

2nd International Conference on

COASTAL ZONES

July 17-18, 2017 Melbourne, Australia

Designing marine protected areas in combination with fishery biodiversity and fishermen conception and attitudes: The case of the Northern Taiwan

Chun-Pei Liao and Hsiang-Wen Huang
National Taiwan Ocean University, Taiwan

The integration of the social, economic and ecological criteria could provide better design of marine protected area (MPA). The northern waters of Taiwan have long exerted a value on fishery activity but lack of comprehensive conservation measures such as MPA. The purpose of this research is to design MPA under the integrated analysis of different index and try to minimize the conflicts between different stakeholders. Three hundred and thirteen (313) fishermen from major fisheries in New Taipei City, Keelung and I-Lan were interviewed during September 2015-September 2016. Another 60 logbook of 2014 were collected to estimate the catch per unit effort (CPUE), income per unit effort (IPUE), IUCN index, Shannon diversity index, richness and conceptions of fishermen were used. The additive weighting method is used to balance the social, economic and ecological perspectives scenario. There are four areas were suggested as MPA or should the enforcement should be strengthened, which include the northwest water around Keelung Islet (121.7°E, 25.1°N), Pengjia Islet (122.0°E, 25.6°N), northeast water around Craig Islet (122.3°E 25.6°N) and the southern water of Turtle Island (121.9°E, 24.6°N). The results also suggested having more strictly measures in the second and third seasons. As for the fishermen perception, the satisfaction of 3-nautical miles closure area for trawlers was highest than the others. The effectiveness of torch light nets and gillnet is not enough and the measures of flying fish roe and crab fishery was questioned. However, the results showed the potential applicability of using fishermen' knowledge as a substitute for identifying ecologically important areas when data are limited.

Biography

Chun-Pei Liao has her expertise in fishery management and marine protected area issue.

a314172427a@gmail.com

Notes: