



**Current and future distribution of *Hippocampus erectus* in the climate change scenario: a modelling approach.**

Adrián Rodríguez-Pérez<sup>1,2</sup>, Nuno Simoes<sup>1</sup>, Carlos Rosas<sup>1</sup>, Maite Mascaró<sup>1</sup>, Carlos Yañez Arenas<sup>1</sup>

<sup>1</sup> PIECEMO, UMDI-Sisal, Facultad de Ciencias, Unidad Académica de Sisal, Universidad Nacional Autónoma de México, Yucatán, México.

<sup>2</sup> Licenciatura en Manejo Sustentable de Zonas Costeras, Facultad de Ciencias, UNAM, Sisal, Yucatán

**Presenting Author:** Nuno Simoes

In the last decades, an enormous amount of studies were carried out on the potential effects of anthropogenic climate change (CC) on terrestrial biota. However, comparatively few studies have been focused on studying CC alterations on marine environments. The lined seahorse (*Hippocampus erectus*) is a species of ornamental importance that faces considerable threats within which one with a potential considerable impact is CC. We used a correlative niche modeling approach to evaluate potential effects of this phenomenon on *H. erectus* populations. Occurrences from its entire range were obtained from several databases (OBIS, GBIF, SNIB, scientific literature and regional collections) and a characterization of its environmental requirements (i.e. ecological niche) was made using Bio-ORACLE marine layers. Two algorithms (Maxent and NicheA) were employed to model its niche and estimate its current and future potential distribution under contrasting climate change scenarios. Finally, we evaluate and discuss potential distributional shifts for the next century.