جامعة بيروت العربية
BEIRUT ARAB UNIVERSITY

SUSTAINABLE DEVELOPMENT GOALS

SDG 17: PARTNERSHIPS FOR THE GOALS







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Beirut Arab University
SDG 14 Life Below Water

University and Community Alignment Report | Lebanon

Evidence review updated 19 October 2026

Understanding the goal

SDG 14 concerns the conservation and sustainable use of oceans, seas and marine resources. It addresses marine pollution, ecosystem protection, scientific knowledge and responsible use. A university can contribute through marine and coastal research, education, prevention of land-based pollution and participation in appropriate partnerships. Scientific evidence is valuable even where a university does not manage a protected marine area.

Evidence: United Nations SDG 14 targets

BAU's contribution

BAU's verified contribution includes research on Lebanese marine organisms, microbial biodiversity and microplastic pollution, together with participation in a marine-protection seminar. Its water-quality expertise is also relevant to pollution that travels from land to the coast. These activities show a knowledge and capacity contribution; they should not be presented as proof of restored fish stocks or university management of marine protected areas.

Relevant UN targets	Focus of this report
14.1	Understanding and preventing pollution
14.2	Knowledge relevant to marine ecosystems
14.a	Marine scientific capacity and research cooperation

Students staff and community

Students develop environmental and analytical skills under academic supervision. Researchers study marine organisms and pollution, while technical employees maintain laboratory quality. Operational teams influence material handling on campus. Coastal and civic organisations can connect university knowledge with conservation discussion and appropriate community learning.

Evidence approach: dated activities and research from 2021–2026 are prioritised. Standing services are identified as such; policies and agreements have no date cutoff. Original links accompany the evidence. The final page proposes improvements and does not claim they are already implemented.

Understanding marine organisms and coastal conditions

Fish research in Jiyeh

BAU's 2024–2025 publication record includes a study of environmental conditions and the allometric and morphometric traits of fish in Jiyeh, Lebanon. The research examines eleven species and relationships between physical traits and local conditions. It contributes information about marine organisms and their environment, rather than demonstrating that a fishery has recovered.

Evidence: BAU original Jiyeh fish research record

Research of this kind can help establish questions for further ecological assessment. A measured relationship needs to be interpreted in the context of sampling, species, season and other conditions. Students can learn why environmental indicators require careful analysis and why one study cannot stand for a complete assessment of the coast.

Marine microbial biodiversity

A BAU-affiliated study in Applied Microbiology's 2025 volume investigates the antimicrobial potential of actinomycetes isolated from marine samples at Tyre. The work connects marine biodiversity with microbiological research. It is a laboratory investigation of biological potential, not an environmental management programme or a clinically established antimicrobial treatment.

Evidence: Original Tyre marine microbial research February 2025

The wider value of biodiversity research includes recognising that marine habitats support organisms and functions that may be poorly understood. Responsible study requires appropriate collection, identification and reporting. Academic staff and laboratory employees support reliable methods, while students develop skills that can contribute to later marine and environmental work.

From scientific results to ecosystem questions

These studies provide a research foundation, but ecosystem protection requires additional information and appropriate management partners. A useful next step is to identify which findings can inform monitoring and which require further study. Public summaries should explain the ecological relevance without promising benefits that the research has not established.

Pollution knowledge from local waters to international research

An international review of microplastics

In September 2025, a conference review involving BAU researcher Dalia El-Badan examined the movement and threats of microplastics in aquatic ecosystems. Coauthor affiliations include institutions in Lebanon, Egypt and Kuwait. The contribution synthesises research on exposure, effects and monitoring challenges; it is a review, not evidence of a new BAU sampling campaign along the Lebanese coast.

Evidence: Original international microplastics review September 2025

The distinction matters because a review and a field survey answer different questions. A review can identify what methods exist and where knowledge is uncertain. A local survey must establish the sites, dates, sampling procedures and analytical quality needed to describe conditions in a specific place.

Land and sea are connected through water quality

BAU participation in the 2024 Rachiine River study contributes evidence on water and sediment pollution. Although the work concerns a river, it is relevant to understanding land-based pathways that can affect downstream and coastal environments. It should not be described as a direct marine survey.

Evidence: Original Rachiine River pollution study published 2024

BAU's Specialized Water and Soil Analysis Laboratory offers analytical capability relevant to environmental contaminants. This can support the skills needed for investigating pollution, within the laboratory's actual methods and service arrangements.

Evidence: BAU Specialized Water and Soil Analysis Laboratory

Teaching responsible interpretation

Students need to understand the pathway from a potential source to transport, exposure and ecological effects. Academic staff can connect chemistry, biology and environmental management, while technical staff maintain quality in sampling and analysis. This interdisciplinary approach helps avoid treating a single contaminant measurement as a complete explanation of ecosystem health.

Community communication should be equally careful. Clear information about a study's location and limits can support informed discussion, while unexplained technical results may create either false reassurance or unnecessary confusion. Accessible summaries are a practical opportunity to extend the value of the documented research.

Participation and the university community

Engagement with marine-protection discussion

On 9 April 2025, BAU's Head of English Department was invited to a seminar introducing Marine Protected Areas Network and BioConnect projects, under the patronage of the Beirut Governor and in cooperation with Beirut Municipality. The original record supports BAU staff participation in an external event. It does not say that BAU hosted the seminar or led either project.

Evidence: BAU participation in marine and biodiversity project seminar

Participation can help university staff understand the work of conservation and civic organisations and identify suitable educational connections. A later partnership or joint project would need its own agreement and activity records. Keeping the level of involvement clear allows the university to build on a real contribution without claiming the responsibilities of another organisation.

Students and staff can connect disciplines

Marine issues are not confined to one department. Scientists can examine organisms and contaminants, engineers can investigate treatment and monitoring, and communication specialists can help explain findings. Students can contribute through supervised assignments and volunteering where there is a defined role and an appropriate partner.

Administrative and operational employees also matter. Purchasing, material handling and facilities management influence the pathways through which waste or pollutants could leave a campus. A preventive approach should establish actual procedures and records, particularly for laboratory and clinical materials. These are areas for strengthening institutional practice rather than evidence of an already verified zero-discharge campus.

Community-facing learning with a defined purpose

BAU could develop learning activities with coastal organisations around questions identified by those partners. A session might help participants understand a water-quality result, recognise the limits of a sampling method or consider how land-based litter reaches the coast. Learning objectives and follow-up feedback would help establish whether the activity is useful.

Such cooperation should respect the expertise of local organisations and the responsibilities of public authorities. The university's role can be research, education or technical support; it need not claim management of a marine site in order to make a meaningful contribution.

Priorities for strengthening the contribution to SDG 14

BAU's strongest verified evidence is scientific and educational. The following recommendations would help connect that knowledge with continuing coastal partnerships and clearer evidence of public benefit.

Develop a focused marine research and engagement programme

A coordinated programme could identify a manageable set of coastal questions and match them with appropriate methods and partners. Repeated monitoring would need agreed sites, quality controls and a reporting schedule. A review article, a laboratory experiment and field monitoring should remain distinct in the university's records.

Priority	Suggested evidence of progress
Marine science	Dated studies, methods and accessible outputs
Pollution prevention	Documented campus handling and disposal routes
Partnerships	Defined university roles and completed activity
Community learning	Participant understanding and follow-up needs

Translate findings responsibly

Research teams could prepare short summaries explaining what was studied, what was found and what remains uncertain. Where findings concern potential products or treatments, communication should separate biological potential from proven safety or effectiveness. Where monitoring identifies concern, the route for informing the appropriate partner or authority should be agreed beforehand.

Students could participate through assessed projects that combine technical learning with communication and ethical reflection. Staff development could support the supervision of interdisciplinary work. Community partners should help define useful outputs so that engagement produces information they can actually use.

BAU's contribution to Life Below Water is a growing base of research and capacity relevant to Lebanese marine environments. Continuing partnerships, careful interpretation and documented follow-up would strengthen the connection between that knowledge and the protection of coastal ecosystems.