



Assessing the Impact of Zag Fishing and Fish Aggregating Devices (FADs) on Indigenous Fish Species in the Meghna River Estuary: A Global Perspective

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Abstract

Inland open water fisheries represent crucial sources of sustenance and livelihood for coastal communities worldwide. However, the widespread adoption of fishing techniques like Zag fishing poses significant threats to indigenous fish species, particularly in the Meghna River Estuary. This study investigates the ecological and socio-economic ramifications of Zag fishing practices, shedding light on its implications for fish biodiversity and local communities. By examining the complex interplay between traditional fishing methods, modern technologies, and regulatory frameworks, this paper offers valuable insights into the broader global implications of these practices.

Keywords: Zag Fishing; Fish Biodiversity; Meghna River Estuary; Proliferation; Marine Ecosystems

Abbreviation

FADs: Fish Aggregating Devices.

Introduction

Inland open water fisheries play a vital role in supporting the nutritional and economic needs of coastal populations globally. However, the proliferation of fishing methods such as Zag fishing presents a pressing concern for the conservation of indigenous fish species, especially in ecologically sensitive areas like the Meghna River Estuary in Bangladesh. This paper aims to comprehensively analyze the impact of Zag fishing and Fish Aggregating Devices (FADs) on indigenous fish populations, offering insights into the broader global

implications of these practices. By exploring the historical context, socio-economic dynamics, and regulatory challenges associated with Zag fishing, this study seeks to inform evidence-based policy interventions aimed at promoting sustainable fisheries management [1].

Zag Fishing Practices

Zag fishing, a traditional method utilizing aggregating devices constructed from natural materials like hizole and gamboling, has become increasingly prevalent in the Meghna River Estuary. These structures, strategically deployed during specific seasons, attract a wide variety of fish species, facilitating high catch rates. However, the indiscriminate nature of Zag fishing poses a significant threat to indigenous

fish populations, leading to population declines and ecosystem imbalances. By examining the ecological implications of Zag fishing, including habitat degradation, species displacement, and genetic erosion, this study highlights the urgent need for conservation measures to safeguard the biodiversity of inland waterways.

Socio-Economic Dynamics

The socio-economic dynamics surrounding Zag fishing are multifaceted, involving various stakeholders ranging from investors to traditional fishing communities. While Zag fishing presents lucrative opportunities for investors and non-fishers, it marginalizes traditional fishers who rely on sustainable fishing practices for their livelihoods. Conflicts often arise over access to fishing grounds and resource depletion, underscoring the need for effective management strategies. By analyzing the socio-economic implications of Zag fishing, including income disparities, social tensions, and cultural shifts, this study underscores the importance of inclusive governance frameworks that prioritize the interests of all stakeholders.

Regulatory Framework

Despite existing regulations prohibiting Zag fishing in many water bodies of Bangladesh, enforcement remains lax, allowing for its continued proliferation. Strengthening regulatory mechanisms and enforcement efforts is imperative

to curtail the unsustainable exploitation of inland open water fisheries and safeguard indigenous fish species. By assessing the effectiveness of existing regulatory frameworks and identifying gaps in enforcement, this study provides valuable recommendations for enhancing legal compliance and promoting sustainable fisheries management [2].

Conclusion

The uncontrolled expansion of Zag fishing poses significant threats to the ecological integrity and socio-economic stability of the Meghna River Estuary and beyond. By implementing stringent regulatory measures and promoting sustainable fishing practices, we can mitigate the adverse impacts of Zag fishing and preserve the rich biodiversity of our inland waterways on a global scale. Through collaborative efforts between governments, civil society organizations, and local communities, we can chart a path towards more equitable and sustainable fisheries management practices that ensure the long-term resilience of our marine ecosystems.

References

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