

IMPACT REPORT 2022

LIFE BELOW WATER



PHOTO SOURCE: FISH POND IN UNIVERSITI MALAYA



UNIVERSITI
MALAYA

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PROJECT ADVISORS

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PROJECT LEADER AND EDITOR

Rahmat Shah Putra Samsul Rizal

STUDY TEAM

Muhammad Azhar Arif Mohd Azmi

WITH SUPPORT FROM

Tan Siu Ching
Nur Dinah Izzaty
Mohamad Firdaus Ramli
Mohd Fadhli Rahmat
Affan Nasaruddin
Noor Azril Ramli

EDITORIAL & DESIGN

Calven Chow Kai Wen
Rahmat Shah Putra Samsul Rizal

Associate Fellows (Corporate Data Centre)

Dr. Bernardine Renaldo Wong Cheng Kiat
Dr. Tan Hsiao Wei
Huzienetta Hamdan

Subject Matter Experts

Professor Dr. Saiful Anuar Karsani
Dr. Muhammad Azzam Ismail

Administrative Support

Kamisah Samsuddin
Norshila Mat Nor

CONTRIBUTORS

Deputy Vice-Chancellor (Academic & International) Office
Deputy Vice-Chancellor (Research & Innovation) Office
Deputy Vice-Chancellor (Student Affairs) Office
Deputy Vice-Chancellor (Development) Office
Registrar Office
Associate Vice-Chancellor (Corporate Strategy) Office
Associate Vice-Chancellor (Global Engagement) Office
Associate Vice-Chancellor (Infrastructure & Information Services) Office
Agro Park Glami Lemi Biotechnology Research Center
Department of Development & Estate Maintenance (JPPHB)
Faculty of Arts and Social Sciences
Faculty of Built Environment
Faculty of Engineering
Faculty of Science
Institute of Ocean and Earth Sciences (IOES)
Rimba Ilmu
The Bachok Research Station
UrbanAqua@UM
UM Sustainability & Development Centre (UMSDC)
UM Water Warriors

FOREWORD BY ASSOCIATE VICE-CHANCELLOR (CORPORATE STRATEGY)



The Sustainable Development Goals (SDGs) has transformed the landscape of the higher education sector on a global scale. These 17 goals have become a primary reference framework in many institutions' planning of education & learning, research & innovation, as well as strategic partnerships strategies.

The publication of the 17 Universiti Malaya Impact Reports 2022 is crucial to monitor our efforts towards SDGs as we are advancing our excellence through the implementation of the UM Strategic Plan 2021-2025, UM Transformation Plan 2021-2030, and UM Sustainability Policy 2021-2030.

For many years, UM has integrated the SDGs into our leadership, university policies, curriculum activities, RDCIE initiatives, values, investments, and strategic partnerships with stakeholders to demonstrate that UM also "walks the talk." These efforts involve active engagement from our staff, students, and the broader community of stakeholders and alumni.

Congratulations to the team at the Corporate Data Centre for formulating data-driven comprehensive reports that will serve the University in becoming a Global University Impacting The World.

PREFACE BY DIRECTOR OF THE CORPORATE DATA CENTRE



I am delighted to present all 17 Universiti Malaya Impact Reports for 2022, which review the data related to the Sustainable Development Goals (SDGs) and showcase UM's achievements in 2022. The 17 SDGs serve as a guide for addressing the most pressing issues and critical challenges. Each of the 17 SDGs demands strong collaborative efforts from all levels of society to ensure a more resilient and sustainable future for the next generation.

In the Corporate Data Centre, we apply knowledge and data analytics skills to make informed, evidence-based decisions. This not only helps address current challenges but also ensures preparedness for the future.

These 17 Impact Reports for 2022 are flagship reports designed to assist the University in monitoring and examining our contributions to the country's progress in achieving the 17 SDGs.

I would like to seize this opportunity to express my deep appreciation to my team, who have worked tirelessly to collect and analyse data, enabling us to effectively monitor UM's sustainability efforts. I am also sincerely grateful for the support from UM's top management and the hard work of all colleagues across campus, particularly the Sustainable Development Centre, data managers, and controllers, for their cooperation in providing the SDG data for 2022.

OUR IMPACT IN 2022



24 assistance programs empowered **10694** students in their academic journeys.



12 impactful food assistance programs, including free food, food banks, vouchers, and affordable options, eliminated hunger on UM campus.



Over **20** outreach programs delivered essential health services to local communities in need and refugees.



47 enriching courses featured in the 2022 Short-Term/International Training/Study Tour, part of UM Course Buffet to support lifelong learning.



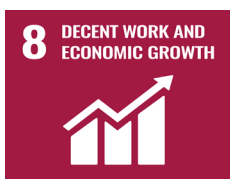
55% Female representation in senior positions



429 participants took on 7 weeks of water conservation challenges during the Kita Jaga Air Challenge 2022.



UM subscribed to the Green Electricity Tariff (GET) program, generating **5.5** million kWh of clean energy



Precision Intervention Program for selected students to produce future-ready graduates enriched with UM DNA.

AIM OF THE GOALS

SDG 1: End poverty in all its forms everywhere

SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

SDG 3: To ensure healthy lives and promote well-being for all at all ages

SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

SDG 5: Achieve gender equality and empower all women and girl

SDG 6: Ensure availability and sustainable management of water and sanitation for all

SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for al

SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation

SDG 10: Reduce inequality within and among countries

SDG 11: Make cities inclusive, safe, resilient and sustainable

SDG 12: Ensure sustainable consumption and production patterns

SDG 13: Take urgent action to combat climate change and its impacts

SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

SDG 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development

The development of the Industrial Relations Strategic Planning Framework - Industry University Hyper Engagement Collaboration Framework (INSIGHT)

The publication of the First E-Magazine for Persons with Disability by The Secretariat AUN-DPPnet.

The establishment of UM Master Plan document to guide the university towards achieving a Carbon-Neutral Campus by 2050.

9 initiatives conducted by the Zero Waste Campaign to establish an integrated solid waste management system

The establishment of UM Carbon Neutrality Acceleration Living Labs to contribute to the university's carbon-neutral performance.

In 2022, Project Pulih joined forces with RHB ISLAMIC to protect Malaysia marine ecosystems.

Rimba Ilmu, or Forest of Knowledge, covers 40 hectares and contains an estimated living collection of around 1,700 species of plants.

UM as the first university in Malaysia to conduct campus elections fully run by students.

UM as part of 28 Global Network Memberships, has International Partners based in UM, and 96 Academia-Industry Collaborations.





Overall Ranked
in band
101-200 /1591
From band **201-300** in 2022



Ranked
50/876
From **201-300**
in 2022



Ranked in band
101-200/647
From band **201-200**
in 2022



Ranked in band
101-200/1218
From band **201-300**
in 2022



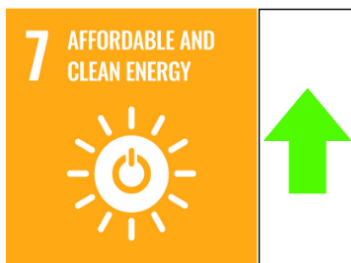
Ranked in band
101-200/1304
From ranked **79**
in 2022



Ranked
3/1081
From ranked **51**
in 2022



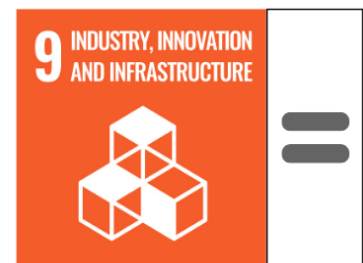
Ranked
60/702
From band **201-300**
in 2022



Ranked
13/812
From **201-300**
in 2022



Ranked in band
401-600/960
From band **401-600**
in 2022



Ranked in band
201-300/873
From band **201-300**
in 2022



Ranked in band
201-300/901
From band **101-200**
in 2022



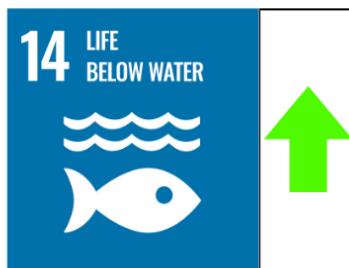
Ranked
72/860
From **101-200**
in 2022



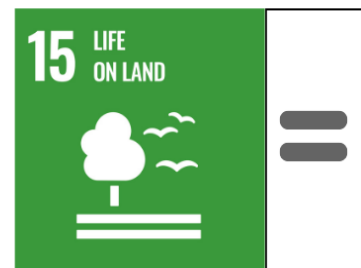
Ranked
73/674
From **201-300**
in 2022



Ranked in band
101-200/735
From band **101-200**
in 2022



Ranked
85/504
From **101-200**
in 2022



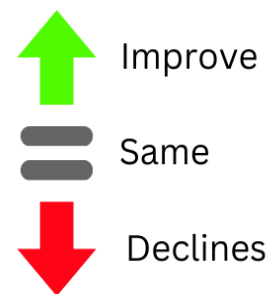
Ranked in band
101-200/586
From band **101-200**
in 2022



Ranked in band
101-200/910
From band **201-300**
in 2022



Ranked
81/1625
From **301-400**
in 2022





Picture taken by our researcher from PULIH Project

Educational Outreach

SUPPORTING LOCAL AQUATIC ECOSYSTEMS

Universiti Malaya (UM) is at the forefront of supporting aquatic ecosystems through education. We offer comprehensive academic programs, conduct vital research, and engage in community outreach to raise awareness about the importance of these ecosystems. UM collaborates with many organisations and government agencies to yield innovative solutions towards this issues.

FRESH-WATER ECOSYSTEMS EDUCATIONAL PROGRAMMES AT UM

UM Water Warriors offers free and paid [Environmental Educational Programs](#) on topics that include Fresh Water Ecosystems Programs such as Water Detective and Creepy Crawlies.

These educational programmes will delve on water conservation and water quality knowledge. Participants can also learn how to conduct the chemical water monitoring kits test at a stream, river or lake to test the water health. UM Water Warriors also offers Nature Quest for youth to enhance their knowledge on various environment-related topics such as aquatic insects, freshwater fish, trees, backyard birds, recycling, stormwater education, watersheds, and water quality issues and water monitoring.

The Faculty of Science at UM also offers several courses that focus on addressing water quality challenges and water-related environmental issues through its Master's program in Environmental Management Technology.

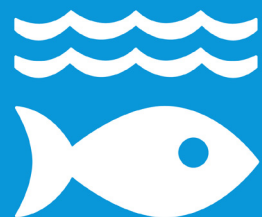
Some of the courses available in this program include Water, Air, and Noise Pollution Control Technology, Clean Technology and Sustainable Waste Management, and Pollution Prevention and Waste Treatment Technologies.

The Faculty of Engineering at UM has also established a research center called Water Engineering and Spatial Environmental Governance (WESERGE), which focuses on research areas such as Smart Water Resources Management and Modeling, Water Supply and Sewerage, Modeling and

Simulation in Hydrology and Hydraulics, Meteorology, Flood Management, River Water Quality, River Basin Management, and many more. The objective of this research centre is to foster multi- and inter-disciplinary collaborative research nationally and internationally to address water issues.

For more information, please visit [The Faculty of Engineering](#).

14 LIFE
BELOW WATER



COMMUNITY OUTREACH ON SUSTAINABLE MANAGEMENT OF FISHERIES, AQUACULTURE AND TOURISM

UM is dedicated to extending its reach beyond the campus and engaging with the local community through various community outreach programs. Over the years, student societies and research centers at the UM have organised multiple community outreach programs that encompass a wide range of sectors, including those addressing issues related to aquatic sector.

The Institute of Ocean and Earth Sciences (IOES) was founded when the UM recognised the importance of establishing a dedicated research center for marine and maritime research. The mission of the center is to promote the sustainable use

of the ocean. Efforts toward this goal include conducting research and technology development, as well as academic sharing sessions with other academic institutions and local communities.

FISH KILL AND HARMFUL ALGAL BLOOM

In one of the events in 2022, Associate Professor Dr. Po-Teen Lim was invited to give a presentation to the Jabatan Perikanan Malaysia Cawangan Negeri Perak on 14th November 2022 regarding “Fish Kill and Harmful Algal Bloom.” Such collaborations are among the initiatives aspired by UM to have its lineup of experts offer their expertise to the government and community.

BENGKEL KESEDARAN TENTANG PENCEMARAN KIMIA DAN SISA PEPEJAL

This workshop was the first program organised by UM in collaboration with the Bachok Land and District Office, as well as the Bachok District Council, Kelantan. This program is part of the university’s internally funded research impact-oriented initiative known as the IIRG Research Grant, led by Associate Professor Dr. Bong Chui Wei from the Institute of Biological Sciences. Among other things, the workshop, which involves the fishing community in Mukim Telong, aims to enhance their understanding and awareness of chemical pollution and solid waste. This initiative is designed to promote the practice of sustainable fishing.



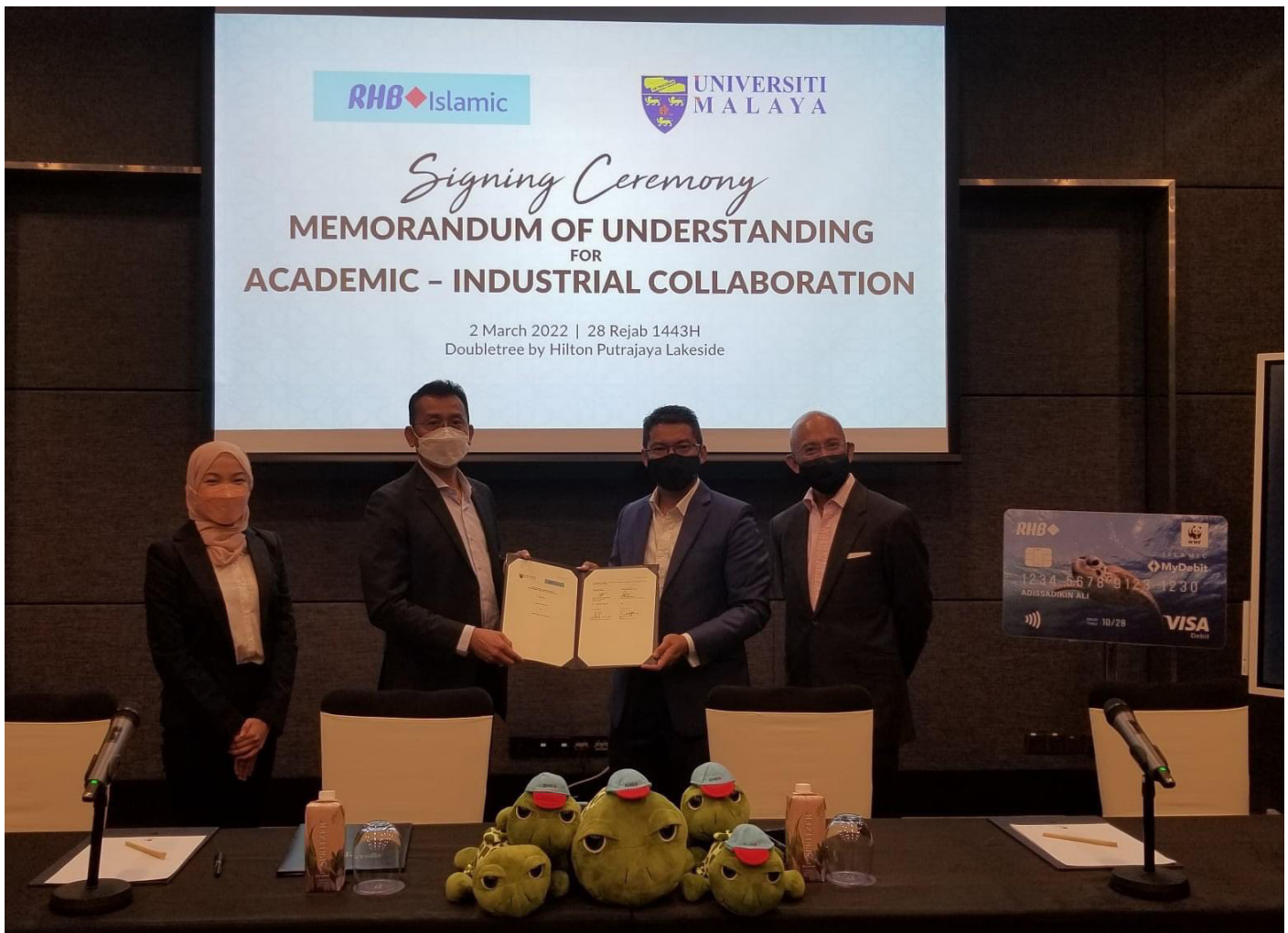


HARMFUL ALGAL BLOOM MONITORING AND SPECIES IDENTIFICATION TRAINING

UM also organises educational outreach programs at an international level. In this regard, Associate Professors Dr. Lim PoTeen and Dr. Leaw Chui Pin were invited by the Department of Fisheries Brunei to conduct an “in-house training course on Harmful Algal Bloom monitoring and species identification” in Brunei between July 18 and 23, 2022. A brief discussion was also held with the Director of the Department of Fisheries Brunei regarding potential future collaborations. Dr. Lim also presented copies of books on behalf of the WESTPAC HAB program to the department.



UM Staffs were discussing with the Malaysian Nature Society (MNS), Kelantan, and the Bachok Curriculum Center at BMRS for the Beach Cleaning Program at Melawi Beach.



UM AND RHB ISLAMIC BANK LAUNCH ICONIC PARTNERSHIP

The degradation and decline of coral reefs in Malaysia, specifically the significant decrease in coral cover since 1990, is attributed to the fragility of corals. They are vulnerable to factors like rising seawater temperatures and the increased frequency and intensity of storms resulting from climate change. To address this issue, there is a pressing need for more successful coral rehabilitation programs.

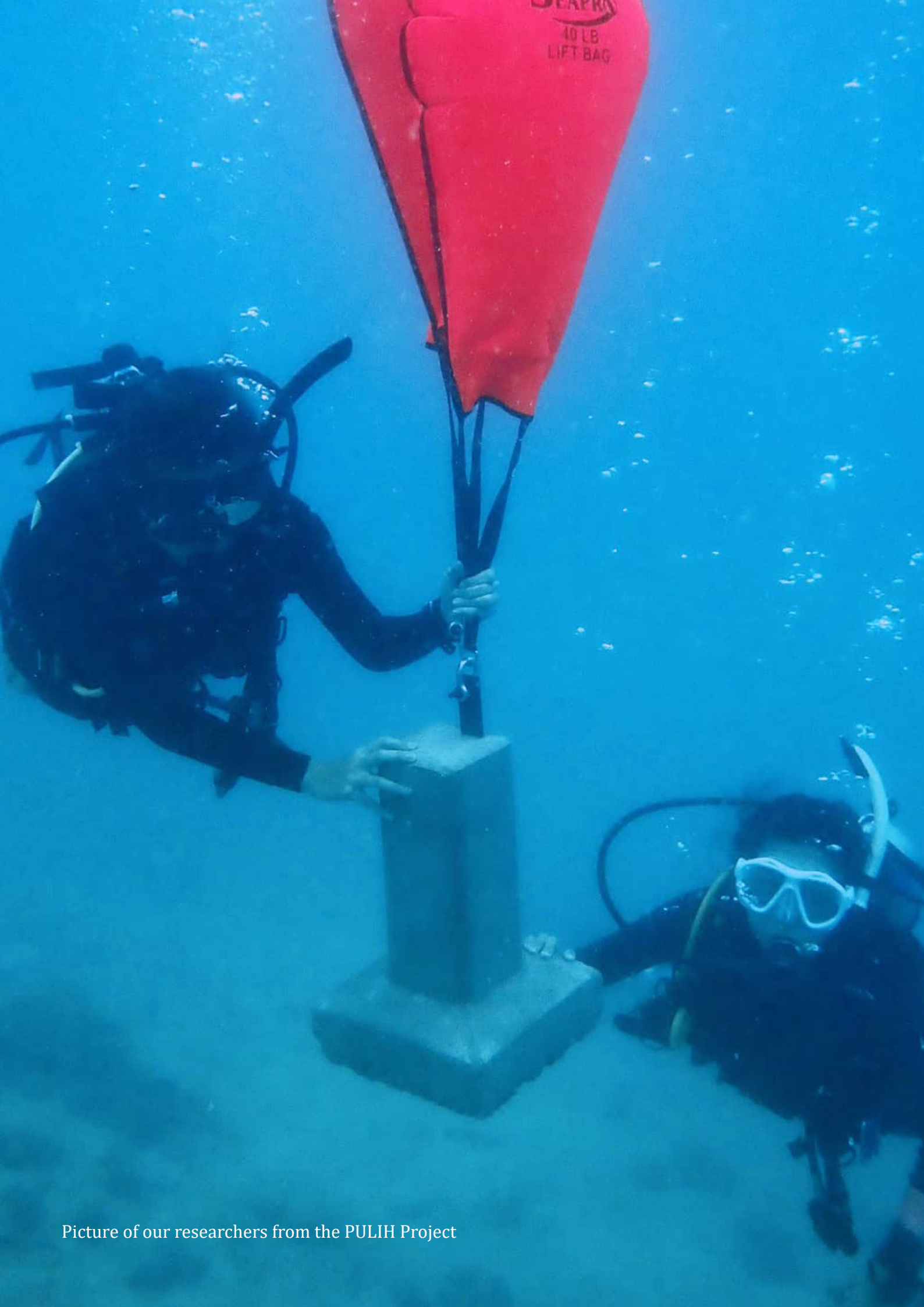
In an effort to combat this problem, researchers from Universiti Malaya (UM), representing the Faculty of Arts and Social Sciences, the Institute of Ocean and Earth Sciences, and the Faculty of Science, collaborated to establish [Project PULIH](#) (Protecting

Underwater Life through Integrated Rehabilitation). This project aims to study the rehabilitation of coral reefs affected by physical damage. It is funded by the Impact-Oriented Interdisciplinary Research Grant (IIRG) program. This multidisciplinary research team integrates various scientific disciplines, including ecology, geography, physiology, and molecular biology, with the overarching goal of discovering improved and locally tailored strategies to heal and restore marine ecosystems in Malaysia.

Recognising the shared vision for coral reef rehabilitation, RHB Islamic partnered with the project through its Ocean Harmony initiative. To formalise this strategic partnership, UM and RHB Islamic signed a Memorandum of Understanding (MoU) on March 2, 2022.

The MoU was signed by Dato' Adissadikin Ali, Managing Director of RHB Islamic Berhad, and Professor Dr. Sabri Musa, Deputy Vice Chancellor of Student Affairs at UM, who represented Professor Dato' Ir. Dr. Mohd Hamdi Abd Shukor, Vice Chancellor of UM. The signing ceremony also included the participation of Mr. Roshan Jaffar, Head of Strategy at RHB Islamic, and Dr. Nuradilla Mohamad Fauzi, a senior lecturer at UM and a representative of the Project PULIH team.

The MoU establishes a framework for future collaborative activities between UM's marine scientists and RHB Islamic. These activities are dedicated to increasing awareness of the coral reef ecosystem and developing science-based solutions to address this issues.



Picture of our researchers from the PULIH Project

RAISING AWARENESS ABOUT OVERFISHING, ILLEGAL, UN-REPORTED AND UNREGULATED FISHING AND DESTRUCTIVE FISHING PRACTICES

UrbanAqua@UM, in collaboration with Hellas TF Sdn Bhd and Sepang Today Aquaculture Center (STAC), organised an aquaculture seminar on the 7 December 2022 at the Auditorium Hall of JPPHB, UM. The event commenced with a mock Memorandum of Agreement (MoA) signing with Hellas Technology Farm, followed by a public visit to the Recirculation Aquaculture System (RAS) at Ladang Mini ISB, located next to the JPPHB building. Various individuals from the industries, as well as staff and students, gathered here to participate in the event.

UM ANNUAL FISHING COMPETITION

As part of UM's efforts to raise awareness about overfishing and destructive fishing practices, the Water Warriors organised an event called "On Campus - Water Warriors Environmental Education @ UM GreenBelt (Invasive Alien Species, Water Quality & Fish Health - Citizen Science Demonstration)" in conjunction with the UM Annual Fishing Competition. The purpose of this event was to educate lake user and UM community about invasive species and to engage in hands-on activities related to fish and water quality. They collected all fish photos to create interpretive materials for the lake.

RIVER CARE: FROM CLASSROOM TO OUTDOOR REAL EDUCATION (RC-CORE)

This program, conducted on 3 June 2022, had the objective of cleaning the Rimba Ilmu River while also creating suitable habitats for aquatic animals and plants, thereby promoting a sustainable environment. Additionally, the program aimed to raise awareness about the significance of river management concerning protection, conservation, and restoration. The activity saw the participation of more than 50 individuals from UM with diverse backgrounds, including students, staff, support and academic personnel from various faculties, as well as involvement from UPM and the general public.



UrbanAqua@UM Aquaculture Seminar, MoA Signing with Hellas TF Sdn Bhd & Visit to RAS System in Ladang Mini ISB.



7 December 2022 (Wednesday)



9.30 am – 12.00 pm



**Dewan Auditorium Jabatan
Pembangunan & Penyelenggaraan
Harta Benda (JPPHB), Universiti Malaya**

> REGISTER NOW



Organised by:

**UrbanAqua@UM, Institute of Biological Science, Faculty of Science,
Universiti Malaya**



Underwater Picture from PULIH Project

CONSERVATION AND SUSTAINABLE UTILISATION OF THE OCEANS

UM actively organises events which promote conservation and sustainable utilization of oceans, seas, lakes, rivers, and marine resources through IOES. This institute was established with the mission of the centre is to seek scientific understanding and to promote best management practices in the utilisation of the marine environment, ocean law and maritime affairs, through multidisciplinary research, education and training.

The event highlights in 2022 include sharing sessions between [IOES](#) and the University of Tokyo, the Department of Fisheries Brunei, and the Department of Fisheries Malaysia.

SHARING BEST PRACTICES FOR THE SEAWEED AQUACULTURE INDUSTRY IN MALAYSIA

Two sessions of 'Sharing Best Practices for the Seaweed Aquaculture Industry in Malaysia' were conducted online by the GlobalSeaweedSTAR team at the UM (Malaysia) in partnership with the Department of Fisheries Sabah.

The sessions included discussions on the key findings and the legacy of the GlobalSeaweedSTAR program for the seaweed aquaculture industry in Malaysia. Various topics were covered, including pests and diseases, biosecurity, and genetic diversity.

IOES SUMMER PROGRAM: MARINE BIODIVERSITY & EDUCATION

IOES hosts an annual summer program that students can join. Participants in this program are exposed to the importance of marine biodiversity conservation through a variety of activities and classes. Students have the opportunity to engage in interdisciplinary educational programs by attending classes covering a wide range of topics, particularly focusing on the field of Malaysian marine science.

To see more, please visit [IOES website](#).



RESEARCH AND ENGAGEMENT WITH INDUSTRIES

Focusing on efforts beyond the campus, UM has partnered with the [World Wildlife Foundation \(WWF\)](#) to sign an MoU concerning biodiversity conservation and sustainable development in Malaysia. This MoU establishes a framework for collaboration between Universiti Malaya and WWF-Malaysia with the aim of increasing awareness and knowledge databases to support biodiversity and ecosystem conservation, as well as sustainable development in Malaysia. The primary objectives include promoting joint research for policy development and management strategies, which will be shared among the involved parties.

Particularly in the field of marine and maritime conservation,

IOES brings UM researchers, educators and students together with community members to work directly, through research and engagement with industries, to maintain and extend existing ecosystems and their biodiversity to solve water quality problems in local priority watersheds. One of the highlighted projects is the collaborative initiative with 'Going Back to Nature SDN BHD' for the project titled 'Good Agricultural Practice Through Microbial Action.' This project is set to run for two years.

[Agro Park Glami Lemi Biotechnology Research Center](#) engages in multifaceted agricultural and livestock initiatives, incorporating collaborative efforts with the industry to enhance the efficiency of project execution.

Notable projects encompass Barbados Black Belly sheep farming, mushroom cultivation, red tilapia fish farming, fish aquaculture, and plant fertigation. Furthermore, the center plays a vital role in the realm of research, offering support for data collection, sampling, outreach programs, technical guidance, and financial assistance to local farmers within the region who express an interest in participation.

DOCUMENTING THE MARINE LIVING RESOURCES IN PREPARATION FOR ADAPTATION TO CLIMATE CHANGE

The list of marine creatures in Malaysian waters is far from complete. It is imperative to have a complete inventory of Malaysia's marine natural resources before the endemic



species go extinct due to rapid climate changes.

Such a bioresource database is necessary for determination of the vulnerability of the indigenous species to provide strategies for their protection. Scientists at the IOES UM are known worldwide for their work in identifying and categorising the [different species of animals and plants](#) in Malaysia and its surrounding region. The discovery of many new species and the identification of rare, endangered and threatened species is an on-going activity of the UM scientists.

TECHNOLOGIES FOR THE PREVENTION OF AQUATIC ECOSYSTEM DAMAGE

[The Bachok Research Station](#) located in Bachok Kelantan, serves

as a hub for field-testing UM's eco-engineering technologies in coastal protection. It also plays a crucial role in the development of mariculture systems and serves as a launching point for expeditions into the South China Sea.

These expeditions are conducted to profile the ocean-earth-atmosphere systems as part of UM's efforts to comprehend their impacts on ocean productivity, monsoons, global climate, and their effects on coastal populations. The information gathered is vital for the Maritime Law Unit's endeavors to establish a national ocean law and policy framework for Malaysia.

Collaborating with UM partners, the National Ocean Centre Southampton, and the Korea

Ocean Research and Development Institute, UM is committed to expanding expertise in open ocean research and deep seabed profiling, thereby contributing to national capacity building in ocean research.

This research centre supports advanced and applied research, focusing on the utilisation of marine resources, marine biotechnology, eco-engineering technology, met-ocean research, and socioeconomic studies. It also provide the necessary infrastructure and facilities for the development and pilot-scale testing of new coastal engineering technologies designed to protect shorelines against erosion, sea-level rise, and tsunamis.





Image from PULIH Project

MINIMISING ALTERATION OF AQUATIC ECOSYSTEMS (PLAN)

UM has multiple water bodies on its grounds. These water bodies provide safe habitats for the native flora and fauna within Universiti Malaya's compound, creating a complex ecosystem. This ecosystem is situated in the midst of a rapidly developing urban landscape, making it a land rich in biodiversity. The university has established several long-standing plans aimed at minimizing alterations to the aquatic ecosystems within the campus. A key example of these efforts is the [UM Development Checklist](#).

This document offers guidelines for the standards and requirements that projects must meet in order to be approved. The document categorizes these standards and requirements into several sections, one of which is Environmental Impact Assessment and Requirements. Environmental Impact Assessment (EIA) is a process that evaluates the likely environmental impacts of a proposed project, taking into account various factors, such as socio-economic, cultural, and human-health impacts, both positive and negative. This assessment is carried out jointly by JPPHB, UMSDC, the Faculty of Built Environment, and the Faculty of Engineering, among others. Before a project is approved for development, its design must be validated by the relevant Centers of Responsibility, which also include criteria related to the aquatic ecosystem. Some of the assessment criteria include:

1. The impact on natural flowing water or other water sources.

2. The effect on important ecological functions of the project site, such as nutrient sources through flooding and stormwater retention.

3. Biodiversity mapping of the area and conservation efforts where applicable.

Requirements regarding the water ecosystem include:

1. The management of water bodies, both natural and man-made features.
2. The implementation of an integrated and long-term water management policy within Universiti Malaya, encompassing lakes, rivers, and groundwater.

The UM Development Checklist is part of the coordinated action plan under the UM Sustainability Policy and the UM Eco-Campus Blueprint. Within the UM Sustainability Policy, Core Area 1: Landscape and Biodiversity Management, Pilar 3: Environment, the document aims to align landscape management at UM with the preservation and conservation of biodiversity on campus. This goal is consistent with the objectives outlined in the UM Eco-Campus Blueprint.

The "[Kompilasi Prosedur Pengurusan Buangan Terjadual Di Setiap Pusat Tanggungjawab \(Ptj\)](#) policy" prohibits the disposal of materials that could have adverse effects on the general public, wastewater personnel in the course of their work, the operation of the University Sanitary Sewer system, or the release of inadequately treated materials into the environment.

MONITOR THE HEALTH OF AQUATIC ECOSYSTEMS

UM uses several approaches to monitor the health of aquatic ecosystems. UM through Water Warriors conduct surface water quality monitoring at water bodies throughout the campus as part of our water management program which is described in the UM Master Plan 2050, UM Strategic Plan 2021-2025, UM Sustainability Development Policy 2021-2030. The monitoring is done using a water quality index comprising of parameters in the Department of Environment water quality index guideline. The water is then categorised into classes following the water standards released by the Department of Environment.

UM IOES conducts long-term studies of the Marine Sciences considering the importance of Malaysia's abundant marine heritage as well as to coordinate and lead all research activities and consultancies in marine and maritime research at the UM. IOES also partners with local agencies and industry players such as in the region to monitor the health of aquatic ecosystem in targeted area through its program PULIH.

MAINTAINING GOOD AQUATIC STEWARDSHIP PRACTICES

UM is actively engaged in the development, promotion, and implementation of various programs aimed at cultivating sound aquatic stewardship practices. UM has initiated several campaigns designed to raise awareness and educate its community about the critical need to preserve local ecosystems. With a particular focus on the aquatic environment, UM Water Warriors is a dedicated group responsible for safeguarding and conserving the campus's aquatic ecosystem. Their responsibilities encompass the coordination of programs designed to promote responsible aquatic stewardship practices.

One such program is the “[Kita Jaga Air Challenge](#),” which is conducted in collaboration with Air Selangor. This competition is geared toward motivating participants to set long-term water conservation objectives by reducing their daily water consumption and fostering a sense of place-based river care. This competition is designed to encourage responsible aquatic stewardship practices and is open to the public, with a significant portion of the content being delivered virtually. Throughout the competition, participants are required to complete a 7-week challenge and document their progress on social media. The challenge encompasses various activities, training workshops, and educational components.

Educational opportunities, such as webinars, workshops, and articles addressing water quality and management, are offered regularly throughout the year to promote responsible aquatic stewardship practices. These sessions are scheduled periodically and can be reserved through the [UM Water Warriors website](#). Most of these programs aim to enhance public awareness of water ecosystem management.

UM's IOES concentrates on addressing contemporary water quality challenges related to land use and land management impacts. UM's researchers are also [collaborating with Air Selangor](#) to advance water conservation and preservation initiatives, which will ultimately benefit the residents of Selangor, Klang Valley, and Putrajaya. The collaborative effort aims to co-create and develop a handbook outlining sustainable water consumption and conservation practices.

Moreover, [Project PULIH](#) is an interdisciplinary team at the UM dedicated to researching methods for rehabilitating coral reefs damaged by physical harm. This team combines expertise from diverse scientific disciplines, including ecology, geography, physiology, and molecular biology, with the overarching goal of enhancing coral reef rehabilitation techniques. The Malay word “PULIH,” which means “to heal” or “restore,” aptly characterizes the team's research mission to devise improved and locally relevant strategies for the healing and restoration of marine ecosystems in Malaysia.

COLLABORATION FOR SHARED AQUATIC ECOSYSTEMS

UM collaborates with several local community organisations to jointly manage and preserve aquatic ecosystems. Most of these collaborations entail educational events designed to raise awareness and disseminate information about aquatic ecosystems. One notable partnership is with [Air Selangor](#), an enduring collaboration that encompasses academic sharing sessions, community outreach activities, and research and development endeavors related to water management. The highlight of this collaboration in 2022 was a knowledge-sharing visit by UM Water Warriors and JPPHB to exchange expertise on non-revenue water management in Selangor, Kuala Lumpur, and Putrajaya. Additionally, the partnership introduced the “Kita Jaga Air Challenge 2022” as part of a social campaign to protect and conserve water resources.

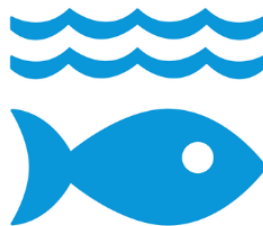
Another collaboration for shared aquatic ecosystems involves Sekitar Kita. Sekitar Kita is a university-linked social enterprise spin-off from UM Water Warriors. This enterprise has collaborated with many institutions, public and private, local and international. The collaborators include UNDP Accelerator Lab Malaysia, Sustainable Places Research Institute (Cardiff University), Forest Research Institute Malaysia, and many more.

Furthermore, UEM Sunrise and UM have signed a Memorandum of Understanding (MoU) to enhance the quality of water at Taman Tasik Metropolitan Kepong. UEM Sunrise Berhad, through its subsidiary Mega Legacy (M) Sdn Bhd (MLMSB), partnered with the Faculty of Science at UM to assess the water quality and heavy metal content of the lake in Taman Tasik Metropolitan Kepong. This initiative aims to transform urban spaces in Malaysia for environmental conservation, ensuring the safety of both humans and aquatic life from potential contamination. Taman Tasik Metropolitan Kepong serves as a recreational space for the public, and the collaboration strives to maintain it properly.





14 LIFE BELOW WATER



CDC welcomes your enquiries and feedback on this report.

Please email: corporate_data@um.edu.my