

# Ecological Relationships of Some Aquatic Species in the Persian Gulf Coastal Ecosystem (Hormozgan Province): An Ecopath Preliminary Approach

Taghavi Motlagh, Seyed Amin<sup>1</sup>; Hakim Elahi, Maryam<sup>2\*</sup>; Ghodrati Shojaei, Mehdi<sup>3</sup>

1- Associate Professor, Research Member, Iranian Fisheries Research Organization (IFRO), Tehran, Iran. Email: s\_taghavimotlagh@hotmail.com

2- Research Member, Iranian National Institute for Oceanography and Atmospheric Science (INIOAS), Tehran, Iran. Email: hakimelahi.m@gmail.com

3- Persian Gulf and Oman Sea Ecological Research Institute, Bandar Abbas, Iran. Email: shojaei1359@gmail.com

Received Date: August 31, 2012

\*Corresponding Author

Accepted Date: November 10, 2013

---

© 2013 Oceanography. All rights reserved.

## Abstract

As there are gaps in applying an ecosystem approach to fisheries assessment and multispecific ecosystem based-management in the Persian Gulf, feeding ecology and trophic relationships of some of the important fishspecies (*Sillago sihama*, *Pomadasys kaakan*, *Parastromateus niger*, *Rastrelliger kanagurta*, *Psettodes erumei*, *Drepane punctata*, *Lutjanus malabaricus*, *Lethrinus nebulosus*, *Acanthopagrus latus*. and *Otolithes ruber*) were studied in the coastal waters of Hormozgan Province (Persian Gulf). The stomach contents of 2480 trawling fish were studied between November 2009 and December 2011 by random sampling method. A multispecific ecosystem-based approach on trophic relationships and their possible variations was built using the ECOPATH software system (ver. 6.3). The results of this study indicated that the trophic levels of the species varied between 2 to 4.30, in which *Liza klunzingeri* and *Lethrinus nebulosus* showed lowest and highest values, respectively. In addition, any changes in the prey biomass could affect the biodiversity and, in the long run, the biomass of the main groups of the food chain in the Persian Gulf.

Keywords: *Feeding relationships, Trophic level, Stomach contents, Persian Gulf, ECOPATH.*

---