Post-Doctoral Fellowship: Coastal Vulnerability and Resilience
University of the Western Cape

Maintaining biodiversity is key to ecosystem health and resilience to environmental variability. The vulnerability of marine ecological communities, in terms of perturbations to biodiversity, is a function of exposure and sensitivity to severe disturbances and long-term warming trends, coupled with species' adaptive capacity. Coastal biota will undoubtedly experience several stressors as the marine physical environment experiences change attributable to global atmospheric and oceanic warming. These impacts are expected to result from coastal sea-level rise, storm intensity, anomalous coastal winds, periods of excessive thermal exposure and the changing frequency of these events, among others.

The goal of the project is to evaluate the South African coast and determine which areas may be vulnerable to the increasing intensity and frequency of extreme events that may have adverse consequences for biodiversity. Such an assessment should include scaling local observations to their regional context, delineating regional boundaries of unique water masses and determining how these boundaries shift in space and time. It will be necessary to decide which coastal properties are important and can be measured quickly and economically and at the appropriate scales.

To this end, we are seeking to appoint a Post-Doctoral Fellow to undertake the relevant work. Applicants should hold a PhD degree in disciplines such as Earth Sciences, Oceanography or Ecology, and be able to produce a record of scientific research publications relevant to this position. Previous experience with the processing of remotely sensed data is necessary. The candidate will be working alongside others that work within the R coding environment, and therefore previous experience with R (or python) will be necessary. The initial appointment will be for 2017, with the possibility to extend to 2018 and beyond.

Please contact Assoc. Prof. AJ Smit at ajsmit@uwc.ac.za or Dr. Robert Williamson at robert@saeon.ac.za for more information. Applications should include a cover letter, a comprehensive CV or Résumé and a research statement. Please also provide the names and contact details for three references.