Seven global climate scenario models predict a quite uniform climate development across Indonesia (Hulme and Sheard, 1991). These climate descriptions are made on a rather coarse scale in space. Indonesian island are, however, rather structured in their topography. Atmospheric properties depend, therefore, strongly on the local and regional relief. If large scale meteorological patterns change in a certain direction (e.g., El Nino, La Nina) local and regional impacts may lead to quite different directions. It is, therefore, necessary to assess these possibilities with small scale regional models.

Runs with different emission scenarios have been run by the coupled Atmosphere-Ocean General Circulation Model (AOGCM) ECHAM4 and HOPE-G (ECHO-G). The world wide out put data is stored at DKRZ. In our study we want to use these data for the maritime continent Indonesia to nest regional models MM5 (Pen-State University / NCAR Mesoscale Model version 5) and CLM (Climate Local Model) from PIK/GKSS/DKRZ for Central Sulawesi. These nesting runs should be performed at DKRZ. The results of these nesting runs will be confronted with our experience of local climate and measure precipitation fields in Central Sulawesi for El Nino and La Nina patterns. Model adaptations and adjustments to tropical maritime regions with a steep and structured relief might be necessary. Effects on the main agricultural crops in Indonesia, rice and cacao will be assessed (Amien et al. 1996; Kim et al. 2004).

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