



Identifying wind resources in Tropical East Africa - A case study for Kenya

A. Sood (1,2) , X. F. Oschieng (1,3), D. Heinemann (1,2), K. Suselj (1,2), M. Schmidt (1,2)

(1) Forwind, Center for Wind Energy Research and (2) Energy Meteorology Group, Energy and Semiconductor Research, CvO University Oldenburg, Germany, (3) Jomo Kenyatta University of Agriculture and Technology, Institute of Energy and Environment, Nairobi, Kenya. (Contact Email: abha.sood@forwind.de)

Significant wind resources are anticipated in the Tropical East African region despite prevalent dominantly weak wind conditions due to regional orographic or thermal forcing. The main goal of this study is to identify potential regions of large wind resources by downscaling NCEP/NCAR reanalysis data using different methodologies and comparing their advantages and limitations for the Kenyan region. Since Kenya's wind energy sector has until now been exploited only to a limited extent (current installed capacity 1.1 MW) with plans underway to install 10 - 15 MW in the next 5 years, the high quality wind resource mapping is expected to provide impetus for the regions accelerated development.