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Lives Tied to the Sea: Island Communities, Fisheries, and the Search for Sustainable Livelihoods

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For generations, the sea has shaped the rhythms of life in the island villages of Pulau Enam, Kabalutan, and Kadoda. Fishing boats leaving at dawn, collectors waiting on shore, and families preparing catches for market are familiar scenes across these coastal communities. Yet behind this continuity lies a complex and changing reality: one marked by rising operational costs, limited infrastructure, fragile market access, and growing efforts by communities to adapt, diversify, and secure their futures.

Recent discussions with fishers, youth representatives, collectors, women's groups, and village leaders offer a grounded look at how these island communities navigate their dependence on marine resources while responding to economic pressures and development opportunities.



Pulau Enam: From Capture Fisheries to New Livelihood Pathways

Pulau Enam Village remains deeply reliant on capture fisheries, with most fishers spending an average of two days at sea per fishing trip. Their catches, however, are relatively modest, typically reaching a maximum of 30 kilograms. This limited volume, combined with fluctuating prices and high operational costs, has prompted the community to explore alternative livelihood options that can complement traditional fishing.

One promising initiative now underway is the introduction of a fish farming programme targeted at existing fishers' groups. The programme is intended to provide a more stable and predictable source of income, particularly during periods when fishing conditions are poor. Importantly, it builds on local experience: one fishers' group in Pulau Enam has already been running a *bobara* fish farming operation with assistance from the Kepulauan Togean National Park (KTNP). Their experience has shown that small-scale aquaculture can be viable when technical support and initial inputs are available.

In Indonesia's coastal-livelihood context, a *bobara* fish farming operation refers to the small-scale capture, holding, and fattening (grow-out) of trevally/jack species, locally called bobara (commonly *Carangidae*, e.g. *Caranx* spp.).

Beyond household income, the fish farming initiative is also expected to contribute to broader national priorities. The programme is seen as a way to support the central government's MBG (free nutritious meals) initiative programme by providing fish as a supplementary protein source. For the community, this connection between local livelihoods and national food security adds another layer of significance to the project.

However, access to capital remains a key challenge. While fish collectors operating in Pulau Enam report that they can access loans through the People's Business Credit (KUR) scheme from Bank Rakyat Indonesia, similar financial opportunities are not as readily available to fishers themselves. As a result, many fishers continue to depend on informal arrangements with collectors, reinforcing existing power dynamics within the supply chain.

Infrastructure constraints further complicate the situation. In the past, Pulau Enam was home to an ice factory that played a crucial role in preserving fish before shipment to Ampana. The factory allowed fishers to buy ice blocks locally, extending the shelf life of their catch and improving product quality. However, rising fuel and operational costs eventually made the facility unsustainable. When ice sales could no longer cover expenses, the factory closed, leaving fishers without local cold storage facilities.

While the District Fisheries Service has provided fishing equipment to support fishers, the absence of a traceability system means that little data exists on the types of fish caught, volumes traded, or the structure of the marketing chain. This lack of data limits opportunities for better fisheries management, market transparency, and potential certification or value-added initiatives.

Kabalutan: High Costs and Tight Margins

In Kabalutan Village, discussions with fishers, women, youth representatives, and collectors reveal a similar pattern of dependence on fisheries, coupled with persistent economic pressures. The community produces a variety of fishery products, yet adequate market access remains elusive.

One of the most pressing challenges is the high cost of transporting fish to Ampana, the primary market hub. Shipping a single box of fish can cost up to IDR 65,000 (~USD 4), a

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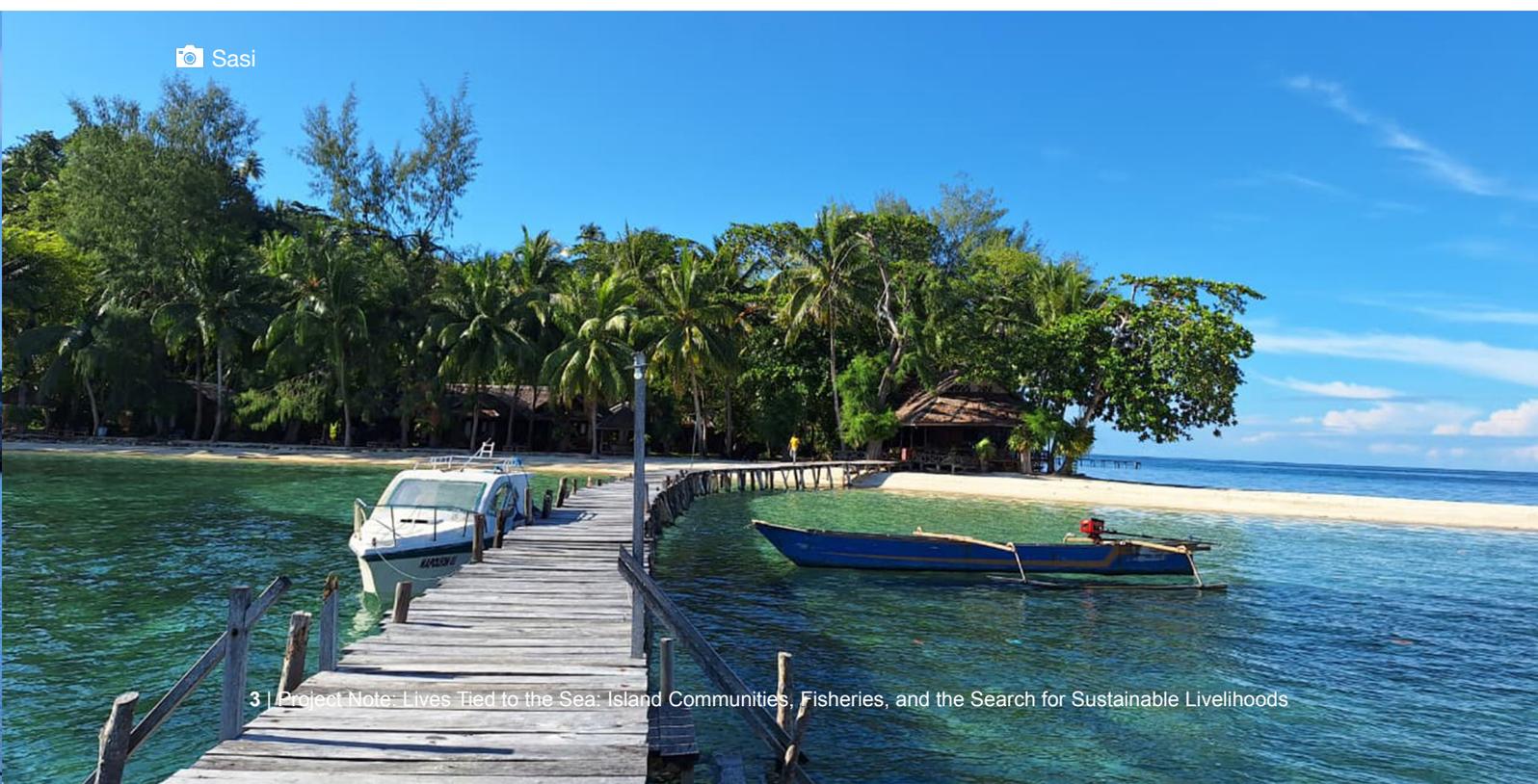




Photo by Sasi

significant expense that eats directly into fishers' profits. For small-scale fishers with limited catches, these costs can make the difference between earning a modest income and barely breaking even.

To manage daily expenses, collectors often advance operational costs to fishers, typically in the form of fuel and small cash allowances. These advances are deducted later when fish are sold to the collector. While this arrangement provides short-term relief, it also binds fishers to specific buyers and limits their ability to seek better prices elsewhere.

Most fish purchased by collectors in Kabalutan is sold onward to larger markets in Bunta and Ampana. Fishers themselves rarely have direct access to these markets, leaving them dependent on intermediaries. Youth representatives noted that while the community has products with potential, the lack of cold storage, processing facilities, and direct market linkages prevents them from scaling up or diversifying income sources.

Kadoda: Tourism, Fisheries, and the Challenge of Connectivity

Kadoda Village presents a different but equally complex livelihood landscape. Unlike Pulau Enam and Kabalutan, Kadoda has become a destination for foreign tourists, with visitors arriving from countries such as Spain, Germany, Morocco, and India. Tourism has created new income opportunities, particularly through homestays, guiding services, and the sale of local products.

Yet the presence of tourists has also highlighted persistent logistical challenges. Transportation and procurement of basic necessities remain difficult, as the village's island

location limits access to supplies. Homestay owners sometimes find themselves buying fish from neighbouring villages to prepare meals for their guests, even though fishing is a primary livelihood in Kadoda. At the same time, local residents must purchase vegetables from Ampana, underscoring gaps in local food systems and supply chains.

Recognising these challenges, the Kadoda village administration has implemented several assistance programmes aimed at improving mobility and livelihoods. Using village funds, the administration has provided motorboats to fishers, enabling them to travel farther and operate more efficiently. To date, 23 fishers have received motorboat assistance, with plans to support an additional 20 fishers in 2026.

The village has also prioritised education by providing two boats to transport school children, ensuring safer and more reliable access to schools across Kadoda's three hamlets. These interventions reflect a broader effort to address basic needs while supporting economic activities.

Kadoda is also in the process of developing its Village-Owned Enterprise (BUMDes). Although still in its early stages, the BUMDes is expected to play a role in managing local economic initiatives, strengthening market access, and potentially supporting tourism-related services in the future.

Adding Value: Women, Crafts, and Small Enterprises

Beyond fishing and tourism, community-based enterprises in Kadoda highlight the importance of value addition and diversification. One local group, consisting of eight members (five women and three men) has developed a range of products that combine marine resources with local skills.

Women in the group produce fish floss and octopus floss, as well as *panada* cakes filled with octopus floss. These products cater to both local consumption and potential tourist markets. Meanwhile, male members craft household items such as cutting boards, small glasses, and wooden cups made from *lasih* wood. Depending on the type of wood used, these crafts are sold for between IDR 50,000 (USD 3) and IDR 75,000 (USD 4.50).



Woodcrafts made from *lasih* wood

Despite their entrepreneurial efforts, the group faces significant constraints. Access to capital is limited, making it difficult to purchase raw materials in bulk or invest in improved packaging. Logistics are also a challenge: essential inputs such as bottles, tomatoes, and cooking oil are expensive and not always readily available on the island. The price of oil in Kadoda, in particular, is notably high.

Although the group maintains some cash reserves to buy materials or repair broken machines, most of their processing equipment was provided by the KTNP. Male members must purchase their own woodworking tools, adding to their financial burden. These constraints limit production capacity and the ability to respond to growing demand.

Octopus Fisheries and Market Chains

Octopus plays an important role in Kadoda's fisheries economy. Three local collectors regularly purchase octopus, some of which is sold to a homestay owner to supply tourist demand. Larger volumes enter a longer supply chain, passing through Ampana and Makassar before reaching PT Bumi Menara Internusa.

Transactions are typically conducted in cash, although costs such as petrol are often deducted if fishers obtain fuel from collectors. As in Pulau Enam and Kabalutan, collectors themselves frequently rely on capital borrowed from urban-based collectors, creating a layered system of dependency that shapes pricing and profit distribution.

Fishers in Kadoda often combine multiple roles, working as crafters, elders, or homestay owners alongside fishing. This diversification reflects both necessity and adaptability, as households seek to balance income sources in a challenging economic environment.

Community Conservation and Local Stewardship

Environmental stewardship remains closely linked to livelihoods across these villages. In Kadoda, fishers (many of whom also engage in crafts and tourism) harvest octopus using traditional methods, with the use of a fishing tool called *gara-gara*. The community has established an open-close area system as a locally driven conservation measure, allowing marine resources time to recover while maintaining long-term productivity.

Women also play a central role in fisheries and conservation. The Kogito female fishers' group, which has nine members and most of whom are around 50 years old, represents a reservoir of experience and traditional knowledge. Their involvement underscores the importance of recognising women not only as processors or traders, but also as fishers and stewards of marine resources.

Shared Challenges, Emerging Opportunities

Across Pulau Enam, Kabalutan, and Kadoda, several common challenges emerge. High transportation and logistics costs reduce profitability. Limited access to formal credit keeps fishers dependent on informal arrangements. Weak infrastructure (i.e. cold storage and processing facilities) constrains value addition. At the same time, the absence of traceability systems and reliable data hampers effective fisheries management and market development.

Yet the discussions also reveal resilience and opportunity. Fish farming initiatives offer new livelihood pathways. Tourism creates demand for local products and services. Women's groups and small enterprises demonstrate the potential of value-added processing. Village-level investments in boats, education, and enterprises signal growing local commitment to development.

Looking Ahead

The experiences of these island communities highlight the need for integrated approaches that connect fisheries, finance, infrastructure, and community enterprise. Supporting sustainable livelihoods will require more than increasing catches—it will depend on strengthening supply chains, improving access to markets and capital, empowering women and youth, and aligning conservation with economic needs.

As Pulau Enam, Kabalutan, and Kadoda continue to adapt to changing conditions, their stories offer valuable lessons. Rooted in the sea but shaped by innovation and collective effort, these communities are charting pathways toward livelihoods that are not only economically viable, but also environmentally and socially sustainable.

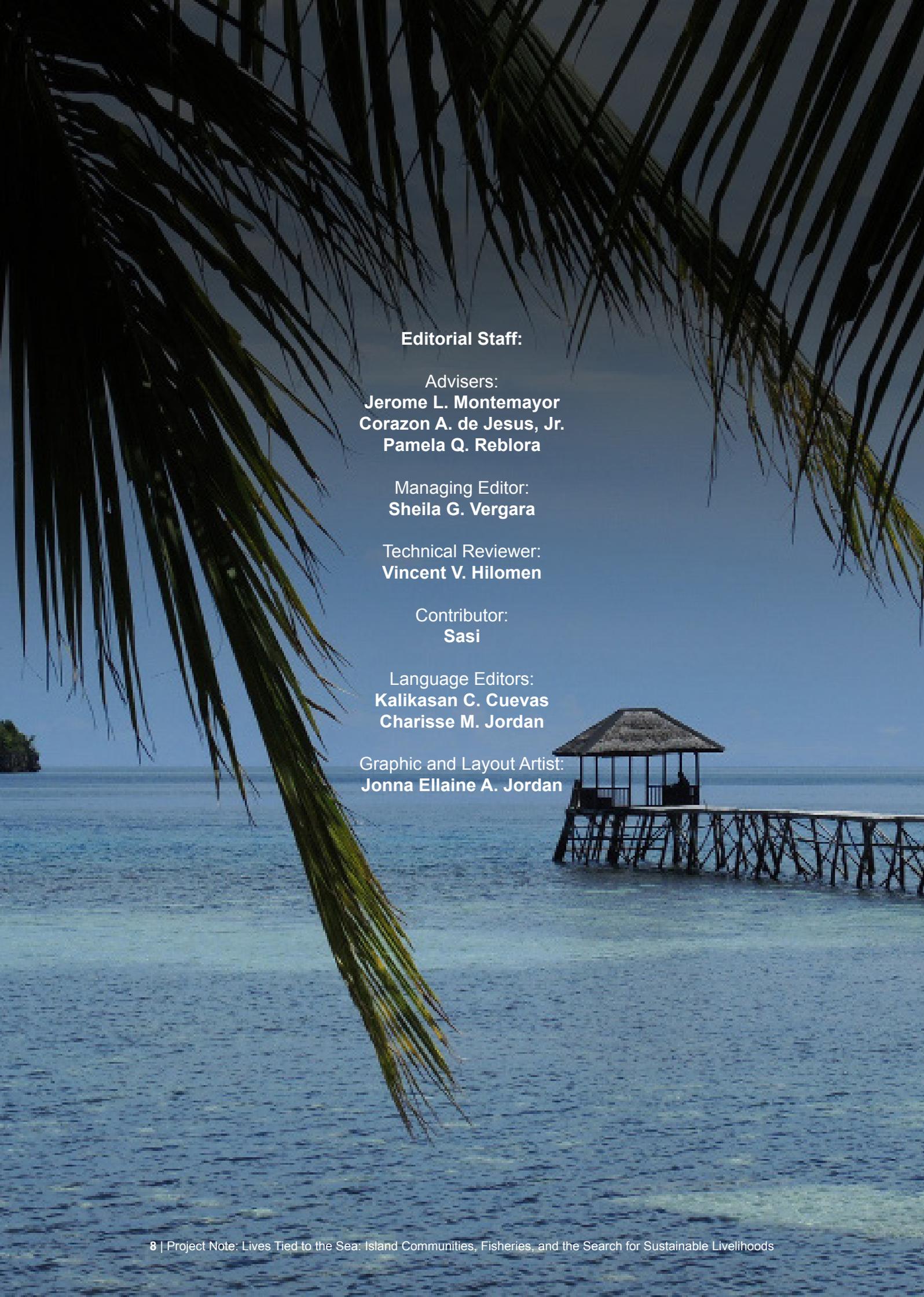
This article has been reviewed to ensure gender-inclusive and empowering language.

The project *Effectively Managing Networks of Marine Protected Areas in Large Marine Ecosystems in the ASEAN region (ASEAN ENMAPS)* aims to improve marine protected area network management in key Large Marine Ecosystems across Indonesia, the Philippines, and Thailand. It applies science-based strategies to conserve biodiversity and sustain fisheries. The project also aims to strengthen governance, build the capacity of stakeholders, promote knowledge sharing, and advance sustainable financing for long-term conservation. ASEAN ENMAPS is implemented by the United Nations Development Programme through the funding of the Global Environment Facility, and with the ASEAN Centre for Biodiversity as the executing agency.

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