

8: 09:30-09:40. Developing capacity for southern countries to engage in convection permitting modelling

¹Chris Lennard

¹CSAG/UCT & LA of ICC AR6 WG2 Chp 9

contact:

Abstract

Convection permitting modelling is computationally expensive in terms of CPU and storage. This is particularly true for long simulations and large domains e.g., transient CMIP6 downscalings at the continental or large country scale.

Most developing countries do not have hardware infrastructure capable of running such simulations, human capacity to maintain and administer such infrastructure nor can work with the large datasets resulting from these simulations. Therefore, most CPM programmes are conducted by northern institutions that (justifiably) address their own research interests.

However, the IPCC AR6 shows that countries most vulnerable to climate change are southern nations, many of which are in convective climate regimes. Convection resolving modeling will therefore very likely contribute to a better understanding of climate risk in these regions, particularly from extreme rainfall and wind.

Unfortunately, with very few southern research centers having the capacity to run these types of simulation (in terms of compute infrastructure, sysadmin support and big data analysis), and the focus of northern centers on their research interests, the added value CPM brings to risk assessment and adaptation planning may not materialize in these regions for years.

How then can we capacitate southern countries to engage in CPM and how can the added value of CPM inform climate resilient development pathways in these countries? How can northern and southern research groups collaborate?

During this interactive session we will try to address some of these questions, so please bring your ideas to the discussion...