A computer vision non-intrusive mechanism to collect images and give real-time insights about animals' behaviour on coral reefs in Mozambican waters

Luis Pina¹², Tiago Azevedo³, Natu Lauchande⁴, Erwan Sola⁵

¹Centro de Estudos e Projectos em Engenharia (CEPrE), Faculdade de Engenharia, Universidade Lúrio, Mozambique
²Computer Engineering Department, Faculdade de Engenharia, Universidade Lúrio, Mozambique
³Department of Computer Science and Technology, University of Cambridge, United Kingdom
⁴Car track, South Africa
⁵Wildlife Conservation Society, Mozambique

ABSTRACT

Our research goal is to develop a non-intrusive deep learning mechanism to collect images and give insights about coral reefs in Nacala Porto. This will allow biologists to analyse data in real-time and infer on animals' life story, behaviour, population, and survivorship in Mozambican waters. Initially, the coral reef will be located between 10 – 15 meters depth and 90 – 100 meters from the central power supply site on Nacala Porto. In particular, we will deploy an artificial reef to study the development of a fish community around a newly introduced structure to gain insight on the potential for ecosystem improvement in the context of coral reef restoration.