of projected hazard and evident vulnerability will define the potential risk for future generations.