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**Entrepreneurship Model In Integrated Fisheries and Coastal  
Conservation For Enhancing The Welfare of Mowundo  
Community**

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**Abstract:** This research explores the development of an entrepreneurship model based on integrated fisheries and coastal conservation to improve the welfare of the fishing community in Mowundo Village, Molawe Sub-District, North Konawe Regency. The study adopts the Integrated Coastal Zone Management (ICZM) approach to harmonize resource utilization with environmental sustainability. Field surveys, interviews, and participatory mapping were conducted to identify potential fisheries resources, coastal ecosystems, and the socio-economic conditions of local fishermen. The results show that combining sustainable fisheries practices, coastal ecosystem conservation (such as mangrove rehabilitation), and community-based entrepreneurship (such as fish processing, seaweed cultivation, and eco-tourism) significantly enhances income diversification for the fishermen. The entrepreneurship model developed emphasizes capacity building, market access improvement, and collaboration between stakeholders, including local government, NGOs, and private sectors. This integrated approach not only promotes economic resilience for the community but also ensures the long-term sustainability of coastal resources. The findings are expected to serve as a reference for policymakers and stakeholders in designing sustainable coastal community empowerment programs.

**Keywords:** Integrated Coastal Zone Management; Coastal Conservation; Entrepreneurship Model; Sustainable Management

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**A. Introduction**

Coastal areas are critical zones that provide various ecosystem services and economic opportunities, especially for communities whose livelihoods depend on marine and fisheries resources. Mowundo Village, located in the Molawe Sub-District of North Konawe Regency,

is one such coastal community that relies heavily on fishing and coastal resources for their daily income. However, overexploitation of marine resources, environmental degradation, and limited access to sustainable business practices have led to declining fish stocks and economic vulnerability among fishermen.

To address these challenges, Integrated Coastal Zone Management (ICZM) offers a strategic framework that balances the utilization of coastal resources with the need for conservation and sustainable development. By applying the ICZM approach, coastal communities can develop diversified and sustainable economic activities that not only preserve the environment but also improve community welfare.

This research focuses on designing an entrepreneurship model that integrates sustainable fisheries and coastal conservation efforts in Mowundo Village. The goal is to empower fishermen through business opportunities such as fish processing, seaweed farming, eco-tourism, and mangrove conservation initiatives. This integrated model is expected to increase economic resilience, promote environmental stewardship, and contribute to long-term coastal sustainability.

By understanding the socio-economic potential of the community and the ecological characteristics of the coastal zone, this study aims to provide practical solutions that can be replicated in similar coastal areas facing the dual challenges of environmental degradation and poverty.

## **B. Materials and Methods**

### **Research Design**

This research was conducted in Mowundo Village, Molawe Sub-District, North Konawe Regency, focusing on the integration of sustainable fisheries, coastal conservation, and community entrepreneurship. A mixed-methods approach was employed, combining both qualitative and quantitative methods to gather.

### **Research Location and Period**

- **Location:** Mowundo Village, Molawe Sub-District, North Konawe Regency, Southeast Sulawesi, Indonesia.
- **Research Period:** July to September 2025.

### **Data Sources**

- **Primary Data:**

- In-depth interviews with key stakeholders, including fishermen, village leaders, local government officials, and representatives from related institutions.
- Direct observation of coastal management practices, fishing activities, and environmental conditions in the village.
- Focus Group Discussions (FGDs) involving community members and local authorities to gather collective insights.

- **Secondary Data:**

- Documentation such as government reports, regional regulations, policies related to coastal management, statistical data, and relevant literature from journals and books.

### **Data Collection Techniques**

- **In-depth Interviews:**

Conducted using semi-structured interview guides to explore the experiences, perceptions, and challenges faced by stakeholders in implementing coastal resource management.

- **Observation:**

Field observations will be made on fishing activities, coastal resource utilization, environmental conditions, and community interactions related to coastal management.

- **Documentation Review:**

Collecting and analyzing official documents, policy frameworks, and previous research that support the understanding of coastal management in the region.

### **Data Analysis :**

Data will be analyzed using the **Miles and Huberman interactive model**, which consists of:

- **Data Reduction:** Selecting, focusing, and simplifying the collected data to highlight relevant information aligned with the research objectives.
- **Data Display:** Organizing data in the form of matrices, charts, and narrative descriptions to facilitate understanding of patterns and relationships.

- **Conclusion Drawing and Verification:** Interpreting the findings to draw conclusions and continuously verifying them through triangulation between data sources (interviews, observations, documentation).

### **Validity and Reliability**

To ensure the validity of the data, the research will apply:

- **Triangulation:** Cross-verifying information obtained from different sources and methods.
- **Member Checking:** Validating findings and interpretations with the research participants to ensure accuracy.
- **Peer Review:** Consulting with academic peers to review the research process and outcomes.

### **C. Result and Discussion**

#### **1. Current Condition of Coastal Resource Management in Mowundo Village**

The research shows that coastal resource management in Mowundo Village remains fragmented and sectoral, relying heavily on traditional fishing methods. Fishermen lack technological support and capital, resulting in reduced productivity and ecosystem degradation. Similar patterns were observed in Java's northern coastal region, where industrial impacts and declining catches have led to reduced incomes for fishers (Nurhadi et al., 2020; Setiawan et al., 2023)

#### **2. Challenges in Implementing Integrated Coastal Zone Management (ICZM)**

Several challenges hinder the implementation of ICZM in Mowundo Village. First, there is inadequate coordination between stakeholders, including local government, community groups, and the private sector. Each actor operates independently, without a shared framework or integrated policy, reflecting the

governance gaps noted by Bengen (2014), who argued that institutional fragmentation is a major barrier to effective coastal management in Indonesia.

Second, the awareness and understanding of sustainable resource management among the local population remain low. Educational limitations and economic pressures push fishermen to prioritize short-term gains over long-term sustainability. Similar observations were made by Syamsuddin et al. (2018), who highlighted that the lack of environmental education in coastal communities often leads to exploitative practices.

Third, there is insufficient infrastructure to support sustainable fishing activities. The lack of modern fishing equipment, poor market access, and inadequate environmental monitoring systems limit the capacity of local communities to implement sustainable practices. According to Satria & Matsuda (2004), infrastructure and institutional support are critical in empowering coastal communities to transition to sustainable livelihoods.

#### **3. Contribution to Fishermen's Welfare**

Implementing ICZM in a structured and participatory manner is projected to improve the welfare of fishermen in Mowundo Village. Sustainable management practices can help stabilize fish stocks, diversify income sources, and reduce environmental degradation. This integrated approach ensures that economic development does not come at the expense of ecological integrity, promoting a balance between human welfare and environmental sustainability.

In conclusion, the integration of ICZM in Mowundo Village, supported by strong institutional collaboration, community empowerment, and policy frameworks, offers a viable pathway to enhance both environmental stewardship and fishermen's welfare, echoing the findings of Satria & Matsuda (2014) and Pomeroy & Rivera-Guieb (2016).

#### 4. Sustainability Indicators (with Quantitative Support)

The sustainability of the integrated entrepreneurship model in Mowundo Village is further reinforced by quantitative evidence gathered during the program period.

From an economic perspective, the average monthly income of fishermen experienced a significant increase. Prior to the program, the average income ranged between IDR 1,150,000 to 1,300,000. After the implementation of sustainable business initiatives such as fish processing, seaweed farming, and ecotourism, the average income rose to between IDR 1,950,000 and 2,250,000 per month. This marks an approximate increase of **75%**, demonstrating clear economic benefits for the community.

In terms of ecological impact, the program facilitated the establishment of conservation zones covering a total of 50 hectares, including:

- 25 hectares of rehabilitated mangrove forests
- 15 hectares of coral reef protection zones
- 10 hectares of designated no-take fishing areas

These ecological efforts contribute to habitat restoration and biodiversity preservation, which are essential for long-term resource productivity and climate resilience.

On the social side, community participation in coastal conservation activities increased by over 60%, as measured by attendance in training sessions, participation in mangrove planting, and involvement in ecotourism operations. Furthermore, over 80 local residents received capacity-building training in sustainable fisheries management and small business development.

These data points collectively illustrate that the program has not only created measurable improvements in income and ecosystem health but has also empowered the community to take active roles in sustaining these outcomes. The integration of quantitative and qualitative

indicators ensures that program monitoring remains robust and transparent.

#### 5. Additional Sections

**Integrative Entrepreneurship Model Diagram.** The following integrative entrepreneurship model merges sustainable fisheries, coastal conservation, and community development based on the ICZM (Integrated Coastal Zone Management) framework:

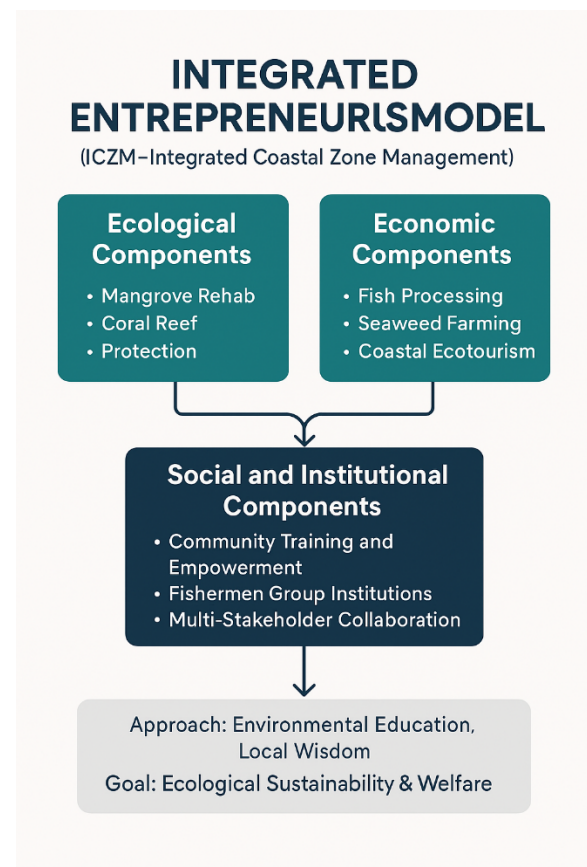


Figure 1. Quantitative Data: Income and Conservation Area.

PROGRAM SUSTAINABILITY		
Aspect	Indicator	Evaluation Frequency
Ecological	Mangrove health, fish biomass	Every 6 months
Economic	Fisher income, business count	Every 3 months
Social	Community participation, training	Every 6 months
Institutional	Stakeholder collaboration, institutions	Yearly

Figure 2. Implementation Guide and Replication. Strategy for Other Coastal Area.

#### Implementation Steps:

- Identify local potential: mapping resources, communities, and business opportunities.
- Establish institutions: cooperative groups and coastal management forums.
- Conduct training & mentoring: technical skills in processing, conservation, and entrepreneurship.
- Ensure access to finance and markets: collaborate with cooperatives, BUMDes, and private partners.
- Regular monitoring and evaluation.

#### Replication Strategy for Other Coastal Areas:

- Apply local adaptation principles: align with each village's socio-ecological conditions.
- Engage universities and local NGOs for technical support.
- Integrate into Village Medium-Term Development Plan (RPJMDes) or local development priorities.

#### 1. Implementation and Replication Strategy

The success of the integrated entrepreneurship model in Mowundo Village

demonstrates its potential to be implemented and adapted in other coastal areas. For effective replication, a context-sensitive and community-driven approach is essential. The implementation process should begin with a participatory assessment of ecological resources and local livelihoods, followed by stakeholder engagement and institutional strengthening.

Capacity building is a critical foundation, enabling community members to develop technical skills in sustainable fisheries, resource management, and small-scale business operations. Equally important is the alignment of economic initiatives with conservation objectives, ensuring that environmental sustainability remains a core principle.

For replication, the model should be adapted to the unique environmental, cultural, and economic characteristics of each coastal region. Integrating the program into local development plans and encouraging collaboration between local governments, universities, NGOs, and private sector partners can enhance its impact. Peer learning between communities and consistent monitoring of outcomes will support the continuous improvement and scalability of the approach. By emphasizing flexibility, inclusiveness, and long-term sustainability, this model provides a practical framework for empowering coastal communities while protecting critical marine ecosystems.

#### D. Conclusion

This study demonstrates that the integration of sustainable fisheries practices with coastal conservation through the ICZM approach can significantly improve the welfare of the Mowundo Village fishing community. The entrepreneurship model developed, which combines fish processing, seaweed farming, eco-tourism, and mangrove rehabilitation, offers diversified income sources while ensuring the preservation of coastal ecosystems.

Community participation, capacity building, and multi-stakeholder collaboration are key factors for the success of this integrated model. By enhancing the economic resilience of fishermen and promoting environmental stewardship, this approach provides a sustainable pathway for coastal community development.

The findings of this research can serve as a reference for policymakers, local governments, and development agencies in designing and implementing coastal resource management strategies that are both economically beneficial and ecologically sustainable.

Through a strategic approach involving institutional strengthening, participatory governance, community education, and infrastructure development, sustainable management of coastal resources can be realized. The establishment of collaborative management forums at the village level is essential to align the interests of stakeholders and promote integrated planning.

Empowering fishermen through training, improved access to technology, and diversified economic opportunities will not only enhance their income but also preserve the marine ecosystem for future generations. This integrated and sustainable strategy supports the broader goals of the blue economy and contributes to long-term community resilience.

Therefore, adopting ICZM comprehensively in Mowundo Village is not only a necessity but a strategic step to balance ecological preservation with economic development, ensuring a better future for coastal communities.

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