PhD position to study coastal fish movement ecology

We are seeking a highly motivated South African candidate to join the Southern African Fisheries Ecology Research Lab (SAFERLab) to work on the multidisciplinary CAREZONE project which aims to promote sustainability in South Africa's marine shore-based fishery (MSBF) by filling key socio-ecological research gaps through the investigation into the potential promulgation of catch-and-release-(C&R) zones as a complimentary management and conservation strategy. This project is funded through the National Research Foundation's Marine and Coastal Research (MCR) programme.

Requirements:
Prospective candidates should hold an MSc degree or recently have completed their MSc (before graduation) in a biological discipline and have good written/spoken (English) communication skills. Applicants should preferably have an understanding of the coastal marine environment and knowledge of coastal fishes. The ideal candidate should have proven experience in experimental design and statistical analyses in R Studio.

Project details:
PhD project: Understanding movement patterns of important marine shore-based fishery species to inform the appropriate size and shape of catch and release zones

South Africa's inshore fishery resources are heavily exploited by a large marine shore-based recreational fishery which has reduced that abundance of these species and reduced the opportunities for a growing small-scale fishery. The shore-based recreational fishery is traditionally managed using output controls such as bag and size limits and technical measures such as closed seasons, and closed areas. While compliance is poor with most fisheries regulations, closed areas appear to be relatively well respected by shore-based recreational anglers, suggesting that other area-based management strategies may yield considerable benefits for species targeted in this fishery. While the promulgation of additional areas that are closed to recreational fishing may be a good strategy to manage fish stocks, this will come at a large socio-economic cost, primarily due to the economic impact (primarily in tourism) associated with the activity. Catch and release(C&R) zones provide a viable alternative spatial management option, which will reduce the biological impact of the fishery, yet retain the economic benefits associated with the activity. However, determining the appropriate size and placement of these areas will require movement information on the target species, an understanding of the economic consequences of zonation and the choices on fishing zone by anglers. This PhD study will contribute to this by gaining an understanding of the spatial ecology (including home range estimates, habitat use, inshore -offshore connectivity) of the most two important shore-based species, the dusky kob*, Argyrosomus japonicus* and bronze bream, *Pachymetopon grande*. This information will be obtained using telemetry methods in specifically designed coastal acoustic tracking arrays and will be conducted in in collaboration with the Acoustic Tracking Array Platform of the South African Institute for Aquatic Biodiversity.

Process:

Interested candidates are encouraged to apply by sending a 1) motivation letter outlining their interest and/or experience in fish ecology; 2) CV (including names and contacts of two references); 3) official transcripts of academic records.

The successful applicant will be assisted in applying for an NRF grantholder scholarship for 2024. If the candidate is successful in their NRF scholarship application, they will be based in Grahamstown at Rhodes University (RU) and will have a supervisory team from Rhodes University and SAIAB. The deadline for applications is the 22nd of June.

Applications and queries can be directed to:

Amber Childs (a.childs@ru.ac.za) and/or Warren Potts (w.potts@ru.ac.za)