



II

The *LELONG.ID* Digital Platform to Optimize the Potential of Makassar's Coastal Fisheries Sector Based on Islamic Values

Zahra Nurhidayah¹, Rusdi Rusman², Muh. Albar³, Laela Tummusfiroh⁴

¹ Department of Islamic Guidance and Counseling, Faculty of Da'wah and Communication, Alauddin State Islamic University Makassar, Indonesia

² Department of Urban and Regional Planning, Faculty of Science and Technology, Alauddin State Islamic University Makassar, Indonesia

³ Department of Mathematics Education, Faculty of Education and Teacher Training, Alauddin State Islamic University Makassar, Indonesia

⁴ Department of Information Technology, Faculty of Engineering, Universitas Tadulako, Indonesia

Corresponding author, E-mail: nurhidayahzahra26@gmail.com

ARTICLE INFO	ABSTRACT
Article History: Accepted: 25 August 2026 Approved: 20 October 2026 Published: 31 October 2026	
Keywords: LELONG.ID, Blue Economy, Fisheries Supply Chain, Marine Biodiversity, Islamic Integration.	<p>The water and fisheries sector in Makassar has significant potential to support the blue economy. However, its sustainability faces challenges such as a biodiversity crisis caused by overfishing and limited access to modern markets for small businesses due to low digital literacy and the dominance of conventional marketing through middlemen. This study aims to identify the needs of coastal communities, describe the development process of the <i>LELONG.ID platform</i>, analyze its feasibility based on expert validation, and evaluate community response to its use. use method <i>Research and Development</i> (R&D) with the <i>ADDIE</i> model which includes Analysis, Design, Development, Implementation, and <i>Evaluation</i>. The research subjects involved expert validators, residents around Paotere Port, and the coastal community of Makassar. Data collection was carried out through validation sheets, Likert-scale Aiken V user response questionnaires, interviews, and observations. Data were analyzed using the Aiken V Index to measure validity and a practicality percentage formula to assess user responses. The results showed that <i>LELONG.ID</i> was successfully developed by integrating five main features that combine digital commerce, environmental conservation education, and maritime culture. Expert validation obtained an Aiken V Index of 0.83 with a very valid category, while user trials resulted in a practicality percentage of 82.52% with a very practical category. These findings indicate that <i>LELONG.ID</i> received a positive initial response and has the potential to support marketing transparency and increase ecological awareness of coastal communities. The development of this platform is expected to strengthen the blue economy through the integration of Islamic values, particularly justice in transactions and human responsibility as khalifah fil ardh in maintaining the sustainability of marine ecosystems.</p>



II

Keywords:

LELONG.ID, Ekonomi Biru, Rantai Pasok Perikanan, Biodiversitas Laut, Integrasi Islam.

ABSTRACT

Penelitian ini mengamati karakteristik pH dan pembentukan busa dari empat formulasi sabun cuci piring yang dibuat dari ekstrak kulit pisang kepok (*Musa paradisiaca*), belimbing wuluh (*Averrhoa bilimbi*), dan daun pepaya (*Carica papaya*), dengan penambahan natrium karbonat (Na_2CO_3) dan surfaktan. Penelitian ini menggunakan pendekatan eksperimental. Nilai pH yang dilaporkan berkisar antara 7,24 hingga 7,92. Tinggi busa sebesar 1 cm pada formulasi F1 dan 2 cm pada formulasi F2, F3, dan F4. Daya tahan busa masing-masing adalah 10, 15, 25, dan 20 detik. Formulasi F3 menunjukkan daya tahan busa terlama berdasarkan hasil pengamatan yang dilaporkan. Temuan ini bersifat deskriptif karena jumlah ulangan dan variasi pengukuran belum disajikan. Produk akhir tidak diuji secara langsung terhadap aktivitas antibakteri; oleh karena itu, penelitian ini tidak menyimpulkan bahwa kombinasi kulit pisang kepok, belimbing wuluh, dan daun pepaya memiliki efektivitas antibakteri. Diperlukan pengujian lebih lanjut untuk mengevaluasi kinerja pembersihan, stabilitas, dan aktivitas antibakterinya ..

INTRODUCTION

Indonesia is an archipelagic country the biggest in the world , one of One prominent area is South Sulawesi Province , with the length of the coastline is 1,937 km which supports development sector fisheries , tourism maritime and industrial maritime (Gusrah et al., 2024) . Makassar City, particularly the coastal area of Paotere Harbor, is one of the most important fishing areas in South Sulawesi. Despite its abundant marine commodity potential, the welfare of traditional fishermen and the efficiency of the seafood marketing system still face significant obstacles. The phenomenon of domination of the distribution chain by third parties or middlemen often leads to non-transparent pricing, which is detrimental to fishermen as the primary producers. Furthermore, economic pressures drive some community members to engage in destructive marine exploitation, such as the use of explosives or potassium, which directly impacts coral reef damage and the decline of marine biodiversity.

Several previous studies have highlighted the importance of fisheries modernization through information technology. Research by Firanti et al. (2026) entitled " *Development of an E-Commerce Platform to Overcome the Inefficiency of Marine Catch Distribution for Economic Equity among Fishermen on the Coast of the Riau Islands .*" Through a qualitative approach with a *Research and Development model* , the study developed *JalaMart* as an integrated *e-commerce platform that combines pre-order features , a fish hub , and a traceability system* to shorten the distribution chain and strengthen the bargaining power of small-scale fishermen. The results of the study show that this kind of digital innovation can create more transparent prices and open



RITMA: ISLAMIC INTEGRATED JOURNAL

Journal Homepage : <https://journal.uin-alauddin.ac.id/index.php/ritma>

E-ISSN: 3031- 6367 ; P-ISSN: 3031-6359

II

more inclusive market access for capture fisheries business actors. This study is relevant as a reference for the development of *LELONG.ID* because it proves that *marketplace digitalization* can be a structural solution to the problem of marine product distribution in coastal areas, although the context is still focused on capture fisheries and has not explicitly touched on the aspect of aquaculture biodiversity conservation. The existence of this *research gap* emphasizes the need for a holistic solution that combines e-auction/marketplace platforms, aquaculture strengthening, and marine biodiversity literacy.

Theologically, Islamic teachings stipulate that all potential marine resources are created for the benefit of humanity, but their management must be based on principles of justice, freedom from fraud, and environmental protection. The lawful and equitable utilization of marine resources is encapsulated in the words of Allah SWT in Surah Al-Ma'idah/5:96:

أَجَلٌ لَّكُمْ صَيْدُ الْبَحْرِ وَطَعَامُهُ مَتْنَعًا لَّكُمْ وَلِلسَّيَّارَةِ وَحُرْمٌ عَلَيْكُمْ صَيْدُ الْبَرِّ مَا دُمْتُمْ حُرُمًا ۚ وَاتَّقُوا اللَّهَ الَّذِي إِلَيْهِ تُحْشَرُونَ

Translation:

It is lawful for you to hunt sea animals and food from the sea as a delicious food for you and for travelers (QS. Al-Ma'idah/5:96).

This study aims to design, test, and describe the strategic correlation of the *LELONG.ID digital platform* in realizing a fair, sustainable and in-line coastal fisheries supply chain in Makassar with Islamic marine ecosystem conservation principles.

METHOD

research uses a *Research and Development* (R&D) approach with the ADDIE development model (*Analysis, Design, Development, Implementation, Evaluate*). The ADDIE model is essentially a paradigm in product development. In addition, the R&D method is a systematic approach designed to produce and test the effectiveness of various types of products such as software, hardware, learning media, curriculum, and instructional models. This method is used to develop a *prototype of the LELONG.ID* digital platform as an educational medium, aquaculture cultivation and economic turnover of coastal communities.

which focused on designing a web/mobile-based digital information system *LELONG.ID*. The research location was carried out in the coastal area of Paotere Harbor, Makassar City, South Sulawesi, on July 16-25, 2026.

Informants and samples were determined using *purposive sampling techniques*. Data collection was conducted through in-depth interviews, participant observation at Paotere Port, and secondary document analysis. The research instruments used included interview guides, field observation sheets, and a LELONG.ID practicality questionnaire to test the platform prototype. Data processing and analysis were carried out interactively with the stages of data reduction, data presentation, and conclusion drawing.

Following is technique analysis data Which used in this study:

1. Root Cause Analysis

Root cause analysis was conducted on the results of interviews and observations. The analysis was conducted descriptively and qualitatively using the Miles and Huberman model. This technique was applied to data obtained from in-depth interviews and field observations. Data analysis includes data organization procedures, data reduction, and data presentation using tables, charts, or graphs. The commonly used approach is the Miles & Huberman model, which consists of three flows: (1) data reduction, (2) data presentation, and (3) drawing conclusions/verification.

2. Validity Analysis

This technique was used to assess the feasibility of the *LELONG.ID platform* based on validator/expert assessments. Validity testing was conducted to determine the extent to which the research instrument could measure what it was intended to measure, ensuring that a valid instrument would produce data that corresponds to reality. The assessment results from the validation sheets included in this study were calculated using the Aiken V Index or the CVR/CVI ratio.

$$V = \sum S / [n(C - 1)]$$

Information:

$$S = R - Lo$$

$$V = \text{Aiken index}$$

R = score given by the assessor

Lo = lowest assessment score (1)

C = highest assessment score (4)

n = number of validators (assessors)

After being calculated, the assessment results are categorized based on the established scale, namely as follows:

Table 1.. Aiken V Index Value Categories

V Value	Category
0.81-1	Very Valid
0.61-0.8	Valid
0.41-0.6	Quite Valid
0.00-0.4	Less Valid

3. Practicality Analysis

To measure the practicality of the *LELONG.ID platform*, the following formula is used:

$$P = \frac{\text{Skor Diperoleh}}{\text{Skor Maksimal}} \times 100\%$$

Information:

81% – 100% = *Sangat Praktis*

61% – 80% = *Praktis*

41% – 60 = *Cukup Praktis*

21% – 40% = *Tidak Praktis*

0% – 20% = *Sangat Tidak Praktis*

This technique was used to measure the platform's ease of use based on responses from coastal communities as users. The questionnaire used a 5-point *Likert scale* (1 = strongly disagree to 5 = strongly agree). Before being officially distributed, the questionnaire was first tested for validity and reliability. The average score was then converted into practicality categories : very practical, practical, quite practical, and not practical .

RESULTS

The results of this study cover four main aspects according to the order of problem formulation and research objectives, namely analysis of coastal community needs, the *LELONG.ID platform development process*, expert validation results, and user responses to the

practicality of the platform.

1. Conditions and Needs of Coastal Communities in Makassar

Based on the results of interviews with 5 informants (consisting of cultivators, fishermen, and fishery processing producers) as well as field observations at Paotere Port, several basic conditions were found:

- a. Economy and Marketing : Most coastal fisheries business actors rely on local middlemen/collectors to market their seafood, so that income is uncertain and the bargaining position of fishermen tends to be weak.
- b. Environment and Ecosystem : Indications of coastal ecosystem degradation, murky waters in boat mooring areas, and some fishermen being forced to use environmentally unfriendly fishing gear (such as bombs/fish anesthetics) due to pressure from middlemen were found.
- c. Digital Readiness and Literacy : **All** informants have *smartphones* and have good internet access in the Paotere area, but their use is limited to basic social media (WhatsApp and Facebook) and they have never used a digital-based seafood auction/marketing platform. to draft *Blue Economy* is also classified as very minimal (4 out of 5 informants) Not yet understand).

2. Development of the *LELONG.ID* Platform

LELONG.ID is a web-based digital platform accessible via *smartphone* or laptop, designed as the first integrated fishery auction and trading system in Indonesia. The *LELONG.ID platform* was developed by adopting the ADDIE (*Analysis, Design, Development, Implementation, Evaluation*) development model. The platform is built on a user -friendly web-based platform (HTML, CSS, and JavaScript) . Based on a research approach that uses the R&D method with the ADDIE model, the following is a table of the stages of the *LELONG.ID* platform's research procedures :

Table 2.. Procedure Study

Stages	Information
<i>Analysis</i>	Observations and interviews were conducted with 5 residents around the coast and harbor.
<i>Design</i>	Designed 6 main pages (Home, Aquaculture, <i>Marketplace</i> , Community, About Us)
<i>Development</i>	<i>The prototype</i> is built based on HTML, CSS, and <i>JavaScript</i> .
<i>Implementation</i>	Limited trials were conducted on July 26 – August 7, 2026 to 23 coastal community residents. This implementation is still limited to information on the products offered, marine conservation,

	aquaculture, community forums and has not yet implemented direct transactions.
<i>Evaluation</i>	The assessment was carried out through validation by 2 experts using <i>the Aiken V Index</i> , as well as analysis of the responses of 23 users with a <i>Likert scale</i> , analyzed descriptively using the Miles & Huberman qualitative model.

Here is a look at the main features of the LELONG.ID platform:

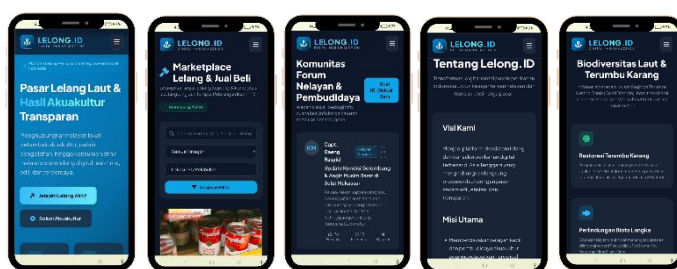


Figure 1LELONG.ID Prototype

- Home: Displays the tagline "*Transparent Marine Auction & Aquaculture Products Market*", *navigation buttons*, and *real-time* sector impact statistics .
- Marketplace: Provides an integrated auction and buying and selling system for fishery commodities at TPI/ports, equipped with location and commodity category *filter features*.
- Biodiversity: Contains educational content and marine conservation programs (biorock coral reef restoration, protection of rare biota, and mangrove conservation).
- Aquaculture: Presenting modern aquaculture technologies, such as IoT-based water quality sensors and environmentally friendly feed formulations.
- Community: Interactive discussion forum for coastal business actors regarding sea weather, market price information, and cultivation tips.

3. Expert Validation Results (Validity)

the LELONG.ID platform was assessed by 2 expert validators (*Validator 1: Ahmad Kafrawi Mahmud, M.Si.* and *Validator 2: Dr. Muchlisah, S.Psi., MA*) and analyzed using the Aiken V Index. The calculation results are presented in Table 3.

Table 3. Analysis Results Aiken Index V Expert Validation

No.	Assessment Aspects	Validator 1	Validator 2	$\sum S$	V	Note:
1.	The appearance of the website design in terms of	4	4	6	1.00	Very Valid

No.	Assessment Aspects	Validator 1	Validator 2	ΣS	V	Note:
	neatness, color, and visual comfort					
2.	Convenience understanding and use website features	4	3	5	0.83	Very Valid
3.	Clarity of educational information on aquaculture cultivation	3	4	5	0.83	Very Valid
4.	The website's ability to attract the interest of coastal communities to care about marine biota cultivation	3	3	4	0.67	Valid
5.	The suitability of the website as a digital-based educational media	4	3	5	0.83	Very Valid
Average					0.83	Very Valid

Source : LELONG.ID Research Data (2026)

Based on Table 1, the average Aiken V Index value of 0.83 is in the range of 0.81–1.00, so the *LELONG.ID* platform is categorized as Very Valid and suitable for use.

4. User Response and Practicality Analysis

A limited trial was conducted with 23 respondents from the Makassar coastal community using a 5-point Likert scale questionnaire. The summary of practicality scores and percentages are presented in Table 4.

Table 4. Analysis Results The Practicality of the *LELONG.ID* Platform

No.	Question	Answer				
		1	2	3	4	5
1.	After using the <i>LELONG.ID</i> website , I more understand importance cultivation biodiversity sea .			5	11	7
2.	Information presented on the <i>LELONG.ID</i> website easy I understand .			4	14	5
3.	The appearance and interface design of the <i>LELONG.ID</i> website is comfortable to use.			1	14	8
4.	Features on the <i>LELONG.ID</i> website easy accessed and used .			1	10	12

No.	Question	Answer				
		1	2	3	4	5
5.	<i>LELONG.ID</i> Website effective give education about method cultivation biodiversity sea .			3	11	9
6.	After using <i>LELONG.ID</i> , my awareness and concern for the preservation of marine ecosystems has increased.			7	10	6
7.	The features on <i>LELONG.ID</i> are tailored to the needs and problems of coastal communities.		1	5	13	4
8.	I am satisfied with the experience of using the <i>LELONG.ID</i> website .			5	9	9
9.	<i>LELONG.ID</i> Website push interest I For apply cultivation aquaculture biodiversity sea .			6	10	7
10.	I believe and am interested in continuing to use the <i>LELONG.ID</i> website in the future.			6	10	7

Source : *LELONG.ID* Research Data (2026)

the *LELONG.ID* user response questionnaire , a practicality analysis was conducted to determine how practical the *LELONG.ID* platform is . The results of the practicality analysis are as follows:

Table 5. Results of Practicality Analysis

Questionnaire Items	Average (Σ responden $\times$ nilai skala / 23)	Percentage ($\text{skor rata} - \text{rata} / 5) \times 100\%$	Information
1	4.08	81.73%	Very Practical
2	4.04	80.86%	Practical
3	4.30	86.08%	Very Practical
4	4.47	89.56%	Very Practical
5	4.26	85.21%	Very Practical
6	3.95	79.13%	Practical
7	3.86	77.39%	Practical
8	4.17	83.47%	Very Practical
9	4.04	80.86%	Practical

10	4.04	80.86%	Practical
Average		82.52%	Very Practical

Source : LELONG.ID Research Data (2026)

Based on Table 5, the overall practicality analysis obtained an average percentage of 82.52% which is included in the range of 81%–100% with the qualification Very Practical.

DISCUSSION

The results of this study indicate that the coastal communities of Paotere Port, Makassar, are highly dependent on direct management of marine resources, both through fishing and processing of fishery products. However, their income levels tend to fluctuate and are uncertain due to the significant impact of extreme weather, fishing seasons, and fluctuations in the price of operational materials. This finding reinforces the theory regarding the characteristics of coastal communities proposed by Fitria et al. (2024), who argue that communities in the land-sea transition area experience high economic vulnerability due to direct dependence on natural conditions. This inequality is further exacerbated by the dominance of local middlemen or collectors in conventional distribution channels. Small-scale fishers lack a strong bargaining position in determining selling prices, resulting in a significant portion of the profit margin being absorbed by the intermediary chain. This fact is consistent with the findings of Azizah et al. (2024) and Chan et al. (2021), which state that conventional marketing limits the market reach of small-scale fisheries entrepreneurs, lengthens the distribution chain, and suppresses selling prices at the producer level.

This economic inequality has direct implications for ecological pressure in coastal areas. Based on field observations and interviews with informants in Paotere, it was found that some fishermen are forced to use environmentally unfriendly fishing gear, such as fish bombs and potassium/anesthesia, to meet the target volume of deposits set by middlemen. This overexploitation activity triggers the degradation of marine ecosystems, as indicated by the murky condition of the harbor water and the absence of coral reefs around the observation area. This phenomenon is relevant to the studies of Zaliani et al. (2026) and Zebua et al. (2024) regarding the aquatic biodiversity crisis, where uncontrolled human activities reduce aquatic species populations and disrupt the food chain.

Problem exploitation and damage sea consequence action man the has warned in a way explicit in the Qur'an in QS. Ar -Rum/30:41:

God willing, God willing, God willing, God willing, God willing God

ظَهَرَ الْفَسَادُ فِي الْبَرِّ وَالْبَحْرِ بِمَا كَسَبَتْ أَيْدِي النَّاسِ لِيُذِيقَهُمْ بَعْضَ الَّذِي عَمِلُوا لَعَلَّهُمْ
يَرْجِعُونَ

Translation:

Corruption has appeared on land and in the sea because of what the hands of men have earned; Allah desires that they may taste a part of their deeds, in order that they may return (to the right path) (QS. Ar-Rum/30:41).

Theologically, the destruction of the Paotere aquatic ecosystem (*al-fasād fil-baḥr*) is a logical consequence of a series of exploitative actions that ignore the principles of environmental sustainability. The concept of sustainable development in Islamic teachings mandates humans as *khalifah fil ardh* to manage nature wisely, not to destroy it for short-term gain. Therefore, technological intervention is needed that not only resolves economic problems but also serves as a means to invite society back (*yarji'ūn*) to responsible marine management practices.

On the other hand, the potential for digitalization in the coastal areas of Makassar is actually quite high, considering that all informants in this study already own *smartphones* and are supported by adequate internet access. However, there is a gap between the availability of infrastructure and its utilization. The use of devices by coastal communities is still limited to basic communication and social media (such as WhatsApp and Facebook), and has not been utilized for online commercial transactions (*e-commerce*). Furthermore, the community's level of understanding of the blue economy concept is very low. This finding aligns with research by Hafidah & Sartika (2025), which underscores the limited digital and financial literacy of coastal MSMEs in South Sulawesi. This gap demonstrates that providing technological infrastructure alone is insufficient without being balanced by digital platforms designed according to the characteristics and literacy levels of local users.

Responding to this gap, the *LELONG.ID platform* was developed using an R&D model with the ADDIE approach (*Analysis, Design, Development, Implementation, Evaluation*). *LELONG.ID* integrates four main ecosystem functions at once, namely a digital auction marketplace , an aquaculture education module, biodiversity conservation, and a coastal community forum. The validation results by two experts showed an Aiken V Index value of 0.83 (Very Valid), with the highest score in the visual appearance aspect (V = 1.00). This proves that the *LELONG.ID interface* has met the standards of visual practicality and ease of use for digital-based media.

A limited trial involving 23 coastal community respondents resulted in an average practicality percentage of 82.52% (Very Practical). The highest scores were achieved in the ease

of feature access indicators (89.56%) and the effectiveness of cultivation education (85.21%). These results align with the research of Firanti et al. (2026) on the JalaMart platform in the Riau Islands and the research of Siburian et al. (2024) on aquaculture e-commerce in Argomulyo, which demonstrated that efficient digitalization of seafood marketing can shorten the distribution chain, create transparency in auction prices, and increase the economic participation of small-scale coastal businesses. The presence of the *Marketplace feature* on *LELONG.ID*, which facilitates transparent and fair fisheries trade, represents the implementation of the principles of Islamic *muamalah*, as recommended in QS. Al-Ma'idah/5:96:

أَجَلْ لَكُمْ صَيْدُ الْبَحْرِ وَطَعَامُهُ مَتَاعًا لَّكُمْ وَلِلسَّيَّارَةِ ۚ وَحَرَّمَ عَلَيْكُمْ صَيْدُ الْبَرِّ مَا دُمْتُمْ حُرُمًا ۚ وَاتَّقُوا اللَّهَ الَّذِي إِلَيْهِ تُحْشَرُونَ

Translation :

It is lawful for you to hunt sea animals and food from the sea as a delicious food for you and for travelers (QS. Al-Ma'idah/5:96).

The above verse establishes the legal basis for the permissibility and permissibility of utilizing aquatic potential as a source of livelihood and food for all levels of society. Through the *LELONG.ID platform*, the utilization of these marine products can be optimized fairly, where sellers (fishermen/cultivators) receive fair prices without exploitation by middlemen, and buyers (*mātā'an lillazīna*) receive *real-time assurance of commodity quality*.

Although user responses were generally very positive, two indicators in the practicality test received relatively lower percentages: increased awareness of ecosystem sustainability (79.13%) and suitability of features to coastal needs (77.39%), both of which fell into the Practical category. This range in scores was due to the fact that some residents had never interacted with an online auction platform before, requiring adaptation time to understand the direct correlation between digital features and solving their daily operational problems. This finding supports Hadi et al.'s (2026) argument that the acceptance of fisheries education technology is strongly influenced by intensive mentoring and consistent familiarization in the field.

LELONG.ID platform research and development lies in its holistic approach (*all-in-one ecosystem*). Unlike conventional fisheries e-commerce systems that only focus on commercial aspects or internal bureaucratic information systems, as studied by Latif & Utomo (2026), *LELONG.ID combines real-time* buying and selling transactions, biodiversity conservation education, modern IoT-based aquaculture technology, and the preservation of local maritime culture in one web platform without requiring complicated application downloads. This approach successfully bridges the limitations of digital literacy for coastal users. In addition, this research includes Islamic values as an ethical foundation for environmental preservation and transaction

fairness.

However, this study has several limitations. First, the practicality test was only conducted in a limited trial phase with a sample of 23 respondents in the Paotere Port area, so its impact on the macroeconomic scale has not been fully measured. Second, the existence of social institutions such as fishermen's groups or active cooperatives has not been fully identified in the study locations, so the platform dissemination process still relies on individual interactions. Third, limited digital literacy among some older fishermen remains a barrier to operating the auction feature independently.

To address these limitations, further research can be directed at several technical and operational aspects. First, the integration of an artificial intelligence module *or* predictive algorithm to automatically map auction price fluctuations and weather conditions in Makassar waters. Second, the development of a structured digital literacy mentoring and training program involving student organizations, the Fatimah Azzahrah Fisherwomen's Community (KWN), and the local Fisheries Service. Third, the expansion of *field testing* to other coastal areas in South Sulawesi to test the reliability and scalability of the *LELONG.ID platform* in supporting the sustainable implementation of the blue economy in Indonesia.

CONCLUSION

The condition of the coastal community of Paotere Port, Makassar, shows a high level of dependence on middlemen due to conventional marketing channels, fluctuating income, and low digital literacy and understanding of *the Blue Economy concept*. This pressing economic condition has implications for the emergence of environmentally unfriendly fishing practices (such as bombs and potassium) which trigger the degradation of aquatic biodiversity. Through the ADDIE model R&D approach, the *LELONG.ID digital platform* was successfully developed web-based by integrating six main features, namely Home, *Real-time auction Marketplace*, Biodiversity, Aquaculture, Culture, and Community. The results of the validation by two experts showed an Aiken V Index value of 0.83 (Very Valid), while the practicality test on 23 respondents produced an average percentage of 82.52% (Very Practical). These findings prove that *LELONG.ID* is feasible and effective as an integrated solution to cut the middleman distribution chain, create price transparency, and increase ecological awareness of the coastal community of Makassar. The implications of this research strengthen the implementation of *the Blue Economy* which integrates the values of just muamalah (QS. Al-Ma'idah/5:96) and the responsibility to prevent marine damage (QS. Ar-Rum/30:41).

As a recommendation, the local government, through the Makassar City Fisheries and Maritime Affairs Office, is expected to provide regulatory support, strengthen fishermen's

institutions, and provide digital infrastructure facilities at fish landing points. Academics and future researchers are advised to expand the platform's trial reach to other coastal areas in South Sulawesi, integrate artificial intelligence features for auction price and weather predictions, and develop a sustainable digital literacy mentoring program for small-scale fishermen.

REFERENCE

Journal/magazine Library:

- Andrewijana, ES, & Tristiyanto. (2021). *Marketplace Application for Micro, Small, and Medium Enterprises (MSMEs) Using the Laravel Framework*. *Pepadun Journal* , 2 (2), 161–172.
- Marketplace* -Based E-Commerce in an Effort to Shorten the Distribution of Agricultural Product Sales. *Jurnal Resti (Systems Engineering and Information Technology)* , 1 (2).
- Azizah, N., Sri, R., Kurnia, N., & Vernanda, D. (2024). *Fish Sales E-Commerce System* . 2 (1), 19–28. <https://doi.org/10.37630/Inventor.V2i1.1341>
- Chan, S., Fahlevi, H., Fadli, N., Hasibuan, P., Sofyan, SE, Rianjuanda, Syukri, M., Saidi, T., & Dawood, R. (2021). *Does Online Marketing Help in Promoting Fish? Case Study on Fish Companies in Aceh, Indonesia* . <https://doi.org/10.1088/1755-1315/674/1/012072>
- Dewanti, TT, Harsen, F., Apsari, NC, Raharjo, ST, Humaedi, S., Taftazani, BM, & Santoso, MB (2023). Protecting Our Coast: Managing Coastal Environmental Potential Through Community Empowerment in Pangempang, Muara Badak District. *Journal of Research and Community Service (Jppm)* , 4 (1), 43–52.
- Firanti, T., Putra, SK, & Firana, A. (2026). Development of an E-Commerce Platform to Overcome the Inefficiency of Marine Catch Distribution for Economic Equity among Fishermen on the Coast of the Riau Islands. *Multidisciplinary Journal of Academic Sciences (Jmia)* , 3 (4), 814–825. <https://doi.org/10.61722/Jmia.V3i4.11264>
- Fitria, AD, Sianturi, ACK, Salwa, F., Haridani, H., Manik, HF, Khairani, K., Dasopang, LM, Lestari, N., Rahmawati, N., Sagala, SS, & Arika, R. (2024). Behavior and Attitudes, Characteristics, and Economy of Coastal Communities in Hamlet XIII, Percut Village. *El-Mujtama: Journal of Community Service* , 4 (2), 1068–1078. <https://doi.org/10.47467/Elmujtama.V4i2.1011>
- Gusrah, Anwar, & Parawansa. (2024). *Implementation of the Blue Economy Scheme in the United Nations Convention on the Law of the Sea: A Study of the Sustainability of Fisheries Resources on the Coast of South Sulawesi* . 4 (31), 416–427. <https://doi.org/10.31004/Innovative.V4i1.7880>
- Hadi, LUAK, Hartanto, AP, Maulana, MF, & Herjayanto, M. (2026). Public Perception of Digitalization of Fisheries Education in Traditional and Modern Fish Markets. *Sintak-Mas (Synergy of Technology and Society)* , 1 (2), 101–110.
- Hafidah, A., & Sartika, S. (2025). *The Effectiveness of E-Modules in Improving Financial Literacy in Women's Micro, Small, and Medium Enterprises (MSMEs) in Coastal Areas* . 15 (1), 108–121. <https://doi.org/10.30588/Jmp.V15i1.2415>

- Latif, MA, & Utomo, AP (2026). Implementation of a Website-Based Fisheries Information System as a Digitalization of Fisheries Data in Kudus Regency. *Altifani Journal: Research and Community Service* , 6 (3), 1400–1409. <https://Doi.Org/10.59395/Altifani.V6i3.1166>
- Maqfirah, M., & Laba, AR (2025). *The Role Of Blue Economy Towards Golden Indonesia* (Vol. 2024, Issue Icame 2024). Atlantis Press International Bv. <https://Doi.Org/10.2991/978-94-6463-758-8>
- Mayang, R., Sutiah, E., Nurfaika, & Melo, RH (2024). Local Wisdom of the Torosiaje Village Community Regarding Fisheries Cultivation. *Journal of Geographical Research (Geojpg)* , 3 (1), 17–25.
- Rahmawati, K. (2021). Online Sales Training Using *Marketplaces* for SMEs in Bantul. *Dharma: Journal of Community Service* , 2 (1), 79–85.
- Salayan, L.M., Wulandari, H., & Huda, M.K. (2024). The Role of Marine Ecosystems in Biodiversity Conservation in Indonesia. *Journal of Natural Sciences* , 5 (3), 234–244. <https://Doi.Org/10.34007/Jonas.V5i3.717>
- Siburian, DPT, Wicaksono, A., Dwi, HS, & Gustina, S. (2024). Design Of A Web-Based E-Commerce Sales System For The Economic Empowerment Of Fish Farmers. *International Journal On Informatics For Development (Ijid)* , 13 (1), 400–417. <https://Doi.Org/10.14421/Ijid.2024.4440>
- Tjiptabudy, J., Angga, LO, & Latupono, B. (2024). Marine and Maritime Resources Management Model. *Pamali: Pattimura Magister Law Review* , 4 (2), 116–127. <https://Doi.Org/https://Doi.Org/10.47268/Pamali.V4i2.2133>
- Zalianti, JM, Rahmayani, S., Amelia, HR, & Fatmawati. (2026). Indonesian Biodiversity Conservation Strategy Through In-Situ and Ex-Situ Conservation. *Al-Furqan: Journal of Religion, Social, and Culture* , 5 (2), 1131–1137.
- Zebua, O., Zega, A., Zebua, R.D., Laoli, D., Dawolo, J., & Telaumbanua, B.V. (2024). Aquatic Biodiversity Crisis: Investigating Community-Based Solutions for Aquatic Ecosystem Restoration. *Manfish: Scientific Journal of Fisheries and Animal Husbandry* , 2 (2), 69–79. <https://Doi.Org/10.62951/Manfish.V2i2.47>
- Zebua, R.D., Waruwu, E., Telaumbanua, B.V., & Laoli, D. (2023). Potentizebua, RD Et Al. (2023) “Potential For Developing Phytopharmacy Based On Marine Resources: Review,” *Asian Journal Of Aquatic Sciences*, 6(3), Pp. 352–360. Available At: <Http://Ajoas.Ejournal.Unri.Ac.Id.Al For Developing Phytopharmacy Based On Mari>. *Asian Journal Of Aquatic Sciences* , 6 (3), 352–360. <Http://Ajoas.Ejournal.Unri.Ac.Id>

Library of publications from institutions/agencies/organizations

- Decree of the Minister of Maritime Affairs and Fisheries No. 32 of 2014 concerning Maritime Affairs. (2014). State Gazette of the Republic of Indonesia 2014 Number 294. <https://peraturan.go.id/id/uu-no-32-tahun-2014>
- Central Statistics Agency of South Sulawesi Province. (2024). South Sulawesi Province in Figures 2024. BPS South Sulawesi Province . <https://sulsel.bps.go.id/publication/2024/02/28/provinsi-sulawesi-selatan-dalam-angka-2024.html>

