

MSc Topic: Creating a mean state of the physical oceanography of the KwaZulu-Natal Bight to contribute to Marine Protected Areas analysis.

Supervisors

Dr. Juliet Hermes – SAEON Egagasini Node
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Cruise opportunities – Potential opportunity on the Angra Peguena research yacht in June 2017 to collect additional physical oceanographic data. This will be dependant on space available.

Funding – A bursary is available and will be inline with national standards

Length of Project – Maximum 2 years 2017-2018

Travel – This is an ACEP project on Marine Protected Area's in the KZN Bight region and some travel to present results at science meetings may be expected.

Data Access

All historical Physical Oceanographic ACEP data

Other Physical Oceanography data sets (including available satellite imagery) will also need to be accessed

Potential to include model data outputs which is available if the student is interested

Preamble - The student would need to mine all of the historical Physical Oceanographic ACEP data (and any other available data) to build a mean structure of the KwaZulu-Natal Bight from Richards Bay / St. Lucia to Port Edward in the south. The student could also build on to the existing in situ structure with available satellite imagery to determine the frequency of mesoscale (and associated) anomalies traveling along the KZN Bight shelf edge, and those that are spawned off of the Durban region. From this they will determine the mean position of the Agulhas Current in this region over time. The data being collected as part of the ACEP project would then enhance the work in the MPA / CBA specific regions of interest. The aim is not to do a descriptive snap-shot study of a particular event or space in time, but rather to input in to the greater MPA plan what the mean state is with some information on the anomalous structures.

Targeted Student - We are looking for a quantitative, self-motivated, dedicated student with a strong background in Physical Oceanography to work up historical data in the KwaZulu-Natal region. The student will also have an interest in applying physical oceanographic information to support marine protected areas. The main focus of the project is to assess all available historical physical oceanography data, and that which will be collected over the next two years, and determine a mean state for the KZN Bight in order to assist with MPA decision making processes currently underway for the region.

Interested? – Please contact tammy@saeon.ac.za for further information