

# CANDIDACY PAPER

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**Title: The role of gleaning in the resilience of coastal social-ecological systems**

## **Abstract:**

The field of Environmental Science offers a holistic approach to studying the different planetary spheres and their interconnections, as well as how they affect and are affected by anthropogenic activities. It offers a variety of perspectives to seeking solutions for the triple planetary crises of climate change, pollution, and biodiversity loss. Among these, biodiversity loss further reflects the compounded effect of the first two crises and thus poses a critical area of study, particularly due to its relationship with ecosystem functioning and human well-being. Studying biodiversity change has many aspects, including different ways of measuring change, taxa of interest, ecosystems of interest, and scales of analysis. These underlying mechanisms of biodiversity change may not always be reflected in global trend reports that often highlight the decline of biodiversity. While this decline is an important global issue to address, this emphasis overshadows opportunities to focus on biodiversity growth or sustainability, especially at local scales. In an archipelagic country such as the Philippines where more than 60% of the population lives in coastal zones, studying coastal communities and coastal ecosystems is detrimental to national social-ecological sustainability. Despite the threats faced by coastal communities and environments, coastal and marine social-ecological systems (CM-SES) continue to adapt and persist, owing to the diversity of biota and ecosystems that promote an equivalent diversity of subsistence and livelihood strategies, and vice-versa. This presentation focuses on coastal gleaning—an undervalued and largely unrecognized resource-gathering strategy—and how it addresses social needs while promoting ecological health, stressing its role in the resilience of CM-SES. Sustainable gleaning provides a form of alternative livelihood and subsistence while potentially maintaining high biodiversity, providing a mechanism for social bonding, and fostering the preservation and transmission of local ecological knowledge. This presentation then concludes with potential directions for research in studying the contribution of gleaning fisheries to the resilience of CM-SES.