First results of the IH.SM-IRD Young Research Team: example of coral reef research in Toliara, SW Madagascar

Institut Halieutique et des Sciences Marines, Université de Toliara (IH.SM), Madagascar

IRD Madagascar, UMR 9220 ENTROPIE, Reunion
Institut Halieutique et des Sciences Marines, Université de Toliara (IH.SM), Madagascar

IRD Madagascar, UMR 9220 ENTROPIE, Reunion
Institut Halieutique et des Sciences Marines, Université de Toliara (IH.SM), Madagascar

jamal.mahafina@ihsm.mg

In Madagascar, coral reefs represent an important source of welfare and services for local populations. But these ecosystems are under a significant and growing pressure. Searching solutions for preserving the environment, and fostering socio-economic development, is the challenge of the IH.SM-IRD Young Research Team, leaded by three young researchers of IH.SM, in partnership with several researchers from the IRD ENTROPIE Research Unit. These young researchers coordinate scientific activities in the Toliara Bay area along three axes: (i) how to maintain and enhance coral populations through habitat characterization and documenting their reproductive strategies and recruitment patterns; (ii) describing reef fish replenishment with light traps for collecting fish post-larvae (PL) before their installation and surveying the catches of fishermen who use mosquito nets; (iii) studying the structure and dynamics of fish exploitation by recording canoe trajectories and monitoring the fishermen catches at landings.

Between November 2016 and April 2017: (i) 120 ceramic tiles were installed in six sites to monitor coral recruitment, and three 10 x 1m permanent transects per site allowed to document the abundance of juvenile and adult coral colonies; (ii) six sampling campaigns of PL, and juvenile fish, were conducted leading to 40,126 specimens analyzed, and 900 high-resolution images and fin samples for DNA barcoding; (iii) a 45-day experiment was carried out for monitoring canoe trajectories and landings in the Ankilibe village. A total of 1,092 photos, which will serve for specimen identification, and 340 trajectories, were collected. These first results, in each of the research areas, already show the specific richness of corals and fishes in the southwest of Madagascar despite its current degraded state.