UNIVERSITAS
MUHAMMADIYAH
SIDENRENG RAPPANG

SUSTAINABLE DEVELOPMENT GOALS

SDG 14
Life Below Water
Progress Report 2025

Universitas Muhammadiyah Sidenreng Rappang

Reporting period 1 January to 31 December 2025
Prepared 29 October 2026

14 LIFE BELOW WATER

Melestarikan Ekosistem Laut untuk Mendukung Kehidupan dan Masa Depan yang Berkelanjutan

SDG 14 Life Below Water Progress Report 2025

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Executive overview

UMS Rappang's documented contribution to SDG 14 in 2025 centres on coastal field education, marine environmental research and practical fisheries skills. The reviewed evidence records a mangrove learning visit, a coauthored study of the Makassar Strait, a seaweed research funding award, an industry internship and fisheries knowledge dissemination through JIKAN. These establish learning opportunities and scientific outputs, with different levels of evidence for delivery and results.

Contribution	Documented evidence
Coastal ecosystem education	Tongke-Tongke mangrove visit on 23 November 2025
Marine science	Makassar Strait environmental study published in April 2025 using 2020–2023 data
Research development	2025 funding awarded for a seaweed environmental modelling project
Technical learning	Reported maintenance of seawater intake filters during a fisheries internship
Knowledge dissemination	JIKAN Volume 5 Number 1 published in April 2025

Main conclusion

The evidence is strongest for education, research capacity and publication. It does not establish restored marine habitat, reduced marine pollution, sustainable fish-stock status or measured benefits to coastal livelihoods. The report explains how each activity relates to SDG 14 and identifies the records needed to assess further progress.

Purpose and reporting status

This evidence-based institutional report includes three source photographs, a journal image and a cropped research title with author affiliations. It supports institutional review and public reporting. Preparation in 2026 for the 2025 reporting period does not establish that this report was published in 2025. Institutional approval remains subject to the university's actual review process.

Scope and evidence method

This report is a selective review of publicly accessible university news, a contemporary external news account, journal metadata and research PDFs. Sources were reviewed on 29 October 2026. Coverage follows the Fisheries Science programme and its documented educational and scholarly work; it is not a complete audit of university water management or marine partnerships.

Reporting boundaries

Activity year, news date, journal publication year and underlying data period are recorded separately. An article published in 2025 may analyse earlier observations or describe activities completed in a previous year. A funding announcement supports an awarded project, while a completed study requires its own results or completion record.

Freshwater fisheries can support related sustainability goals, but they are not automatically evidence of marine conservation. A tilapia training article in a 2025 journal issue reports delivery in October–December 2024. It is retained in the screening record and excluded from 2025 activity totals. [6]

Relationship to SDG 14

The UN goal concerns conservation and sustainable use of oceans, seas and marine resources. The clearest thematic links here are target 14.2 on marine and coastal ecosystems and target 14.a on scientific knowledge, research capacity and marine technology. These are interpretive links to target directions, not measurements of UN national indicators or determinations of ranking eligibility. [8]

Evidence type	Interpretation used
Reported educational activity	Shows a learning opportunity; participation and competency require programme records.
Published research	Shows a scholarly output; data year and university author affiliation are checked.
Research funding award	Shows support secured for research; completion and adoption are not assumed.
Journal hosting	Shows dissemination capacity; hosted papers are not all university-authored.
Environmental benefit	Requires a baseline and follow-up measurement; no benefit is inferred from a photograph.

Coastal learning at Tongke Tongke

Fisheries Science programme | Activity 23 November 2025 | News 1 December 2025

Fisheries students visited the Tongke-Tongke mangrove area in Sinjai for Aquatic Ecology and Aquatic Productivity practical learning, guided by lecturer Damis. The account describes vegetation and associated aquatic-life observations, water-quality measurements and dialogue with site managers. Students considered mangrove ecological functions and community conservation approaches. [1]

Figure 1. Field-learning photograph published with the Tongke-Tongke mangrove visit report. Source [1].

Contribution and documented output

The visit connects classroom learning with coastal ecosystem observation. It is relevant to the knowledge and capacity needed for target 14.2 and to marine science education under target 14.a. The public account supports an educational activity; it does not establish university-led planting, restoration area, increased biodiversity or improved fish recruitment.

Assessment and follow up

The programme should retain the practical guide, field attendance, measurement sheets and student reports. Assessment can examine whether students interpret observations, explain ecosystem relationships and identify feasible management questions. Repeated observations at agreed sites would support future ecological monitoring, subject to suitable methods and cooperation with site managers. These are proposed next steps rather than reported 2025 outcomes.

Marine environmental research in the Makassar Strait

Coauthored research | Published 24 April 2025 | Observations cover 2020 to 2023

The study Spatial-Temporal Environmental Conditions of the Makassar Strait Waters 2020–2023 was published in JIKAN. The PDF identifies Hasrianti with UMS Rappang's Fisheries Science programme and coauthors with two other higher education institutions. It uses AQUA MODIS remote-sensing data, geographic information systems and inverse-distance weighting to examine marine environmental variation. [4, 9]

SPASIAL-TEMPORAL KONDISI LINGKUNGAN PERAIRAN SELAT MAKASSAR 2020-2023

Spatial-Temporal Environmental Conditions of the Makassar Strait Waters 2020-2023

Rini Sahni Putri[1*], Hasrianti[2] dan Muh. Ikhsan Idrus[3]

[1]Jurusan Teknologi Kemaritiman, Politeknik Pertanian Negeri Pangkajene Kepulauan
[2]Prodi Ilmu Perikanan, Fakultas Sains dan Teknologi, Universitas Muhammadiyah Sidenreng Rappang
[3]Prodi Pemanfaatan Sumberdaya Perikanan, Institut Teknologi dan Bisnis Maritim Balik Diwa
*rinisahniputri@gmail.com

Figure 2. Cropped title and author affiliations from the published research PDF, page 116. Source [4].

Scientific contribution

The paper describes spatial and temporal patterns in sea-surface temperature, chlorophyll-a and currents. This provides a marine knowledge output relevant to target 14.a and potentially useful for ecosystem questions under target 14.2. Its publication in 2025 is distinct from its 2020–2023 observation period. It is not a new 2025 field survey or proof of a marine management intervention.

Interpretation and use

Environmental maps can inform subsequent research questions, but application to fisheries decisions requires validation and engagement with users. The paper does not establish restored stocks, reduced pollution or an operational forecasting service. Differences between the landing-page and PDF author affiliations should be resolved in the institutional research record; this report uses the PDF to establish the UMS Rappang coauthor.

Records for institutional verification

Retain the final PDF, publication metadata, author affiliation confirmation, data provenance and analysis files where available. Any later management use should be documented separately through the decision, users, date and follow-up assessment.

Research support for sustainable seaweed cultivation

Laikang Bay research project | Funding announcement 25 August 2025

The university announced that Fisheries Science lecturer Damis secured funding for the 2025 research programme. The project concerns an aquatic environmental model to support seaweed cultivation in Laikang Bay. The stated aim is to develop data-based understanding that can support more sustainable cultivation conditions. [2]

Figure 3. Portrait published with the university research funding announcement. It is not a fieldwork photograph. Source [2].

Contribution and evidence status

The award demonstrates support for a marine aquaculture research question and is relevant to research capacity under target 14.a. Its proposed environmental focus may support target 14.2 if findings inform cultivation choices and ecosystem safeguards. The public announcement establishes an awarded project and intended purpose, without confirming a completed model, field dataset or adoption by producers.

Evaluation priorities

Institutional follow-up should distinguish funding, research delivery, scientific output and practical application. Useful records include the award decision, project period, approved protocol, sampling plan, water-quality observations and final report. A later account of producer engagement should identify who used the findings and how decisions changed. Yield, income and environmental improvements should be reported only when independently supported by appropriate measurements.

Practical skills in seawater intake maintenance

Fisheries industry internship | University report 24 March 2025

A university account describes Fisheries Science interns working with field technicians to inspect seawater supply pipes, identify blockages and clean filters. Nur Zafitri and Futry Syahrir are named as participating students. The reported routine is twice monthly and concerns debris entering water supplied for aquaculture. [3]

Figure 4. Photograph accompanying the report on fisheries interns and seawater pipe maintenance. Source [3].

Contribution and limits

Supervised maintenance provides a practical setting for understanding water intake systems, equipment care and aquaculture operations. Its relevance is primarily technical capacity associated with target 14.a. An intake screen removes material before water enters a production system; this activity does not demonstrate treatment of discharged wastewater or reduction of pollution entering the sea.

Evidence needed to assess learning

Retain placement agreements, dates, supervisor records, maintenance logs and competency assessments. The twice-monthly routine should not be converted into an annual total because the source does not establish a full year of participation. A stronger assessment would document students' ability to identify problems, follow operating procedures and record maintenance findings. Environmental performance would need separate water-quality and discharge evidence, including sampling locations and methods.

Disseminating fisheries knowledge through JIKAN

Institutional journal | Volume 5 Number 1 April 2025

JIKAN is managed by UMS Rappang's Fisheries Science programme in the Faculty of Science and Technology. The April 2025 issue, dated 25 April on its issue page, contains ten article entries covering marine, aquaculture and fisheries topics. The university also published an institutional news item about the issue. [5, 7]

Figure 5. Journal identity image accompanying the university news item. This is a publication image rather than an activity photograph. Source [5].

Contribution to marine knowledge

The issue includes seaweed growth, shrimp water quality, marine fish and Makassar Strait environmental analysis alongside freshwater and other fisheries subjects. Journal provision helps make research accessible and supports scientific exchange relevant to target 14.a. Marine relevance should be assessed article by article; the entire issue cannot be treated as ten UMS Rappang-authored marine studies.

Avoiding duplicate output counts

The Makassar Strait paper discussed earlier is part of this issue. It is one research output, while hosting the issue is an institutional dissemination activity. These are different contributions and should not be added together as independent research publications. Issue-level and article-level publication dates should each retain their own metadata.

Follow up

The editorial team should retain an issue archive, article metadata and stable full-text links. Programme reporting can identify university-affiliated authors separately from external contributors. Evidence of use, such as a documented teaching application or partner discussion, would strengthen understanding of the journal's contribution beyond availability.

Progress assessment against SDG 14

The evidence presents a coherent contribution through education, research and dissemination. Its practical strength is the connection between a coastal learning setting, marine environmental analysis and fisheries skills. The reviewed records do not provide a quantified university-wide marine conservation result.

SDG direction	Evidence in this report	Assessment
14.2 Marine and coastal ecosystems	Mangrove learning and environmental research	Knowledge and learning contribution; no measured habitat restoration.
14.a Marine science and capacity	Coauthored study, funding award, internship and journal	Documented outputs or capacity opportunities, with delivery limits explained.
14.1 Marine pollution	No direct pollution-reduction measurement identified	Intake maintenance does not establish reduced marine discharge.
14.3 Ocean acidification	No sustained acidity monitoring programme identified	A practical pH observation alone would not establish a long-term programme.
14.4 and 14.5 Stocks and protection	No stock-recovery or protected-area result identified	No attainment claim made.
14.b Small-scale fishers	No verified access-rights or market intervention in the selected sources	No legal, access or market outcome claimed.

What can be reported confidently

UMS Rappang can describe the five evidence areas using their respective dates, source links and output types. The mangrove visit and internship are reported educational activities; the marine paper is a 2025 publication using earlier observations; the seaweed project is an awarded research initiative; and JIKAN is a dissemination platform. These categories should remain distinct.

What remains unmeasured

The selected sources do not provide a consolidated student participation total, an institution-wide marine research budget, hectares restored, debris avoided, changes in fish stocks or verified livelihood gains. Missing values should remain unreported until supported by records; they should not be recorded as zero or estimated from photographs.

Monitoring and improvement priorities

The following measures are recommendations for future reporting and institutional validation. They are not presented as approved commitments or achieved 2025 results. Programme managers can select measures that match their actual activity boundaries and available records.

Area	Proposed measure	Supporting record
Field education	Unique participants, practical completion and assessed skills	Attendance, assessment rubric and anonymised field reports
Marine research	Projects and outputs with confirmed UMS affiliation	Award records, final reports and publication metadata
Research expenditure	Marine research expenditure and denominator if calculating a share	Finance-validated project classification and expenditure records
Technical internships	Placement duration and demonstrated competencies	Agreements, supervisor assessments and maintenance logs
Community engagement	Coastal partner needs and documented use of findings	Consultation notes, agreed actions and follow-up records
Environmental outcomes	Site-specific change where an intervention actually occurs	Baseline, methods, repeat measurements and responsible partner

Recommended sequence

First, consolidate the five evidence areas into a university register with one record for each distinct project or activity. Second, validate dates, roles and participation with the relevant programme and research unit. Third, attach the underlying outputs, including field reports and research results. Finally, assess which activities justify environmental follow-up and publish only validated findings.

Publication and accountability

Before release, the university should review the factual statements, confirm image attribution and approve the report through its normal process. The public page should display the actual publication date and provide stable evidence links. Corrections should preserve a clear version history. A report covering 2025 can be published later, but its reporting year and release date must remain separate.

Evidence register and source links

All links below were reviewed on 29 October 2026. Photographs and the journal identity image are reproduced from the cited news pages; the research title crop comes from the original PDF. Images identify their source context and do not prove attendance totals or environmental outcomes.

Source 1 Ajatappareng Online

Mahasiswa Prodi Ilmu Perikanan UMS Rappang Kunjungan Edukasi ke Hutan Mangrove Tongke-Tongke Sinjai. 1 December 2025; activity dated 23 November 2025.

Open evidence source

Source 2 UMS Rappang

Membanggakan Dosen Ilmu Perikanan UMS Rappang Lolos Pendanaan Program Penelitian Tahun 2025. 25 August 2025. Funding announcement.

Open evidence source

Source 3 UMS Rappang

Mahasiswa UMS Rappang Asah Keterampilan di Magang Industri Perikanan. 24 March 2025. Internship account.

Open evidence source

Source 4 Putri, Hasrianti and Idrus in JIKAN

Spatial-Temporal Environmental Conditions of the Makassar Strait Waters 2020–2023. Volume 5 Number 1, pages 116–126, April 2025. DOI 10.55678/jikan.v5i1.1984. Full text.

Open evidence source

Source 5 UMS Rappang

Prodi Ilmu Perikanan UMSRappang Terbitkan Edisi Terbaru Jurnal Sains dan Teknologi Perikanan JIKAN. 25 August 2025. Institutional dissemination news.

Open evidence source

Additional sources and verification notes

Source 6 Surianti and colleagues

Innovation in Tilapia Cultivation Techniques to Increase Productivity and Quality of Fishery Products in Sidrap. Volume 1 Number 1, 2025. Methods date training to October–December 2024; excluded from 2025 activity claims.

Open evidence source

Source 7 JIKAN

Volume 5 Number 1 April 2025. Issue metadata dated 25 April 2025. Ten article entries, including the Makassar Strait paper.

Open evidence source

Source 8 United Nations Department of Economic and Social Affairs

Goal 14 targets and indicators. Reference framework for thematic mapping. No national indicator attainment is asserted.

Open evidence source

Source 9 JIKAN article record

Spatial-Temporal Environmental Conditions of the Makassar Strait Waters 2020–2023. Article metadata dated 24 April 2025. Use together with the full text in source 4.

Open evidence source

Verification decisions

The 2025 publication of the tilapia training report is not evidence that training occurred in 2025. The marine paper's observation period is retained as 2020–2023. The funding announcement is not counted as a completed study. Journal-hosted outputs are distinguished from university-authored outputs. These decisions maintain a consistent annual reporting boundary.

Source photographs remain in their original context. The portrait accompanying the funding announcement is identified as a portrait; the journal image is identified as a publication image. The cropped research heading preserves the title and affiliations so readers can check the university's documented role.