Assessing the Prevalence of Illegal, Unreported, and Unregulated (IUU) Fishing in Olutanga, Zamboanga Sibugay, Philippines: A Baseline Assessment Using the I-FIT Tool

Norlika D. Moti[1*], Judy Ann H. Fernandez[1], Angelica M. Darunday[1], Hilly Ann Roa-Quiaoit[1], Maria Theresa M. Mutia[2], Daisy Lou L. Polestico[3], Frandel Louis S. Dagoc[1], and Armi G. Torres[1]

[1]Department of Environmental Science, School of Interdisciplinary Studies, Mindanao State University-Iligan Institute of Technology, Iligan City, Philippines
[2]National Fisheries Research and Development Institute-Freshwater Fisheries Research and Development Center (NFRDI-FFRDC), Department of Agriculture, Taal, Batangas, Philippines
[3]Center for Computational Analytics and Modeling, Premier Research Institute of Science and Mathematics, Mindanao State University-Iligan Institute of Technology, Iligan City, Philippines
**Corresponding Author Email: norlika.moti@g.msuiit.edu.ph*

ABSTRACT

Illegal, unreported, and unregulated (IUU) fishing is a major challenge to the sustainability and resilience of small-scale fisheries, threatening fish stocks, coastal ecosystems, and the livelihoods of fishing-dependent communities. Despite reported IUU fishing activities in Zamboanga Sibugay, systematic assessments at the local level remain limited. This study assessed the prevalence of IUU fishing in the 14 coastal barangays of Olutanga, Zamboanga Sibugay, Philippines, using the Philippine IUU Fishing Index and Threat Assessment Tool (I-FIT) developed by the Department of Agriculture-Bureau of Fisheries and Aquatic Resources (DA-BFAR) and the United States Agency for International Development (USAID). A mixed-methods approach integrating social surveys, key informant interviews, focus group discussions, stakeholder workshops, and secondary data review was employed. Ten I-FIT prevalence indicators were evaluated using indicator-specific assessment methods and prescribed scoring criteria within a standardized four-point risk scale, ranging from low risk (1) to very high risk (4). The quality of supporting evidence was independently assessed using a three-point Data Quality (DQ) scale, ranging from low (1), based primarily on perceptions or limited documentation, to high (3), supported by systematically collected records or official documentation. Supplementary social surveys were conducted to validate information for selected indicators. Olutanga obtained an overall prevalence score of 3.45, corresponding to a high IUU fishing risk and exceeding the national average of 2.51. The elevated risk was associated with recurring illegal fishing incidents, limited patrol frequency and geographic coverage, inadequate catch reporting, increasing trends in fisheries violations, repeat offenders, and destructive fishing practices that contribute to coastal habitat degradation. These findings indicate vulnerabilities in local fisheries governance and enforcement that may undermine the long-term resilience of coastal communities and ecosystems. Strengthening fisheries law enforcement, expanding patrol coverage, improving catch monitoring and reporting systems, implementing appropriate sanctions for repeat offenders, providing alternative livelihood opportunities, and increasing community participation are therefore recommended. The study provides baseline evidence for strengthening local fisheries management and supports broader efforts toward sustainable fisheries and Sustainable Development Goal 14.4, which calls for effective regulation of harvesting and an end to illegal, unreported, and unregulated fishing practices.

Keywords: Illegal/ Unreported, and Unregulated Fishing/ I-FIT Tool/ Small-Scale Fisheries/ Fisheries Governance/ Coastal Resilience/ Sustainable Development Goal 14.4