The behavioural ecology of two major bycatch species of the tuna purse-seine fishery: the oceanic triggerfish and the rainbow runner

Fabien Forget*†1,2,3, John David Filmalter^{1,3,4}, Paul Cowley², and Laurent Dagorn⁵

¹Institut de Recherche pour le Developpement (IRD) – Mahe, Seychelles ²South African Institute of Aquatic Biodiversity (SAIAB) – Private Bag 1015, Grahamstown, 6140, South Africa

³Rhodes University – Private Bag 1015, Grahamstown 6140, South Africa
⁴South African Institute for Aquatic Biodiversity (SAIAB) – Private Bag 1015, Grahamstown, 6140, South Africa

⁵IRD, France – Mahe, Seychelles, Seychelles

Abstract

The rainbow runner (*Elagatis bipinnulata*) and the oceanic triggerfish (*Canthidermis maculatus*) are two of the main bycatch species of the FAD-based tuna purse-seine fisheries in the world. Within the framework of an ecological based management, baseline information of these species is required to assess the ecosystem impacts of tuna fisheries. To date, little information is available on the basic biology and behaviour of those two species. Acoustic telemetry on fish associated with FADs (57 oceanic triggerfish and 26 rainbow runners) provided information on their associative behaviour. Additionally, biological sampling on fish caught by purse seiners was used to investigate the diet of both species.

Keywords: Bycatch, Elagatis bipinnulata, Canthidermis maculatus, behavioural ecology

^{*}Speaker

[†]Corresponding author: fabienforget@gmail.com