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DIVERS FOR THE ENVIRONMENT

WWW.EMIRATESDIVING.COM | MAGAZINE | SEPTEMBER 2026 | VOLUME 22 | ISSUE 3



UNDERWATER WORLDS

DISCOVERING THE SPECIES, HABITATS AND STORIES BENEATH THE WAVES

• A NEW CHAPTER FOR EDA • REEF CHECK • WHERE ARE ALL THE BIG FISH? • EELS OF THE WORLD
• TIMOR-LESTE • SEAGRASS MEADOWS • YOUTHS CORNER • UPCOMING EVENTS

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EDA is a non-profit NGO registered with the Ministry of Community Development and CDA, and accredited by UNEP as an International Environmental Organisation.



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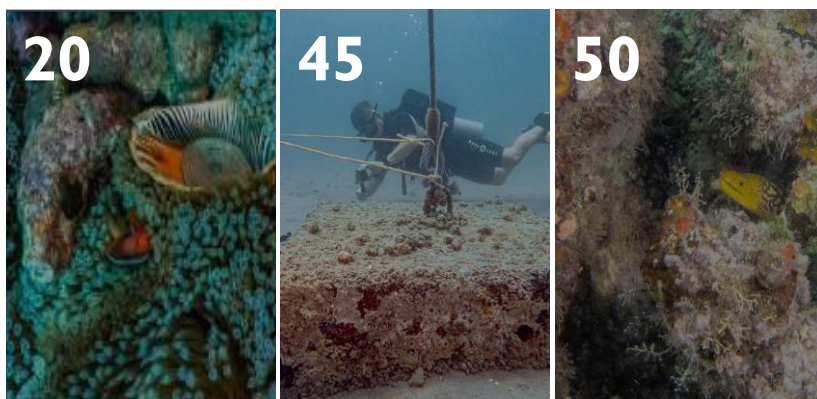
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DIVERS FOR THE ENVIRONMENT

Please note that EDA's magazine, 'Divers for the Environment', includes articles written by individuals whose opinions, whilst valid, may or may not represent those of EDA's. The magazine is a platform for individuals to voice their opinion on marine and diving related issues. You are welcome to suggest an article for the next issue, to be released in December 2026. Send your articles, feedback or comments to: magazine@emiratesdiving.com



COVER

PHOTO BY Naima Amari.

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Underwater Worlds: Discovering The Species, Habitats And Stories Beneath The Waves



Photo by Ahmed Al-Ali

A NEW CHAPTER BENEATH THE SURFACE



IBRAHIM AL-ZU'BI
Co-Founder

Welcome to the September issue of Divers for the Environment. As we enter a new season for diving in the UAE, we also begin an exciting new chapter for the Emirates Diving Association. The appointment of a new Board of Directors marks an important moment for EDA and for the wider diving community. It brings renewed energy, fresh perspectives and an opportunity to build on the strong foundations established over the years. At the heart of this journey remains a shared passion for our seas and a commitment to ensuring that the UAE's marine environment continues to be explored, understood and protected for generations to come.

The UAE has always had a special relationship with the sea. From the traditional communities whose lives and livelihoods were shaped by the waters around our coast, to today's growing community of recreational divers, photographers, marine enthusiasts and conservationists, the ocean continues to be an important part of our national identity.

Today, the opportunities are greater than ever.

As the UAE continues to strengthen its position as a global hub for sustainability, conservation, innovation and outdoor experiences, diving has an important role to play. Our waters offer extraordinary opportunities to discover marine life, document underwater ecosystems, develop scientific knowledge and, perhaps most importantly, inspire people to care about what lies beneath the surface.

The future of diving in the UAE is therefore not simply about more people entering the water. It is about better diving, responsible diving and meaningful engagement with our marine environment.

EDA has an important role in shaping that future. Through education, awareness, community engagement, conservation initiatives and collaboration with partners across the UAE, we can help create a diving culture that is safe, informed and environmentally responsible.

The new Board of Directors inherits not only an organisation with a proud history, but also a community with enormous potential. There is an opportunity to bring divers together, encourage the next generation to discover the underwater world, support our dive professionals and clubs, and strengthen the connection between diving and marine conservation.

As we look towards the cooler months, when our diving community once again returns enthusiastically to the water, there is much to look forward to. New discoveries await, new stories will be told, and new generations of divers will experience the sense of wonder that comes from looking beneath the surface of our seas.

This September issue is therefore more than the beginning of another diving season. It is an invitation to look ahead—with optimism, ambition and a renewed sense of purpose.

The future of diving in the UAE is bright. And together, we have the opportunity to make it even brighter.

Welcome to a new chapter of Divers for the Environment.
Safe diving,

Ibrahim Al-Zu'bi

Ibrahim Al-Zu'bi

EDA ANNUAL GENERAL ASSEMBLY

Emirates Diving Association Holds 2026 General Assembly



The Emirates Diving Association (EDA) successfully conducted its 2026 Annual General Assembly on 24 July 2026, bringing together members to discuss the Association's achievements, financial matters, and future plans.

During the Assembly, members reviewed and approved the 2025 Annual General Assembly minutes, administrative report, and financial report, along with the proposed 2026 operational plan and budget. The meeting also included the approval of the Association's external auditor and discussions on strengthening the EDA's financial sustainability and future activities.

New Board of Directors Announced
A key highlight of the General Assembly was the election of the EDA Board of Directors for the next four-year term.

The newly elected Board members are:

1. H.E. Juma Bin Thalith Al Humairi – Chairman of the Board
2. Brigadier Expert Dr. Juma Khalifa Alrahommi – Vice Chairman of the Board
3. Mohamed Faraj Abdulla Jaber – Secretary General and Chief Inspector
4. Major General Khalid Nasser Abulrazaq Alrazooqi – Financial Director
5. Ibrahim Al Zu'bi – Board Member & D.G.
6. Abdulla Salem Nasser Salem Alruwaihy – Board Member
7. Shaikha Khalid Mohamed Almughani Alhmoudi – Board Member
8. Marwa Abdelrahman Ahmed Ali Almahmoud – Board Member
9. Talib Ali Salim Albeli Aldhuhoori – Board Member

The EDA extends its warm congratulations to the newly elected Board of Directors and wishes them every success in their new term. With renewed leadership and a shared commitment to the diving community, the EDA looks forward to continuing its efforts to develop, regulate, and promote the diving sector in the UAE, while enhancing services and support for its members.

The EDA thanks all members for their continued support and looks forward to a successful new chapter for the Association.



H.E. Juma
Bin Thalith Al
Humairi



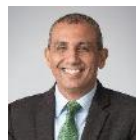
Brigadier
Expert Dr.
Juma Khalifa
Alrahommi



Mohamed
Faraj Abdulla
Jaber



Major
General
Khalid Nasser
Abulrazaq
Alrazooqi



Ibrahim Al
Zu'bi



Abdulla
Salem Nasser
Salem
Alruwaihy



Shaikha
Khalid
Mohamed
Almughani
Alhmoudi



Marwa
Abdelrahman
Ahmed Ali
Almahmoud



Talib Ali
Salim Albeli
Aldhuhoori

EDA MOVIE SCREENING

PLASTIC OCEANS BUNDLE

PHOTOS AND ARTWORK BY ALLY LANDES



Event Details

Date

Thursday 11 June 2026

Time

Doors open 6:30pm, first film 7:00pm

Location

Deep Dive Dubai.

Registration was required for this event – no walk-ins were allowed.

Who Could Attend

Attendance was open to EDA Members only. Spaces were limited, and members who could no longer make it after registering were asked to notify Kacy so their place could be passed to someone on the waiting list.

Want To Join Us Next Time?

Membership is AED100/year and gives you access to every EDA event.

www.emiratesdiving.com/membership

The Documentaries Showing

1. Cutting the Line (10m 39s)
2. Out of Plastic (19m 46s)
3. Return of the Mangroves (9m 7s)
4. From the Mountain to the Sea (16m 12s)

EDA MOVIE SCREENING

PLASTIC OCEANS BUNDLE

[@plasticoceans](#) curated a bundle of award-winning documentaries for us to screen through their impact film distribution: [@seepositivechange](#). This screening opened up important conversations about our connection to the ocean and the actions we can take to protect it.

RESCUES

The first film, [@cuttingtheline](#) follows a husband and wife team, Naude and Katja Dreyer, as they embark on a mission to rescue entangled seals along their home along the Namibian coastline and raise urgent awareness about ocean plastic pollution.

PLASTICS

The second film, Out of Plastic is a compelling 2018 short documentary directed by Cleanwave founder Line Hadsbjerg. Shot in Spain's Balearic Islands, the 20-minute film explores the devastating presence of single-use plastics in the Mediterranean Sea. It combines stunning ocean scenery with urgent calls for environmental action.

CORAL

The third film, From the Mountain to the Sea documents the coral restoration by [@wedoocean_bali](#) – carried out together with the local community and Bali Blue Harmony.

MANGROVES

The fourth film, Return of the Mangroves signifies the global resurgence of these vital coastal ecosystems. Mangroves are making a comeback thanks to international conservation, high-tech planting (like drones), and heightened awareness of their incredible power to protect shorelines and fight climate change.



EDA MOVIE SCREENING

PLASTIC OCEANS BUNDLE



Here is all the information we shared at our EDA Movie Screening:

RESCUES (following Cutting the Line)

This raised the discussion of who to call in the UAE for marine animal rescues, or sightings.

1. [@uaedolphinproject](#) for dolphin and whale sightings (dead or alive) & [@yasseaworldrrad](#) Hotline
2. [@dubaiturtles](#) if you find sick or injured sea turtles & [@fujenvironment](#)'s what to do info during sea turtles nesting season

PLASTICS (following Out of Plastic)

We discussed EDA's own Cleanup Arabia campaign; the Dubai Voluntary Diving Team's Stuck Threads initiative on how to call them to report ghost nets; and we shared an article published in Divers for the Environment by Mohamed Almusallami et al. on the research of ingestion of marine debris in juvenile sea turtles in Abu Dhabi.

3. Cleanup Arabia
4. [@dubai.voluntary.diving](#)'s Stuck Threads Initiative
5. [@b47r](#) et al. article

CORAL (following From the Mountain to the Sea)

Here, we shared information on those who can provide coral citizen science projects, educational courses, and volunteerism within the UAE.

6. [@reefcheckfoundation](#) with EDA and [@coral_watch](#)
7. [@project.reeframe](#) by [@freestyle_divers](#)
8. [@archireef.co](#) coral reef education
9. [@coralife.ae](#) volunteering options
10. Introducing [@ecocoast.global](#)'s new Ecoreef project

EDA MOVIE SCREENING

PLASTIC OCEANS BUNDLE

MANGROVES (following Return of the Mangroves)

We shared the mangrove national parks of the UAE with educational options, kayaking tours and mangrove planting options.

- 11. Abu Dhabi
- 12. Ajman
- 13. Umm Al Quwain
- 14. Mangroves Matter with [@goumbook](#)

- 15. [@sundivebyronbay](#) bucket list expeditions and research adventures & [@marinemegafauna](#) dives to support Marine Research
- 16. [@bigfishexpeditions](#) focus on photographing big animals & [@immersivexpeditions](#) for off-the-beaten-path locations
- 17. [@thebigbluediving](#) based in Dubai for worldwide group adventures

TRAVEL

One last short film by [@allylandesphotography](#) was shown on how to find specialised trips with research/education, and/or a focus on photography at the forefront; as well as connecting like-minded divers in the UAE looking to travel as a group to find new worldwide adventures.



MALAYSIA'S DIVING TRAILBLAZER HONoured AT TIA 2026

Diveheart Malaysia ambassador Hj Syed Abd Rahman recognised for his work in scuba diving, water therapy and inclusive adaptive tourism.

SELANGOR, MALAYSIA | 8 AUGUST 2026



ABOVE: Hj Syed Abd Rahman, ambassador for Diveheart Malaysia and founder of Kids Scuba.

Johor-born dive professional Hj Syed Abd Rahman has been awarded the Malaysia Tourism Industry Award (TIA) 2026 in the category of Outstanding Tourism Personality for Scuba Diving and Adaptive Tourism.

The award was presented at the TIA 2026 gala dinner and awards ceremony, held at the Sunway Lagoon Resort Hotel ballroom on 8 August, which brought together leaders from across Malaysia's hospitality, leisure and tourism sectors.

The awards recognise contributions to Malaysia's tourism competitiveness and sustainable growth. Recipients are also named Ambassadors of Malaysia Tourism.

Hj Syed Abd Rahman has spent decades redefining what is possible in Malaysia's marine and accessible tourism sectors.



“Underwater, gravity disappears, and physical limitations fade away — we are all equal.”

HJ SYED ABD RAHMAN

As the driving force behind Kids Scuba and a leader for Diveheart Malaysia, he has worked to make the underwater world accessible to groups traditionally left out of mainstream sport — including young people, individuals with spinal cord injuries, and people with diverse physical abilities.

Through adaptive diving programmes, medical rehabilitation partnerships and the training of specialised support teams, he has shown that the zero-gravity environment of scuba diving offers physical, mental and emotional benefits.

“This recognition is not just a personal milestone, but a testament to the collective power of adaptive tourism and water therapy,” he said. “I share this honour with every medical professional, volunteer and student who believes that the ocean should be a space for everyone.

Diveheart Malaysia is a non-profit extension of the global Diveheart mission, dedicated to building confidence, independence and self-esteem in children, adults and veterans with disabilities through scuba therapy and adaptive training.”

Also In 2026

International Scuba Diving Hall of Fame inductee
Chairman, Accessible Tourism
Founder, Kids Scuba

diveheart.org



THE ART OF HIDING

GOBIES OF KHORFAKKAN

WORDS AND PHOTOGRAPHY BY **MOHAMED MOHSEN**



All photographs were captured in Khorfakkan, in the UAE.

Most divers never see a goby. They are shy, and they dart into the holes in the coral at the first sign of movement.

A goby can also match the colours of the coral around it – this is her main defence against predators.

To find and photograph one takes patience and deep focus. You wait, and wait, until you get the shot.

These photographs show the variety of colour and shape among the gobies of Khorfakkan, one of the finest dive sites I have seen in the Gulf.

About The Photographer

Mohamed Mohsen is an architect, diver and underwater photographer based in the UAE and Oman. His macro work reveals the quiet beauty and behaviour of marine life.

www.instagram.com/m.mohsen.uwp



Shot With

Camera Sony A7 III

Lens Sony 90mm f/2.8 Macro G OSS

Depth 10–15 m

Dive buddy Ali Salman

GILGAMESH

THE WORLD'S FIRST DIVER?

THE EARLIEST DIVE INTO THE DEPTHS OF THE SEA | BY MUSTAFA AL FARDAN



ABOVE: Tablet XI of the Epic of Gilgamesh, known as the Flood Tablet, held in the British Museum, London.

Long before modern diving equipment, before documented pearl fisheries, and before the great maritime civilisations of the Arabian Gulf, an ancient story told of a man who tied heavy stones to his feet and descended into the depths of the sea in search of a mysterious plant that promised renewed life.

That man was Gilgamesh, the legendary king of Uruk and hero of what is widely regarded as the world's oldest surviving epic.

Written more than four millennia ago, the Epic of Gilgamesh preserves one of humanity's earliest literary descriptions of a deep-water dive. Although the epic never explicitly mentions pearl diving, its vivid account of descending to the seabed has fascinated historians, archaeologists, and researchers interested in the origins of diving traditions.

The Epic of Gilgamesh survives on twelve clay tablets written in Akkadian cuneiform. The best-known copy formed part of the royal library of the Assyrian King Ashurbanipal at Nineveh, in present-day Iraq, where it was discovered during archaeological excavations in 1853.

THE DESCENT INTO THE DEEP



ABOVE: An artist's impression of Gilgamesh's descent to the seabed.

Today these remarkable tablets are preserved in the British Museum in London, offering one of humanity's oldest literary treasures and an extraordinary glimpse into the beliefs and imagination of ancient Mesopotamia.

In Tablet XI, after surviving many trials, Gilgamesh learns from Utnapishtim about a remarkable plant hidden beneath the waters. The epic tells us:

"There is a plant that grows in the waters... If you obtain this plant, you will regain new life."

Determined to reach it, Gilgamesh prepares for an extraordinary descent. The text describes how he:

- Opened the passage leading to deep waters
- Tied heavy stones to his feet
- Descended to the seabed
- Found the mysterious plant
- Removed the stones
- And rose safely back to the surface

This sequence is one of the earliest known literary descriptions of a deliberate dive into deep water.

One detail is particularly remarkable. Gilgamesh ties heavy stones to his feet before descending.

For centuries, traditional pearl divers across many parts of the world — including the Arabian Gulf — used weighted stones to descend rapidly to the seabed before releasing the weight and returning to the surface.

Although separated by thousands of years, this similarity has attracted considerable scholarly interest.

THE PLANT OF LIFE

It is important to note that the epic does not describe Gilgamesh as a pearl diver. Rather, it records a deep-water descent whose method resembles techniques later used by traditional divers.

The object of Gilgamesh's search is described simply as a plant growing beneath the waters that restores vitality and renews youth. The epic never identifies this plant as a pearl.

However, some modern writers and researchers have proposed a symbolic interpretation, suggesting that the mysterious underwater plant may represent the pearl.

Their interpretation is based on several observations:

- Pearls are born beneath the sea
- They were among the most precious treasures known to ancient civilisations
- They symbolised purity, renewal and divine mystery
- Like the legendary plant, pearls were associated with extraordinary value and almost mythical significance

This remains an interpretation rather than an established historical fact, but it illustrates the enduring cultural power of pearls throughout the ancient Near East.

Whether Gilgamesh should be called the world's first diver depends on how the question is understood. Historically, people almost certainly dived long before the epic was written.

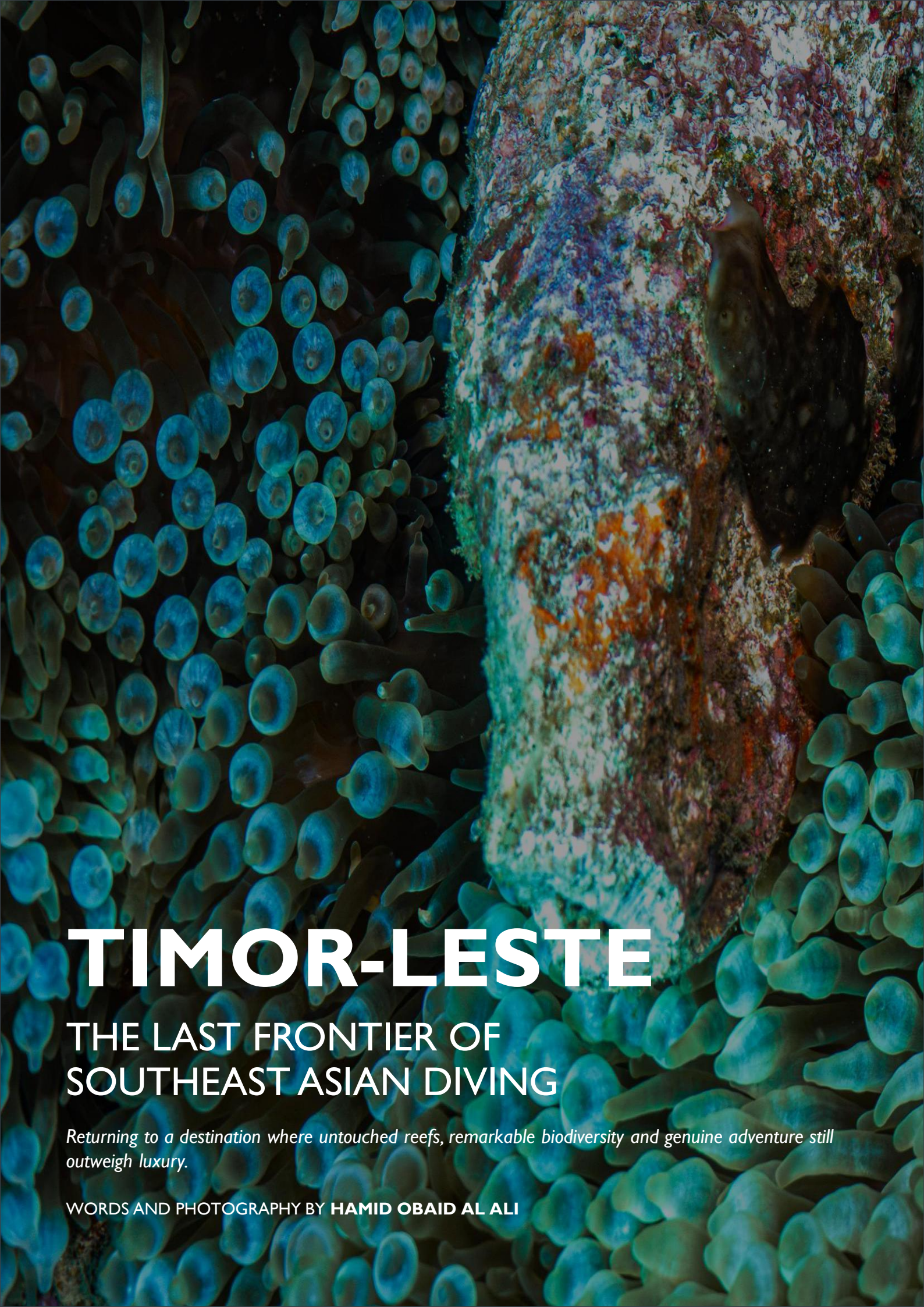


ABOVE: The pearl-diving traditions of the Arabian Gulf became one of humanity's greatest maritime cultures.

Thousands of years later, the pearl-diving traditions of the Arabian Gulf would become one of humanity's greatest maritime cultures.

Divers descended on a single breath in search of pearls that transformed economies, inspired poetry, and shaped the identity of coastal communities.

Whether viewed as mythology, symbolism, or literary history, Gilgamesh's underwater journey reminds us that humanity's fascination with the hidden treasures of the sea began in the earliest chapters of civilisation. His legendary descent continues to inspire historians, archaeologists, and lovers of maritime heritage around the world.



TIMOR-LESTE

THE LAST FRONTIER OF SOUTHEAST ASIAN DIVING

Returning to a destination where untouched reefs, remarkable biodiversity and genuine adventure still outweigh luxury.

WORDS AND PHOTOGRAPHY BY **HAMID OBAID AL ALI**





ABOVE: Timor-Leste remains largely untouched by mass tourism.

Some dive destinations impress you once. Others keep calling you back. Timor-Leste belongs firmly in the second category.

This was my second visit to this young island nation, and returning only confirmed what I had discovered during my first trip: beneath its modest exterior lies one of the healthiest and least explored marine ecosystems in Southeast Asia.

Unlike many famous diving destinations that have evolved around tourism, Timor-Leste remains refreshingly authentic.

Tourism is still developing, dive operations are limited, and many areas retain the feeling of genuine exploration rather than commercial adventure.

Getting there has become easier than many divers imagine. A direct two-hour flight from Bali to Dili makes Timor-Leste surprisingly accessible. Many divers visiting Indonesia can simply extend their holiday by a few days and experience a completely different underwater world without complicated travel logistics.

Ironically, reaching the country is easier than entering it. Visitors

should allow extra time on arrival, as airport formalities can be slow and somewhat tedious.

Immigration, luggage handling and customs are noticeably less streamlined than in neighbouring countries. It is not difficult, but it does require patience — the first reminder that this is not yet a polished tourist destination.

Once outside the airport, however, the pace immediately changes. There are no massive resorts, no endless rows of dive shops, and no beaches filled with tourists. That authenticity quickly becomes one of Timor-Leste's greatest attractions.



Divers accustomed to destinations like Bali, the Maldives or the Philippines should arrive with realistic expectations. Timor-Leste is not a luxury diving destination.

The number of professional diving centres remains limited, operating mainly around the capital, Dili. Facilities are functional rather than luxurious, equipment is straightforward, and dive boats prioritise practicality over comfort.

Yet none of this diminishes the quality of the diving. In fact, the relatively small diving industry has helped preserve what matters most — the underwater environment.

Without heavy tourism pressure, reefs remain remarkably healthy and dive sites rarely feel crowded. Throughout my trip many dives felt like private explorations, with no other bubbles in sight and no competition for the best

photographic subjects.

The local dive operators deserve tremendous credit. Their familiarity with tides, currents and seasonal marine life allows divers to experience sites at their very best.

Adjust your expectations above the surface and prepare to exceed them below it.



Timor-Leste offers an impressive diversity of underwater environments, making it equally rewarding for macro photographers and wide-angle enthusiasts.

For macro lovers, every dive feels like a treasure hunt. Colourful nudibranchs, ornate shrimps, decorator crabs, ghost pipefish, frogfish, seahorses, juvenile reef fish, blennies, gobies and flatworms hide among healthy coral gardens and volcanic slopes.

Yet macro photography tells only

half the story. The reefs themselves are magnificent.

Massive hard coral formations, colourful soft corals, enormous sea fans, steep walls, dramatic drop-offs and crystal-clear visibility create exceptional opportunities for wide-angle photography. Reef sharks, turtles, schooling fish, eagle rays and the occasional pelagic visitor add excitement to nearly every dive.

Some of the country's most spectacular sites lie around the nearby offshore islands, where

short boat rides transport divers to pristine, largely undisturbed reefs.

One spectacle deserves special mention: the sheer abundance of clownfish colonies. Entire stretches of reef are carpeted with giant sea anemones, forming continuous colonies dozens of metres across.

Instead of a single pair occupying one anemone, divers are greeted by hundreds of individuals, each fiercely defending its own tiny territory. It is an unforgettable experience and a photographer's dream.

Although scuba diving was the primary reason for my return, Timor-Leste has another claim to international recognition. Among marine enthusiasts it may be even more famous for its whale watching than for its diving.

Every year, particularly between October and December, migrating blue whales, sperm whales, pilot whales, melon-headed whales and numerous dolphin species pass through the deep waters surrounding the country.

This migration corridor has become one of the most exciting whale-watching destinations in the region. The unique underwater geography allows these animals to travel remarkably close to shore.



As tourism slowly develops, better hotels, improved infrastructure and additional dive operators will almost certainly follow. For now, visitors have the rare opportunity to experience the country before commercial development transforms it.

This was my second visit, and it certainly won't be my last. Timor-Leste isn't a destination for everyone — those searching for luxury resorts, polished facilities or vibrant nightlife may find themselves disappointed.

But divers who seek healthy reefs, remarkable biodiversity and authentic hospitality will find something increasingly rare.

Not every great dive destination needs luxury. Some simply need extraordinary oceans — Timor-Leste is one of them.

The Author

www.hamidobaid.com

www.instagram.com/hamid.o.alali



THE SECRET WORLD OF ABERYSTWYTH'S ROCK POOLS

WORDS AND PHOTOGRAPHY BY Isaac Al-Zu'bi



ABOVE: Aberystwyth, on the mid-west coast of Wales.

I have just returned to the UAE after a lovely six-week summer holiday in Wales, where I was visiting my grandparents.

It was six weeks full of fishing, crabbing, beach cleaning and exploring rock pools.

One of my favourite places in Wales is Aberystwyth. Set on the mid-west coast, it is easy to concentrate on the sea, the beach and the cliffs. But if you visit when the tide is going out, you might notice something else hiding between the rocks.

At first, a rock pool might just look like a puddle of seawater. But if you look closely, it is actually a tiny underwater world full of creatures. Some are easy to spot, while others are experts at hiding.

My brother Idris and I spent our summer holiday exploring the coast around Aberystwyth, and it made me realise how much life can be

hiding in something that looks so small.

A rock pool is a pool of seawater that gets trapped in a hollow or dip in the rocks when the tide goes out.

The sea is constantly moving over the coastline. Waves crash against rocks and gradually wear them away. Over many years, this erosion creates cracks, holes and deeper depressions in the rock.

When the tide comes in, these spaces fill with seawater. When it goes back out, some of the water stays behind — a tiny ocean trapped between the rocks.

The animals living in rock pools have to be pretty tough. They spend part of the day completely underwater, then the tide goes out and suddenly they are sitting in a pool exposed to the sun and air.

The temperature can change, the

water can evaporate and predators can arrive. This area between the high and low tide marks is called the intertidal zone, and the animals living here have evolved special ways of surviving these constantly changing conditions.

I like to think of the rock pool animals as the survival experts of the seaside!

Some hide underneath rocks or seaweed. Others have shells that stop them drying out. Some, like sea anemones, can even shrink themselves into a little blob when they are out of the water.

Crabs are probably one of the most exciting things to find. Shore crabs hide underneath rocks or amongst seaweed, waiting for the tide to return. You might also find tiny young crabs that look completely different from the larger crabs in deeper water.



ABOVE: Some of the creatures hiding in the rock pools around Aberystwyth.



ABOVE: Look, photograph, learn — and leave everything where it belongs.

Tiny sea snails such as periwinkles and topshells are common on rocky shores around Wales.

They might not seem very exciting at first, but they play an important role. Many graze on algae growing on the rocks, almost like tiny underwater lawnmowers.

If you are really lucky, you might see a small fish darting around a pool. One species found on rocky shores is the common blenny. Their mottled colouring camouflages them against the rocks, and they can be surprisingly hard to spot — they look like part of the rock until they suddenly move.

Look carefully into deeper pools and you might see tiny prawns or shrimps moving between the seaweed. They are incredibly difficult to see because they are often almost transparent.

You will sometimes see what looks like tiny shells stuck firmly to the rocks. These could be limpets or barnacles. Barnacles spend their lives attached to the rock, while

limpets use their muscular foot to cling on. They have to withstand waves crashing over them,

so, holding on is extremely important.

You don't need to go scuba diving or have expensive scientific equipment. You can crouch beside a pool and watch tiny animals moving, feeding and hiding.

Rock pooling is great fun, but it is important to remember that the rock pool is someone's home. It can be tempting to pick up creatures, move rocks around or take shells home — but disturbing the habitat causes problems for the animals living there.

Seaweed is a very important part of the rock-pool ecosystem. It provides food and shelter for many animals. Crabs hide underneath it, small creatures crawl through it and fish use it for protection.

We even eat some types of seaweed in Wales. My mum makes laverbread from it. I don't really like the taste, but it is an important part

of Welsh food culture and has been eaten in Wales for generations.

One of the things I find most interesting about rock pools is that you can actually see nature happening right in front of you.

If you turn over a rock to look underneath, put it back carefully, exactly where you found it. Animals can be sheltering there, and moving the rock can expose them to conditions they aren't adapted for.

It is much better to be a wildlife detective than a collector.

Look, photograph, learn and leave everything where it belongs — just like the great Sir David Attenborough taught us to.

A rock pool isn't just a puddle left behind when the tide goes out. It is a tiny ecosystem, with predators, prey, plants, shelter and animals that have developed amazing ways of surviving.

Next time you walk along the coast of Aberystwyth and see a little pool of seawater between the rocks, stop and look closely. There might be a whole underwater world looking back at you.

BRICE ASONGWE

THE NEW OCEAN STORYTELLER

How consistency in the right direction leads to impressive progress

WORDS AND PHOTOGRAPHY BY **ARWA M.B.**



ABOVE: Brice Asongwe, now a scuba instructor at Dive Campus and an underwater photographer in his own right.

As a wildlife photographer, I visited Ras Al Khor Sanctuary to document the nesting of a unique bird. There, I came across a young Cameroonian man, Brice Asongwe, who stood out from the rest of the staff.

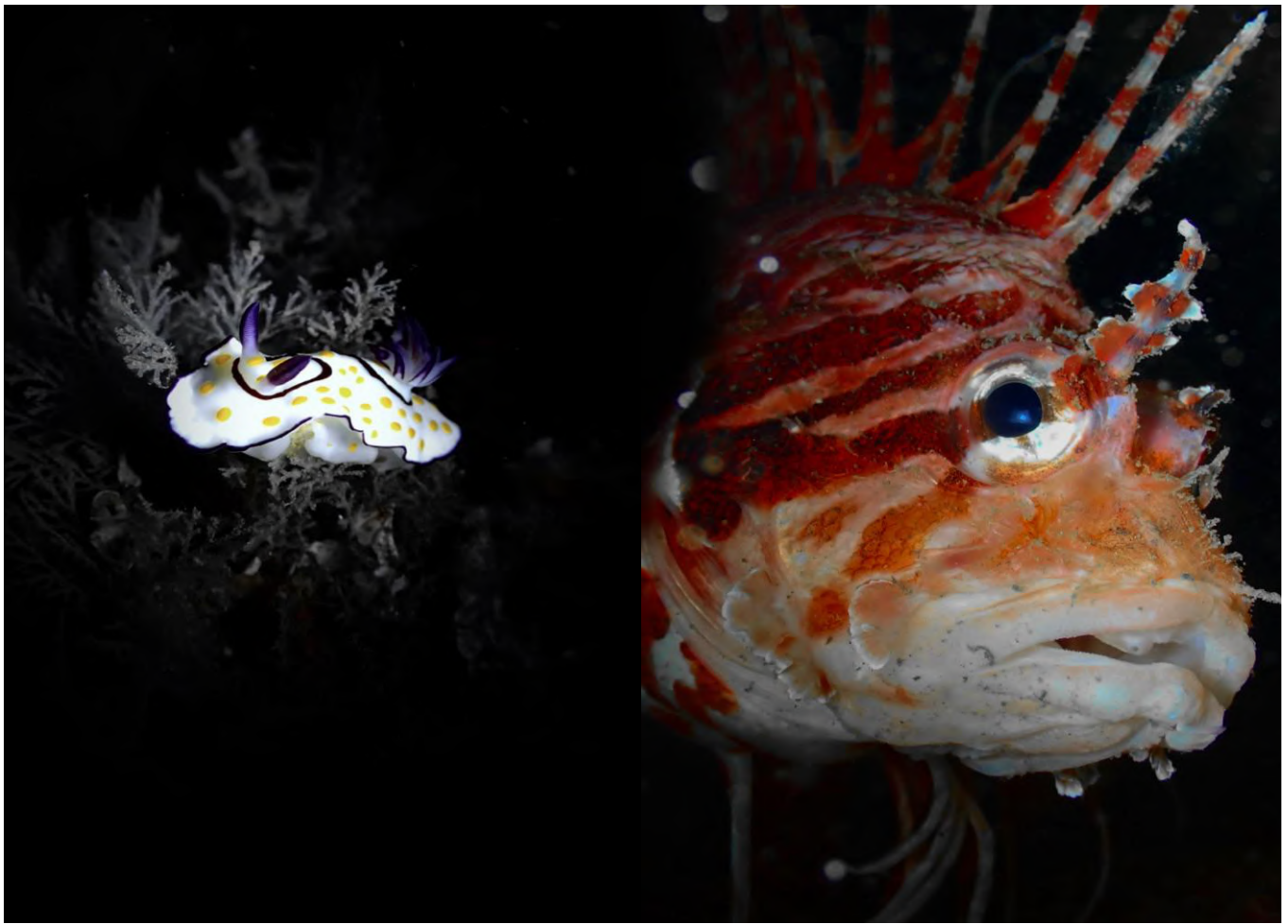
While others seemed unfamiliar with the area, he was incredibly knowledgeable; he had found bird nests throughout the sanctuary on his own, during his daily runs.

We had a long discussion about my work documenting wildlife both above and underwater, and I noticed his genuine curiosity about photography and wildlife documentation. On that day, I became his mentor.

We drafted a detailed career plan, and within two years he turned that plan into reality.

He became a scuba dive instructor at Dive Campus, the best spotter for underwater photographers, and an underwater photographer and videographer himself.

Brice was first invited to film beach cleanups, which became his earliest encounter with the sea.



“I saw people going underwater. I was shocked that they disappeared for a few hours. It was fascinating. How could they stay underwater that long? What did they see?”

“The following day, Instructor Sara G enrolled me in an Open Water course. I was very happy and nervous, but I refused to let fear take over, and I looked forward to seeing what the ocean had in store for me. I realised then that I belonged to the sea.

“I came to the UAE with a big dream: to make a difference, inspire others, and be inspired. I started my journey in Dubai, working my way from zero to holding fourteen scuba diving licences.

“I was fortunate to come across amazing mentors. It started with Ms Arwa, Sara G, Saeed S. Majed, Bashar and Nuel R. Anadon, and continued with master scuba diving mentors Sneha Shetty and Islam Mahmoud at Dive Campus.

“My background is in industrial engineering, but what inspired me to pursue scuba diving as a career was the joy I saw in discovery divers after their first dive. Most people never forget their first dive; I certainly did not, and I wanted to create that same feeling for others.”

“In the ocean, everything is alive. You just need to slow down and pay attention.”

Brice’s story is the true definition of how consistency in the right direction leads to impressive progress. I am proud to announce that he is the sixth person I have recruited to become a fellow diver.

His curiosity led him to completely change his life. Don’t stop being curious yourself — you might also discover a passion you never imagined excelling in.

TIGERSHARK

MACRO MAG PORTZ

A NEW MAGNETIC SYSTEM FOR UNDERWATER MACRO PHOTOGRAPHERS

REVIEWED BY **ARWA M.B.**



TIGERSHARK continues to push the boundaries of underwater photography gear, delivering on its promise to make diving easier and more efficient for photographers.

I was fortunate enough to get my hands on these new products before their official launch in the Dubai market. The official release date is 10 October 2026, but they are already available to preorder — and after testing them myself, I believe they are worth every dirham.

The two products worth exploring are the QuickArm and the Magport JL Ring Combo.

WHY IT MATTERS HERE

Macro photography is the preferred style for many underwater photographers in the UAE, because of our often-limited visibility. As a result, many of us dive with wet magnification lenses, commonly known as wet diopters.

I learned the importance of securing these lenses the hard way. During a night dive I lost my Nauticam SMC-I after it slipped out of my pocket. I only realised it was missing once I got home, and ever since I have worried about losing expensive wet lenses underwater.

THE VERDICT

I can now comfortably carry two wet lenses on my rig, attached to the TIGERSHARK QuickArm, and switch between them in seconds.

Magnetic wet lens holders are not new in themselves. The real innovation is in TIGERSHARK's system: instead of spending precious time screwing a wet lens onto the housing port, the magnetic adapter lets the lens be twisted and locked into place with one hand, either on the lens port or on the arms. This quick-lock mechanism is a true game changer.

tigersharkgear.com

DIVING INTO THE MEADOWS

Exploring the Gulf's extraordinary seagrass ecosystem through long-term monitoring by the Yas SeaWorld Research & Rescue Center and the Environment Agency – Abu Dhabi

BY **DR HUNG MANH NGUYEN**, Senior Researcher, Yas SeaWorld Research & Rescue Center, Yas Island, Abu Dhabi



ABOVE: A seagrass meadow at Marawah Nature Reserve, one of the monitoring stations of the long-term seagrass monitoring project. Photo: Hung Manh Nguyen

When divers descend into the waters of the Arabian Gulf, their attention is often drawn to coral reefs, shipwrecks, dramatic schools of fish, or encounters with turtles and dolphins.

Yet beneath many of these iconic marine wonders lies one of the ocean's most important yet least appreciated ecosystems: seagrass meadows.

To many people, seagrass appears unremarkable. At first glance it can resemble little more than underwater grass swaying gently with the currents. It lacks the vibrant colours of coral reefs and the visual spectacle of large marine animals.

As a result it is frequently overlooked by divers, tourists, policymakers, and even conservation efforts.

However, this humble marine plant quietly performs some of the most important ecological functions on Earth.

SEAGRASSES ARE NOT SEaweeds

They are true flowering plants that evolved from terrestrial ancestors before returning to the sea 60–90 million years ago.

35×

faster carbon uptake than tropical rainforests

30–40 kg

of seagrass eaten by an adult dugong every day



ABOVE: Seagrass meadows near Mirfa, dominated by *Halodule uninervis*. Photo: Noura Al-Mansoori (EAD)

There are only around 70 seagrass species worldwide, but their influence extends across thousands of kilometres of coastline on every continent except Antarctica.

Their roots stabilise sediments, reducing erosion and helping to keep coastal waters clear. Their leaves slow currents and waves, creating sheltered habitats where countless organisms feed, reproduce and find refuge from predators.

They absorb and store enormous amounts of carbon, helping to mitigate climate change while improving water quality and supporting fisheries.

A single meadow may host hundreds of species, each occupying a different role within a complex web of life. Tiny crustaceans cling to the leaves. Juvenile fish shelter among the blades.

Shellfish, worms and microorganisms thrive within the sediments below. Larger predators patrol the edges. Sea turtles and dugongs graze upon the plants themselves.

Every square metre of seagrass supports a remarkable diversity of life that often goes unnoticed by those passing overhead.



The Yas SeaWorld Research & Rescue Center research team during a seagrass field survey.
Photo: Viliame Waqalevu and Hung M. Nguyen.

At first glance the Arabian Gulf may seem an unlikely place for extensive seagrass meadows. This is a shallow and highly challenging marine environment.

The Gulf experiences some of the highest seawater temperatures regularly recorded anywhere in the world. Summer temperatures can rise above 36°C, a level that would stress many marine organisms elsewhere.

Salinity is also exceptionally high, due to intense evaporation and limited water exchange with the Indian Ocean. Seasonal conditions fluctuate dramatically, while sediment resuspension and strong winds further challenge marine life.

Yet despite these challenges, seagrasses continue to thrive in the Arabian Gulf.

Three tropical species — *Halodule uninervis*, *Halophila stipulacea* and *Halophila ovalis* — form vast underwater meadows covering an estimated 7,000 km², about 6% of the world's seagrass distribution.

Abu Dhabi alone supports between 3,000 and 5,500 km², making it one of the region's most important strongholds.



The Yas SeaWorld Research & Rescue Center research team during a seagrass field survey.

Photo: Viliame Waqalevu and Hung M. Nguyen.

These meadows are biodiversity hotspots and vital nurseries, where juvenile fish, shrimp and countless other species find shelter and food during the most vulnerable stages of their lives.

Most notably, Gulf seagrass meadows support the world's second-largest dugong population. Often called sea cows, dugongs depend almost entirely on seagrass for food.

Green sea turtles are similarly reliant. Every dugong and turtle sighting in the Gulf tells the same story: thriving marine megafauna depends on thriving seagrass meadows.



ABOVE: The research team in a field survey. Photos: Viliame Waqalevu and Hung M. Nguyen



LEFT & RIGHT: Dr Hung Manh Nguyen taking PAM measurements (photo: Nylor Mindajao); a team member collecting a core sample to study seagrass biomass (photo: Hung Manh Nguyen).

With this philosophy at its core, the Yas SeaWorld Research & Rescue Center (YSWRR) and the Environment Agency – Abu Dhabi (EAD) launched an ambitious long-term seagrass monitoring project in early 2025.

Four monitoring stations were selected across Abu Dhabi's coastline — Ras Ghurab, Saadiyat Nature Reserve, Dhabiya and Marawah Nature Reserve. Sensors continuously record temperature, salinity and pH.

Every two months the team dives these sites, collecting photographs, video, water, sediment and seagrass samples. More than 25 field expeditions have run since launch, from cool winter months to the extreme heat of summer.

The monitoring programme has documented extraordinary seasonal changes and highlighted the remarkable resilience of Gulf seagrasses.

Among its most exciting discoveries was the first documented record of seagrass flowering in the Arabian Gulf — a milestone that opens new avenues for understanding how these plants reproduce and persist in such an extreme environment.

Published in Aquatic Botany, 2025

Beyond Research

The project has become a platform for education, inspiration and collaboration. Students and interns from across the UAE and around the world have gained hands-on experience in world-class marine science.

New partnerships have formed with institutions including Khalifa University and UAE University, with more continuing to emerge.

On The World Stage

Findings have been presented at the First Arabian Regional Seagrass Scientific Workshop in Abu Dhabi, the 58th European Marine Biology Symposium in Norway, the 2026 Indian Seagrass Conference and the 2026 Plant Biology Conference in Canada.

Outreach continues through the YSWRR Science Talk series and the Global Seagrass Nursery Network.



ABOVE: The Environment Agency – Abu Dhabi fibreglass research boat used for seagrass monitoring. Photo: Environment Agency – Abu Dhabi

The project is doing more than monitoring seagrass. It is transforming knowledge into action and inspiring people to protect one of the UAE's most important natural treasures.

The next time you encounter a dugong grazing peacefully beneath the surface, or a green turtle gliding across Abu Dhabi's coastal waters, you are witnessing a story that begins in the seagrass meadows below.

Protecting these underwater meadows means protecting the wildlife, biodiversity and natural heritage that make the Arabian Gulf such a remarkable place to explore.

EXPLORE THE RESEARCH

Yas SeaWorld Research & Rescue Center

The long-term seagrass monitoring project described on the previous pages is one strand of the Center's work in the Arabian Gulf.



SCAN TO FIND OUT MORE

The Yas SeaWorld Research & Rescue Center is the largest dedicated marine research, rescue, rehabilitation and return centre in the region.

Scan the code to read about its research programmes, its rescue and rehabilitation work, its education and outreach, and the Science Talk series.

www.seaworldabudhabi.com/en/research-and-rescue



FROM INTERN TO IMPACT

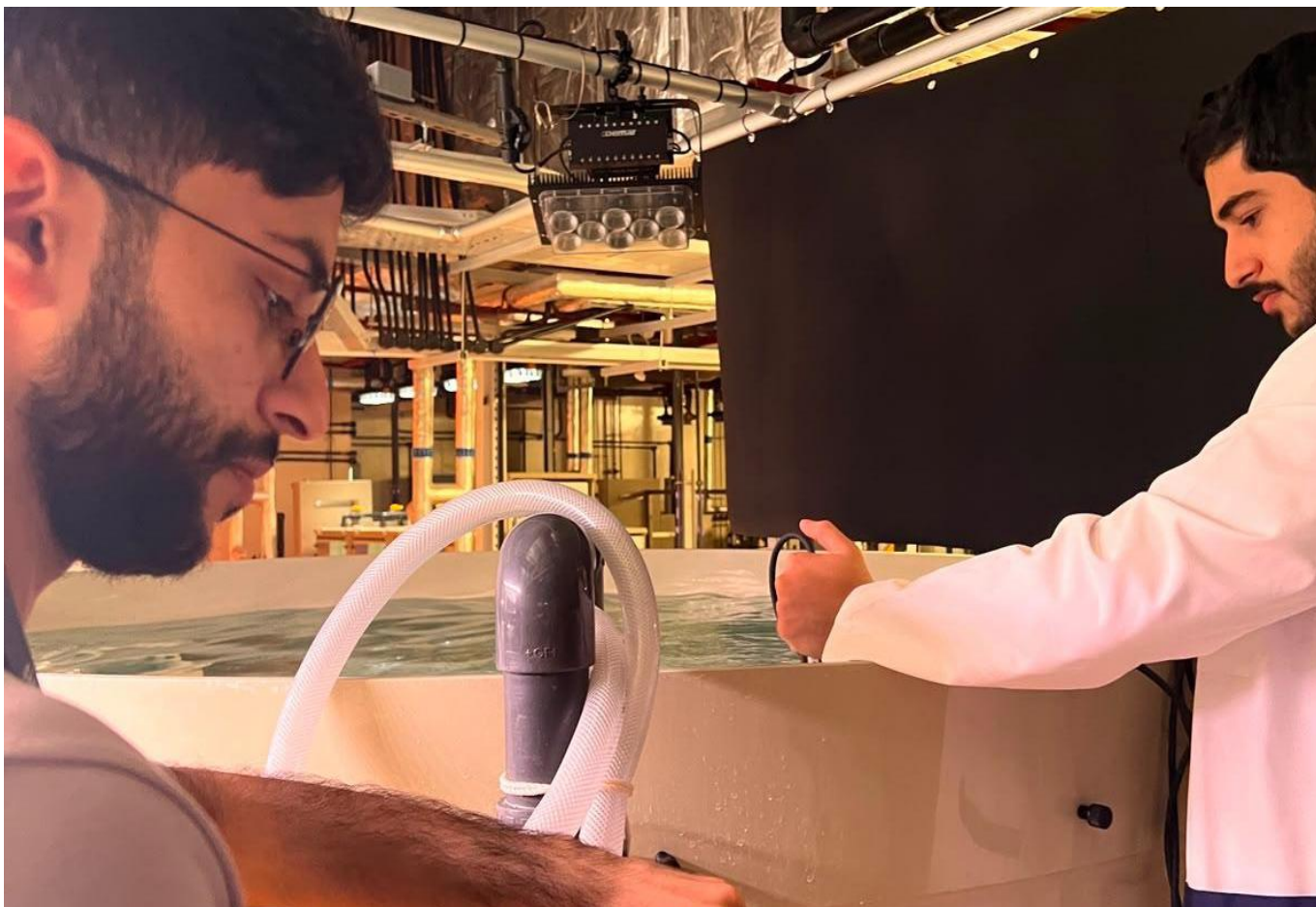
Creating career pathways in marine science at the Yas SeaWorld Research & Rescue Center

BY **DR VILIAME WAQALEVU**, Lead Researcher, Yas SeaWorld Research & Rescue Center, Yas Island, Abu Dhabi





“The most meaningful measure of success is when former interns return as professionals and begin mentoring the next generation.”



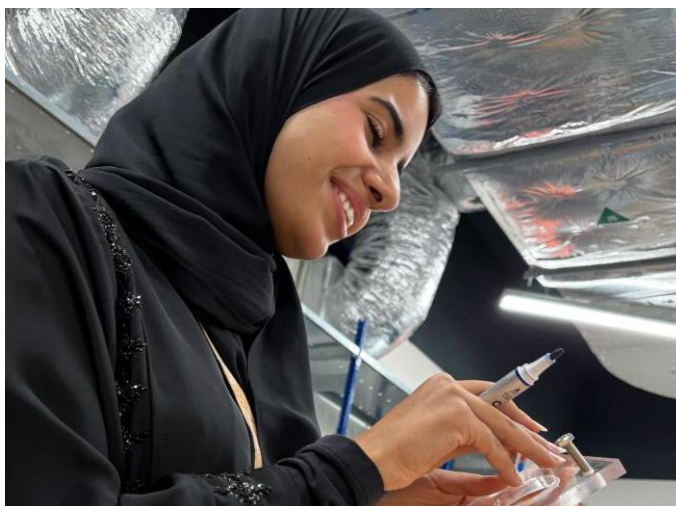
For many young people worldwide, and especially in the UAE, a career in marine science begins with a small dose of curiosity: a fascination with life beneath the surface, a concern for the health of our ocean, or simply the desire to understand how marine ecosystems function.

At the Yas SeaWorld Research & Rescue Center — the largest dedicated marine research, rescue, rehabilitation and return centre in the region — nurturing future talent is a core part of our mission.

Since opening three years ago, the Center has developed a programme designed to channel students' curiosity into hands-on experience, continuously refined to stay responsive to each student's needs.

The programme gives students and early-career professionals the opportunity to step beyond the classroom and experience the realities of marine research, conservation and animal care.

Interns gain exposure to the scientific methods, operational discipline and teamwork required within a working research facility.



Depending on the duration and focus of their placement, interns engage in a variety of research activities. In the Sustainable Aquaculture Research programme these include live-feed production — maintaining microalgae cultures, examining zooplankton species and managing the husbandry of our breeders.

Others collaborate with the marine ecology research team, which studies seagrass ecosystems, investigates marine plankton communities and explores aspects of fish physiology.

Day to day, interns collect data and take an active part in ongoing experimental projects.

These responsibilities demonstrate that marine science is built not only on exciting discoveries, but on consistency. Cleaning equipment, keeping accurate records, following safety procedures and completing routine observations are fundamental to reliable science and animal welfare.

Every task, however small it may appear, contributes to a much larger purpose.



Short-term internships suit high school students seeking work experience or joining summer programmes, and serve as an introduction to marine science and its career pathways.

Mid-term and extended placements are designed for university students, building technical proficiency and focused research contributions.

By collaborating with local schools and universities, the Center bridges the gap between education, practical training and industry, easing the transition from classroom learning to hands-on experience.

Researchers and technicians help interns develop technical competence while encouraging

them to ask questions, think critically and understand the reasoning behind each procedure.

The programme also strengthens communication, accountability, adaptability and collaboration.



Perhaps the most rewarding measure of success is seeing former interns return as members of the team.

Some have progressed into technical roles and now help guide new interns through the same activities they once learned themselves.

This transition — from learner to professional, and eventually from intern to mentor — captures the true value of a sustainable talent pathway.

7 → 38

interns per year, 2023 to the first half of 2026

Since the programme launched in 2023 we have seen remarkable progress, expanding from seven interns in the first year to 38 in the first half of 2026.

That growth reflects not only increasing interest, but the diverse backgrounds of our participants.

46

high school students, from 21 schools across the UAE

We have hosted 46 high school students from 21 schools across Abu Dhabi and Dubai, with some travelling from Sharjah. Our university cohort numbers 51 students from 15 universities, most from local institutions such as UAEU, Zayed University and Khalifa University.

51

university students, from 15 universities worldwide

Others have come from farther afield: the University of the South Pacific in Fiji, James Cook University in Australia, Montpellier and Nantes in France, the University of Bonn in Germany, and the University of California, Berkeley.



Developing skilled marine professionals supports the UAE's wider ambitions in environmental stewardship, scientific innovation, sustainable aquaculture and food security.

It also strengthens the local capacity needed to understand and protect the unique marine ecosystems of the Arabian Gulf. An internship here is more than a temporary placement.

It is an entry point into a community of scientists, conservationists and animal care professionals — helping transform curiosity into capability, and interns into the next generation of ocean leaders.

LET'S GO DIVING

SIXTY-FIVE YEARS BENEATH THE SURFACE

From a Spanish harbour basin in 1961 to the presidency of DIWA — the diving life of Wilfried Dickes.

WORDS BY **WILFRIED DICKES**

30,507

dives logged, as of March 2026

65

years diving, since 1961

54

years as a diving instructor



ABOVE: Wilfried Dickes, owner and president of DIWA, still diving at 72.

Hello divers. My name is Wilfried Dickes, and I was born on 29 April 1954 in Germany.

I went on my first scuba dive at the age of seven, in the harbour of Dénia, a small Spanish fishing village.

I say “dive”, though the tank was roughly my own size. My friend Francisco and I strapped the tanks around our waists with a lasso and simply went for an underwater stroll around the harbour basin. That is why the phrase “Let’s go diving” rings so true for me.

After our underwater walk our fathers gave us a spanking — but seeing how eager we were to learn, they then explained the essentials to keep us safe.

At 18 I qualified as an Open Water Scuba Instructor with DIWA, a German training agency, in 1972.



After qualifying I trained with the Navy as a combat swimmer — one of the toughest military training programmes in the world.

In March 2026 I completed my 30,507th dive, in Marsa Alam, Egypt.

In 54 years as an instructor I have dived in oceans across the globe. I worked for a year and a half on an island in the Maldives, and ran my own diving schools in Spain, Italy, the Dominican Republic, Guatemala and Honduras.

From sunken ships of the Columbus era, complete with gold treasure, to

recovering bodies from a lake after plane and helicopter crashes — I have experienced it all, and much more.

I spent 20 years in Guatemala and 15 in Honduras, working with local naval bases to train their divers and to assist in the fight against drug smuggling.

Over the course of my life as a diver I have had many wonderful dives — and some not so wonderful. When I dive today I see a great deal of rubbish underwater.

That was not the case back in the

1980s and 1990s, when the flora and fauna were healthy and intact. Sadly, much of that has since been destroyed by us.

Thousands of tonnes of plastic waste lie on the seabed, and microplastics can be detected in almost all marine life. In other words, when we eat seafood we are consuming our own rubbish.

In recent years divers have begun retrieving waste from the ocean and bringing it back to shore, and many dive centres now organise such initiatives.





It is a small step for us divers, but it is a positive action we can all take to help save our oceans.

Diving has shaped my life. Today, at 72, I am a DIWA Course Director — number 1000.

In 2013 I purchased the diving instructor association DIWA; the former owner wished to sell it because of his age.

I am now its owner, CEO and president.

DIWA has offices in Asia, the USA and the Caribbean, with its European headquarters here in Germany.

My next dive was to have been at the diving tower in Dubai in May 2026. Circumstances prevented the trip, but I hope to make up for it soon.

At my age I always strive to introduce people to scuba diving. We must make sure young people learn to dive — our future lies with the youth.

Greetings to all divers.

www.diwadiving.com

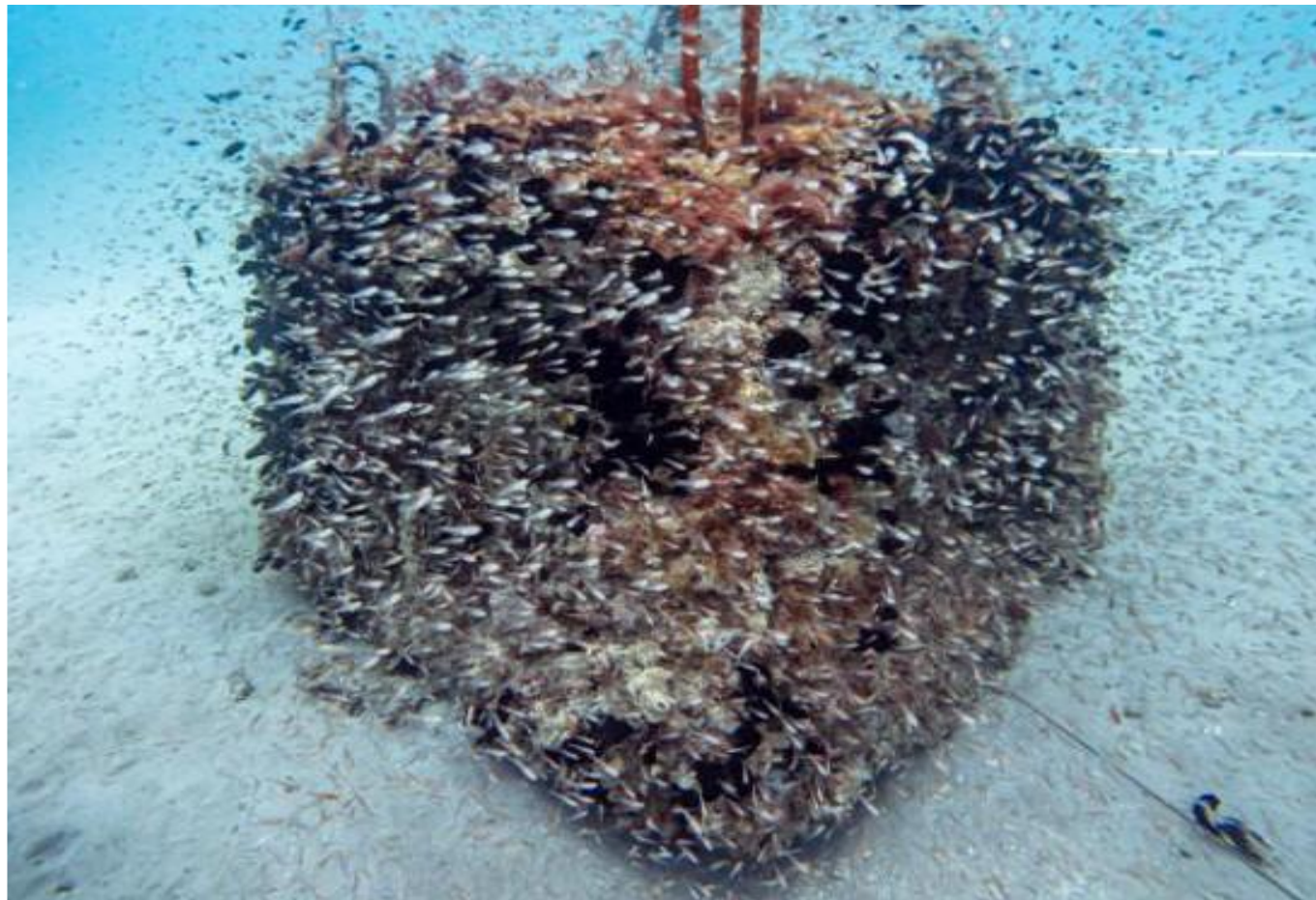


ABOVE: Divers now bring waste back to shore — a small step, but a positive one.

WHERE ARE ALL THE BIG FISH?

Ten months after a set of engineered mooring blocks went down off Fujairah, divers came back up talking about something nobody expected.

BY THE **ECOCOAST** TEAM



ABOVE: Juvenile fish using Ecoreef as shelter and habitat.

Every diver in the Gulf has seen a mooring halo, even if they've never really stopped to look at one. You drop down onto a mooring and there's a pale circle scoured into the sand around the concrete mooring block, ten or fifteen meters across, with the ground chain lying over it. Outside the circle, there's either seagrass, rubble or coral. Inside, there's nothing at all.

It's not a mystery. A diving boat swings with the tide and the wind, the chain drags round and round, and after a couple of years, you have a bare patch of seabed. Nobody sets out to do this. It's simply what the hardware does,

which is probably why most of us stopped noticing it a long time ago.

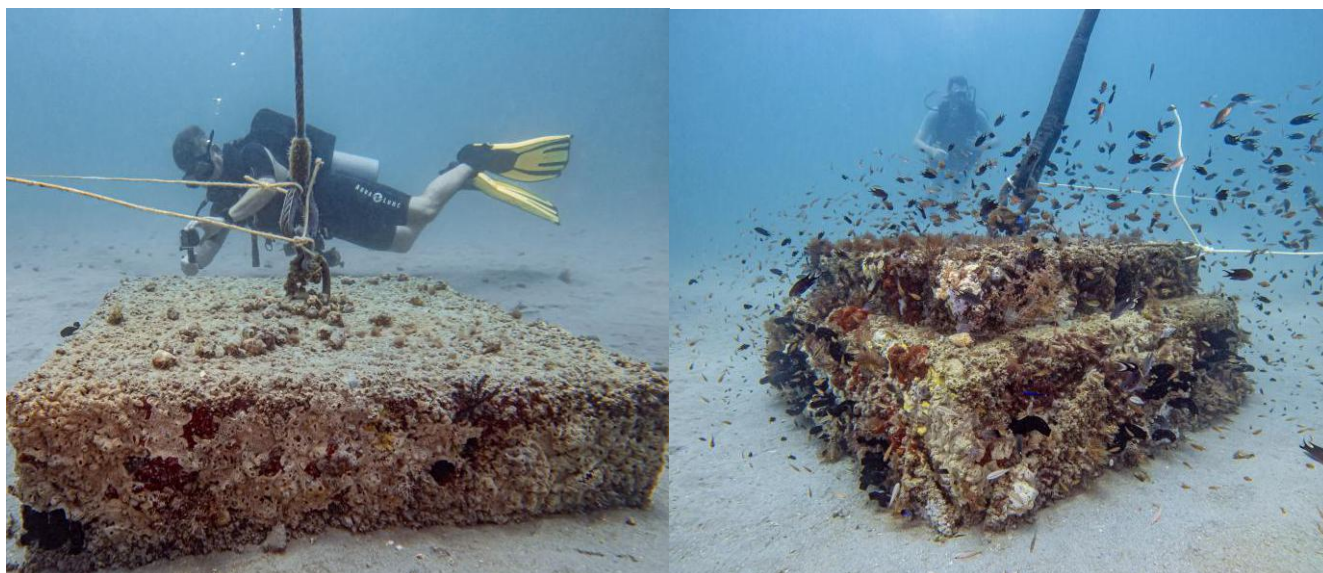
But, it did start a question that we kept coming back to at Ecocoast. Marinas, ports, aquaculture farms, marine contractors and navigation authorities put thousands of large concrete mooring blocks on the seabed every year, and they are going to keep doing it. If the block has to be down there anyway, keeping infrastructure in place, could it maybe be doing something useful while it's there?

That's where Ecoreef comes from – the same job, in the same place, on the same seabed, but designed so that the block itself becomes habitat.

And that leads more or less immediately to the question we get in many conversations.

Where are all the big fish?

It's a completely fair thing to ask. If you dive in this region, you've been to the wrecks, you've swum up to something large, you've seen snapper and grouper hanging around, and that's what you have learnt an artificial reef looks like when it's working. Then you look at an Ecoreef block, which is not dramatic at all. A compact structure with a lot of small voids and passages running through it, surrounded by clouds of fish barely bigger than your thumbnail. It's easy to conclude that it's underperforming.



ABOVE: Traditional concrete mooring block vs. Ecoreef: same function, different outcome.

It isn't, and the reason is the most interesting thing I've learnt working on this project.

Reef ecologists have been arguing about this for decades. The argument has a name: **attraction versus production**. If you sink something big and hollow, you will attract fish, because adults move in from the surrounding reef to use the shelter and sit in the current. It looks spectacular and it photographs beautifully. But in many cases, these structures have not added a single fish to the sea. They've taken fish that already existed on the surrounding reef and concentrated them in one place, which incidentally makes them considerably easier to catch. The density of fish went up, but the population did not.

Production is a different mechanism altogether. It happens at a size class most of us would swim straight past. Most reef fish die young. They settle out of the plankton a few millimeters long, and predation removes the majority of them long before they reach adult size. What limits the number of adults on a reef, very often, is not food or space at all. It's whether a juvenile can find a hole small enough that nothing bigger can follow it in.

Which is exactly what the voids in an Ecoreef block are for. They're not decoration, but sized deliberately to be too small for a predator and about right for a fish trying to survive its first few months. A big, open swim-through structure shelters an adult that would probably have made it anyway, while a dense network of small spaces shelters the fish that would otherwise have been eaten. Dr. Aaron Bartholomew, who developed the ecological thinking behind Ecoreef, puts it more bluntly than I would: "Contrary to what most people think, the small spaces are the whole point, and plenty of mainstream artificial reefs do not work nearly as well as everyone assumes they do."

So, when divers come up talking about juveniles rather than snapper, that's not a consolation prize while we wait for the good stuff to arrive. It is the good stuff.

Dr. Aaron worked most of this out during his PhD, years before there was any realistic prospect of building it. He talked about it, he published on it, and then, as happens to a lot of good ideas that live in journals, essentially nobody did anything with it for a very long time. What changed was meeting

Ecocoast – a company that already uses heavy marine concrete at scale, with a factory an hour up the road in Umm Al Quwain – and suddenly the idea could actually become reality.

In August 2025, we put the trial in the water off Fujairah: three Ecoreef block designs, including a traditional control block of the kind already sitting under moorings all over this country, on the same seabed under the same conditions. Then we waited. Dr. Aaron describes seeing the first results as the best moment of his professional career, and since he's not a man given to overstatement, I'm leaving that sentence exactly as he said it. This brings me to June 8.

It was World Oceans Day, off Le Méridien Al Aqah, and it was already hot and humid well before nine in the morning. About thirty people came out with us: consultants, marina operators, marine contractors, resort teams, university academics, scientists, a social enterprise, videographers and photographers who have shot more UAE reef than most of us will ever dive, the Emirates Diving Association, the Leisure Marine Association, a journalist from Khaleej Times, and the Ecocoast team. Some people got in the

water; the rest of us stayed inside and waited, which turned out to be its own kind of experience.

When the divers surfaced, the reaction was immediate and completely unguarded. There was a lot of excitement, a lot of smiling, and a lot of people talking over each other trying to describe the same thing at once. And the phrase that kept coming back, from person after person, was “clouds of juvenile fish”. That’s genuinely how everyone described it, and I have not found a better description since.

When we watched the footage ourselves, it was striking for a slightly different reason. The fish were not spread out across the surrounding seabed the way you might expect. They were held tight around the Ecoreef blocks and almost nowhere else, small fish dropping into the voids and coming straight back out again. There was soft coral already settling on the surfaces too, ten months in. Medium fish did show up in the monitoring counts over the trial,

like hamour, shaari, kanaad, species that matter to Emirati fisheries and to anyone who eats fish in this country, but it was the small ones that got the reaction on the day, which tells you something about how a good result actually lands when you see it rather than read it. And then someone found an oyster...

It was *Pinctada radiata*, the native pearl oyster, sitting right next to one of the blocks. If you dive in the UAE, you know this one even if you don’t know the scientific name. For centuries, this coast dived for it, traded it and lived off it, right up until the industry collapsed in the 1930s, and it has had a rough hundred years since. One oyster is not a population recovery, and I’m not going to pretend otherwise, but it’s the clearest possible statement of what the block is for. We designed it as a mooring – a piece of hardware whose entire job is holding a boat in place – and a native oyster was living right beside it.

Of course, a single dive only tells

you what was happening on that particular morning, which is why the monitoring matters. The Fujairah trial ran comparative counts across the three designs for ten months, and the differences in fish abundance between them were statistically significant. In plain terms, what the divers saw on June 8 was not a good day or a lucky video. It held across ten months of observation, alongside juvenile aggregations concentrated in the engineered voids rather than the surrounding area, commercially important species using the structures, natural coral recruitment with no transplantation, and one very welcome oyster. None of that was our work alone. It was done with Dr. Aaron Bartholomew at the American University of Sharjah, the Fujairah Research Centre and interns from the University of Oxford.

There’s also a second half to the problem, because changing the block doesn’t on its own change what the steel mooring chain does. That’s what Ecomoor is for – an



ABOVE: Ecomoor and Ecoreef – sustainable mooring and habitat creation, working together.

environmentally friendly mooring line that floats, never touching (or damaging) the seabed. Put the two together and there’s no halo, and what’s more, the block sitting underneath is producing fish.

Which is really the thought I would like to leave you with. That scoured circle in the sand is the result of

a design choice nobody ever consciously made, which means that it’s a choice that can be unmade. Grey infrastructure is going into the water regardless of what any of us think about it. The only question worth asking is whether we let it sit there inert.

#GreyToGreen

<https://www.ecocoast.com/ecoreef/>

FACES OF THE REEF

EELS OF THE WORLD

A photographic voyage through nine moray species, from the Lebanese coast to the Gulf of Aqaba.

WORDS AND PHOTOGRAPHY BY **Samer Halwany**



ABOVE: Bodies tucked safely inside the reef, only their heads peeking out.

Most of us divers keep a close eye on the reef, scanning the coral and rock formations for hidden marine life. Among the most magical encounters are the mysterious moray eels.

With their bodies safely tucked inside the reef and only their heads peeking out, they emerge to hunt, to breathe, or to get a meticulous detailing from cleaner shrimp.

Each species has a completely distinct appearance and personality: some elegantly ornate, others masters of camouflage. Through my lens, a voyage across the world's reefs.

LEBANON

**MEDITERRANEAN MORAY** *Muraena helena***FANGTOOTH MORAY** *Enchelycore anatina***MEDITERRANEAN MORAY**

From the shallows of the Lebanese coast, a species known for its adaptability and its deep connection to the rocky seabed. Look closely at its face and you are struck by an unblinking, glassy stare.

Protruding from the tip of its snout are two distinctive, tube-like anterior nostrils.

Because this nocturnal hunter has very poor eyesight during the day, those nasal tubes act as advanced chemical sensors, constantly sampling the water to locate octopus or crab hidden in the rock cracks.

FANGTOOTH MORAY

Shifting to the dark recesses of a nearby fissure, a striking yellow face comes into view.

Finding this species off Lebanon marks a major ecological shift. Driven by warming waters and the opening of the Suez Canal, it is a prominent participant in the Lessepsian migration, expanding rapidly into new territory.

Its glass-like fangs are so large that its mouth cannot close. Instead of chewing, it uses a second set of jaws hidden deep in its throat to drag struggling prey backwards into its stomach.

MALDIVES & INDONESIA

**RIBBON EEL** *Rhinomuraena quaesita***RIBBON EEL**

A few days in the blue of the Maldives, and a face-to-face with the one-of-a-kind ribbon eel in its striking blue phase. This paper-thin species is a biological marvel that undergoes a complete transition of sex and colour over its life cycle.

They begin life as sleek, pitch-black juveniles before shifting into electric blue and yellow males, then transitioning into fully yellow, egg-laying females. Their faces are wild caricatures, with flared, trumpet-shaped nostrils that act as tiny scoops to help them smell passing glass shrimp.

HONEYCOMB MORAY**HONEYCOMB MORAY** *Gymnothorax favagineus*

Documented on the Liberty wreck at Amed, Bali. Its black polygonal markings earned it the name leopard moray among divers, and act as disruptive camouflage, breaking up the heavy outline of its body inside dark crevices.

One of the giants, reaching up to three metres, it is a frequent client at cleaning stations, opening its mouth wide for wrasse and shrimp. I documented it again in the Musandam fjords — its range runs from the Red Sea and East Africa to Papua New Guinea.

OMAN & UAE



YELLOWMOUTH MORAY *Gymnothorax nudivomer*

YELLOWMOUTH MORAY

Diving the Dibba peninsula in Oman, a flash of yellow caught my eye. An open mouth welcomed my lens.

Also called the starry moray, it constantly gapes its jaws to pump oxygen-rich water over its gills. That vital breathing habit doubles as a defence, flashing a neon-yellow mouth that warns predators away.

The warning is no bluff. It coats its scaleless skin in a toxic mucus that repels parasites and sharks alike, and its outer jaws are lined with teeth engineered to slice through crab shells — and invasive lionfish.



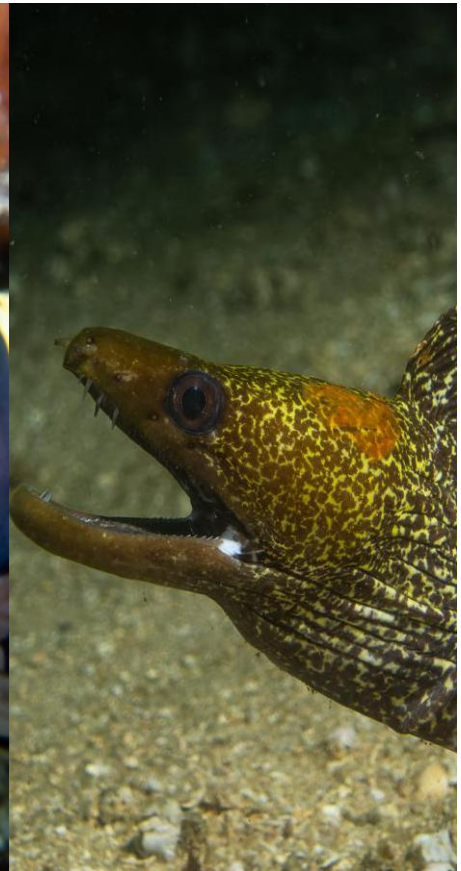
BANDED MORAY *Echidna polyzona*

BANDED MORAY

Peeking out from hard coral cracks in the Musandam peninsula, wrapped in bold black and white rings like a zebra's stripes. The sharp contrast breaks up its body shape, making it nearly invisible against reef shadows.

Unlike the sharp-toothed fish eaters, this species is an ecological balancer, armed with pebble-like teeth built to crush the armour of crabs, shrimp and mantis shrimp.

Docile and much favoured by photographers, it is a useful indicator of healthy reef architecture.



UNDULATED MORAY *Gymnothorax undulatus*

UNDULATED MORAY

Highly abundant around Dibba and Fujairah. I photographed this specimen at Dibba Rock, facing the Fujairah coast.

Adults typically grow to between one and one and a half metres, with a distinct yellowish head contrasting against a dark brown body.

They hide in caves by day and hunt fish, octopus and crab at night using an acute sense of smell, with hidden pharyngeal jaws that spring forward to drag prey backwards. Like most eels, the constant opening and closing of the mouth is breathing, not aggression.

EGYPT & JORDAN

GIANT MORAY

Diving Ras Mohammed, off Sharm El Sheikh, my eye fell on a huge creature emerging from the reef. The biggest of all the eels, reaching three metres and exceeding thirty kilograms.

Its eyes are small and its vision poor, so it tracks prey through chemical signals in the water, hunting reef fish, octopus and crustaceans under cover of darkness.

Generally solitary, it occasionally hunts cooperatively with roving coral grouper. The partnership works because the two hunting styles offset each other's weaknesses: swimming into the open risks the grouper, staying in the reef risks the moray.

Despite the menacing appearance and razor-sharp, backward-curved teeth, they are not inherently aggressive towards divers unless threatened or provoked.

GEOMETRIC MORAY

Documented in the Gulf of Aqaba, Jordan, where it popped up from the sandy bottom and posed. A smaller species, reaching roughly 65 centimetres.

Its head displays neat lines of tiny black dots that resemble a symmetrical tattoo — in fact specialised lateral line pores used to detect pressure shifts and vibrations.



GIANT MORAY *Gymnothorax javanicus*



GEOMETRIC MORAY *Gymnothorax griseus*

For many, eels are the villains of the ocean floor — misunderstood predators associated with menacing stares and sharp teeth.

Yet spending time in their world

reveals a different reality: the tattoo-like beauty of the geometric moray, the intelligence of a giant moray cooperating with a grouper, the balance they bring to the reef.

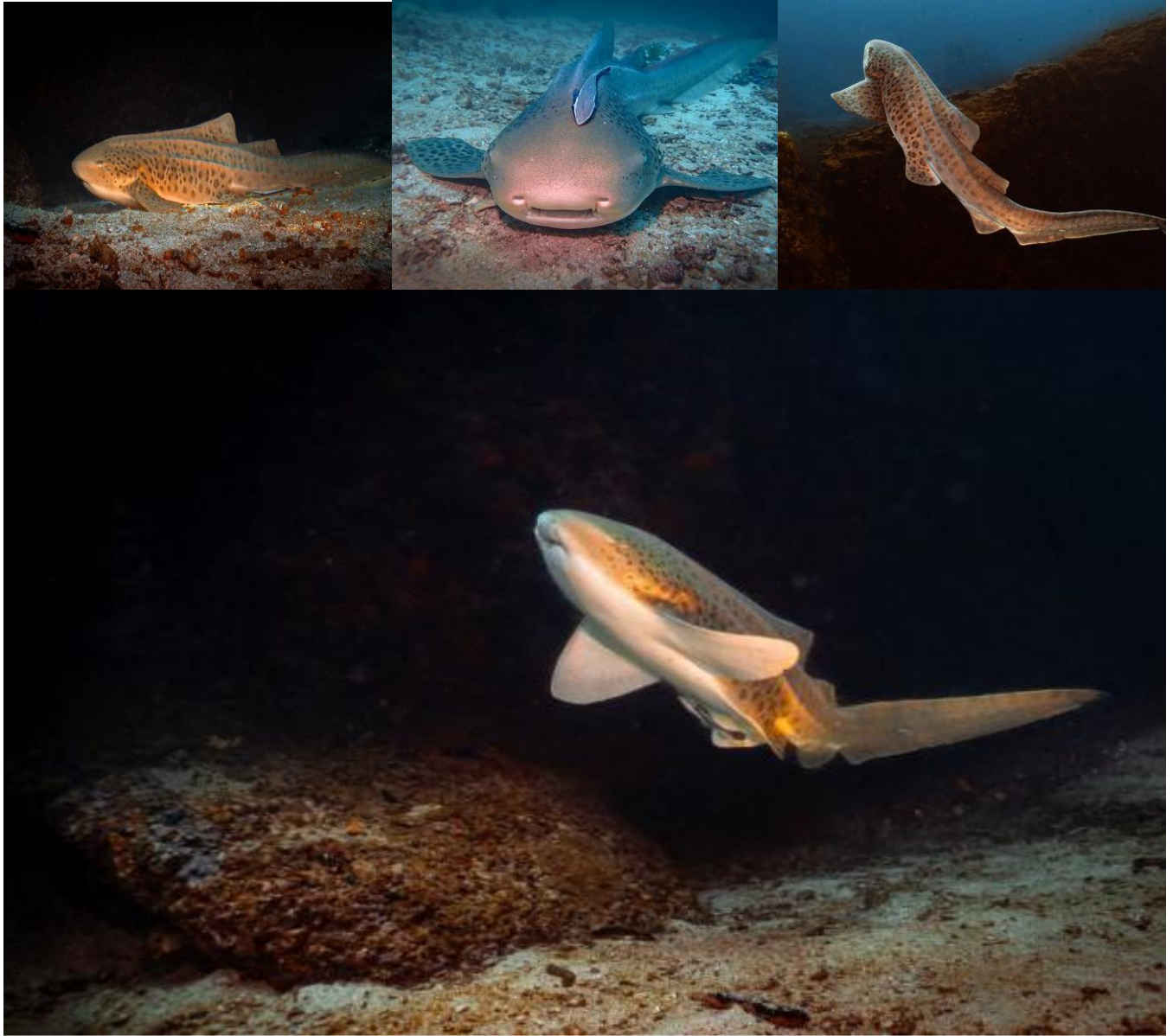
The ocean's most intimidating faces often hide its most fascinating secrets.

A leopard shark is shown swimming in a dark underwater environment. The shark's body is covered in dark spots and stripes, and its large, flat, yellowish tail is prominent. It is positioned diagonally across the frame, moving from the upper left towards the lower right. The sandy bottom is visible at the bottom of the image.

LEOPARD SHARKS

OF THE GULF OF OMAN

WORDS AND PHOTOGRAPHY BY **MOHAMED MOHSEN**



ABOVE: All photographs captured at Musandam (Lima) and the Daymaniyat Islands.

Most people are afraid of sharks, and would not get into the water if they heard there were any nearby. That fear comes from the movies, not from the animals.

The leopard shark is one of the most beautiful fish I have ever seen. It looks sleepy on the sandy bottom, and as divers we wait for it to start moving. When it does, it looks like dancing — and its tail is remarkable.

WHICH LEOPARD SHARK?

The name can be confused with a Pacific species, *Triakis semifasciata*. In the UAE and Oman it refers to the zebra shark, *Stegostoma fasciatum*. Adults have cream-coloured bodies with dark brown spots; juveniles are striped.

WHERE TO FIND THEM

Oman The Daymaniyat Islands are a major hotspot

Musandam Khasab is known for sightings

UAE Occasional sightings at local dive sites

DOCILE BY NATURE

They are timid, slow-moving and pose no threat to humans. They prefer shallow water, often resting on sandy floors near coral reefs, and hunt at night for molluscs, crustaceans and small fish.

I encourage everyone to read and learn about sharks, and to see their beauty. They play an essential role in the natural balance of the environment.

Shot With

Camera Sony A7 III

Depth 10–15 m

Dive buddy Yehya Ibrahim

REEF CHECK

NINE NEW ECODIVERS

REEF CHECK CERTIFICATION DIVE, DIBBA

SATURDAY 20 JUNE 2026 | 3 ROCKS, DIBBA, FUJAIRAH







Congratulations to our nine newly certified EcoDivers, who passed their Reef Check fish, invertebrate and substrate exams on Saturday at 3 Rocks in Dibba, Fujairah.

They can now join any organised Indo-Pacific Reef Check survey. Our next survey dive will be announced soon.

Everyone stayed on for a second fun dive at Dibba Rock, with a few of the team doing a rubbish sweep — filling a mesh bag with all sorts of plastics, snorkel and mask packaging included.

As we made it over the patch of soft corals, a porcupinefish swayed into view but kept its distance.

Just as we turned around, a curious hawksbill turtle swooped in and gave Hamid a heart-to-heart hello.

A big shout out to Reef Check Trainer **Rania Shawki Mostafa** for another successful Reef Check, and to [@diversdownuae](#) for a fun day out together.

AS OCEAN TEMPERATURES HIT RECORD HIGHS

REEF CHECK RAISES THE ALARM ON CORAL BLEACHING

Coral bleaching is changing reefs around the world, so this September we are giving up our colour to bring attention to what reefs are facing.

21.10°C

daily global average sea surface temperature, 22 August 2026

17,000

reef health surveys completed since 1997

40+

countries with citizen scientist teams



Valentina Cucchiara, CORAL

In recognition of the fourth annual Coral Bleaching Awareness Month, Reef Check has joined the Coral Reef Alliance, the International Coral Reef Initiative and hundreds of partners around the world in “bleaching” our logo on social media.

For Reef Check, the campaign is closely connected to the work we have been doing for three decades: getting people into the water to observe, measure and document the changes occurring on reefs.

Reef Check was founded in 1996 to address a critical gap in our understanding of coral reef health. The following year, trained volunteer divers and scientists carried out the first global survey of coral reefs using a standardised monitoring protocol.



Today Reef Check's Tropical Program includes citizen scientist teams in more than 40 countries, conducting more than 600 surveys each year. That long-term perspective is particularly important now.

On 22 August 2026 the daily global average sea surface temperature reached 21.10°C — the highest recorded since the Copernicus Climate Change Service dataset began in 1979.

At the same time El Niño is strengthening, with NOAA forecasting a greater than 90% chance that it will become a very strong event during the Northern Hemisphere autumn and winter.

For coral reefs already facing increasing heat stress, these conditions are cause for concern — and make consistent monitoring more important than ever.

When corals experience prolonged heat stress, they can expel the symbiotic algae living within their tissues that provide much of their colour and energy. Without them, corals become pale or white — the phenomenon known as coral bleaching.

Bleaching does not necessarily mean a coral has died. If stressful conditions subside, corals can recover.

But severe or prolonged bleaching leaves corals more vulnerable to disease and mortality, while other pressures — including poor water quality and overfishing — further reduce a reef's ability to withstand and recover from heat stress.

By returning to the same reefs and collecting comparable data over time, our teams create a record of how these ecosystems are changing. During periods of

extreme ocean heat, those observations let us compare reef conditions before, during and after bleaching events — identifying not only where reefs are declining, but where they may be showing resilience and recovery.

Three decades of monitoring have shown us that the story of coral reefs is not only one of loss. Reef Check data also document reefs that recover, and communities taking action to protect the ecosystems they depend upon.

Bleaching our logo is a small symbol of what reefs are experiencing. Keeping trained divers in the water is the work that comes next.

MALDIVES REEFS UNDER THREAT

BIOSPHERE EXPEDITIONS REPORT CONFIRMS

SUBMITTED BY **BIOSPHERE EXPEDITIONS**

13th

annual Maldives coral reef
conservation report

70–90%

of tropical reefs may be lost by 2050
at 1.5°C of warming

3

atolls surveyed: Ari, South Malé and
Vaavu



Reef Check partner and international wildlife conservation organisation Biosphere Expeditions has published its 13th annual Maldives coral reef conservation report, detailing marine monitoring conducted during the Reef Check EcoExpedition in October 2025 across Ari, South Malé and Vaavu atolls.

While the archipelago escaped a mass coral bleaching event in 2025 following severe thermal stress in 2024, the findings reveal a starkly uneven recovery landscape across the central atolls.

The release comes at a crucial moment, as rising ocean temperatures, an approaching El Niño cycle and localised human impacts threaten tropical coral ecosystems worldwide.

The report finds that the primary threats to Maldivian reefs — climate breakdown, ocean acidification, overfishing, coastal sedimentation and substandard waste management — continue unabated.



Current projections by the Intergovernmental Panel on Climate Change warn that 70–90% of global tropical coral reefs may be lost by 2050 under a 1.5°C warming scenario. With thermal anomalies and an approaching El Niño, the survival of lagoonal inner reefs remains precariously fragile.

Without immediate enforcement of local environmental regulations, sustainable fisheries management and systemic global climate governance, the report warns, recovery windows will continue to close.

The next Biosphere Expeditions coral reef and whale shark survey in the Maldives runs from 17 to 23 October 2026. Qualified divers can join as citizen scientists.

biosphere-expeditions.org

The 2025 report also underscores the role played by citizen scientists.

Biosphere Expeditions' marine dataset from the Maldives and Oman was recently recognised in Nature Communications, demonstrating that volunteer-collected data — when gathered properly — meets the highest scientific standards.

Long-term monitoring by Biosphere Expeditions volunteers and Reef Check EcoDivers directly enabled Pancrazi et al. (2025), a study that formally validated the “inner/outer reef dichotomy” first identified in Biosphere Expeditions' field reports — proving that post-bleaching recovery on inner lagoonal reefs is stunted compared with cooler outer slopes.

“When conducted with scientific rigour, citizen science provides the robust, multi-year datasets needed to inform international climate policy.”

DR MATTHIAS HAMMER,
Biosphere Expeditions

Since its first Maldives expedition in 2011, Biosphere Expeditions has built one of the few continuous, independent long-term datasets tracking coral health, reef fish populations and human impacts across the central atolls.

It published a reef education booklet for Maldivian children, distributing 2,000 copies to the Ministry of Education, and offers full scholarships for Maldivian nationals to train as Reef Check EcoDivers alongside international volunteers.

Former placement recipient Shaha Hashim organised the first all-Maldivian Reef Check survey and now leads NGO work against destructive fishing and unmanaged dredging.

CORAL REEFS IN DECLINE

AND THE POWER OF LONG-TERM MONITORING

The Global Coral Reef Monitoring Network has released the largest global coral reef assessment ever produced — and Reef Check data are part of the picture.

21.1m

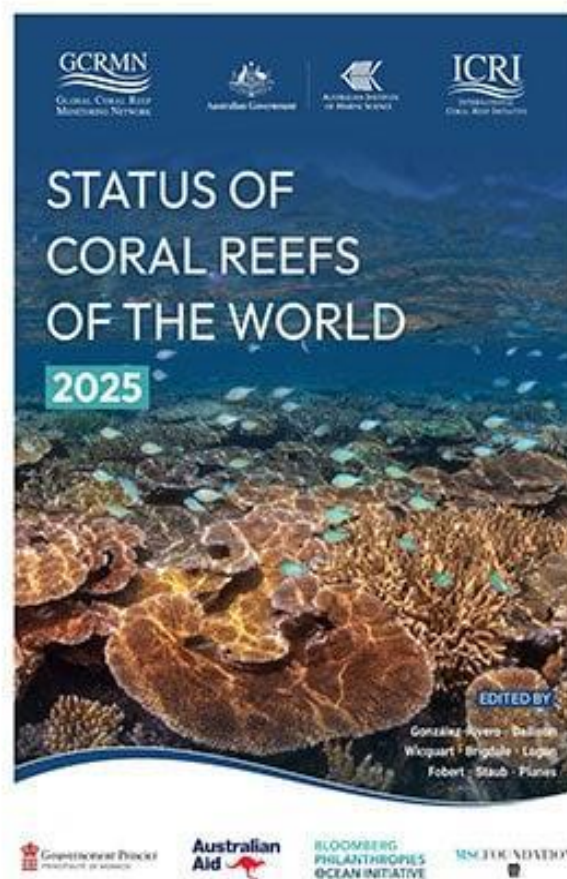
observations analysed

87,299

surveys at 36,886 reef sites

120+

countries, territories and economies



The Global Coral Reef Monitoring Network has released its most comprehensive assessment of the world's coral reefs to date.

Status of Coral Reefs of the World: 2025 brings together 21.1 million observations from 87,299 surveys at 36,886 reef sites.

The data were contributed by 600 partners across more than 120 countries, territories and economies — making it the largest global coral reef assessment ever produced.

The findings underscore the growing pressure on coral reefs. Between 2023 and 2024 alone, global hard coral cover fell by a relative 8.9% — the largest single-year decline on record.

1980–2009

30.2%

reference period average

2020–2024

27.3%

a relative decline of 9.5% against the reference period

2024

25.8%

after the largest single-year fall on record

ACROSS THE TEN GCRMN REGIONS

4

regions in long-term decline

4

with no evidence of net change

2

that have increased since their reference period

Climate-driven marine heatwaves are the primary driver of the global decline. Since 1998, four global coral bleaching events have each been associated with relative losses of 6.5–9.9% in global hard coral cover.

Since 2010, these large-scale disturbances have been occurring every four to six years in many regions, leaving reefs with less time to recover before the next event.

Yet the report also makes clear that the story is not the same everywhere, and that recovery is still possible. Following the third global bleaching event, global hard coral cover increased by roughly 6% between 2017 and 2019.

Reef Check monitoring data

contributed to all ten regional chapters of the report, and several Reef Check coordinators served as co-authors of their regional chapters. The report specifically acknowledges the Reef Check Foundation and the countless hours contributed by its volunteers.

That contribution speaks to one of the report's central messages: sustained, long-term monitoring is essential to effective coral reef conservation.

Consistent monitoring lets scientists establish baselines, identify trends, connect changes with their causes, measure recovery and determine whether conservation strategies are working.

For nearly 30 years, Reef Check scientists, coordinators, partners and volunteer citizen scientists have helped build that record. Individual surveys, repeated year after year and shared across borders, become part of the evidence base used to understand an entire global ecosystem.

The situation is urgent, but the fate of coral reefs is not predetermined. Limiting global warming is fundamental to their future, while reducing local stressors, strengthening reef protection and investing in monitoring can improve resilience and recovery.

gcrmn.net/2025-report



PHOTO BY
Sundeep Rao



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Sarah Kelly



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Philippe Lecomte

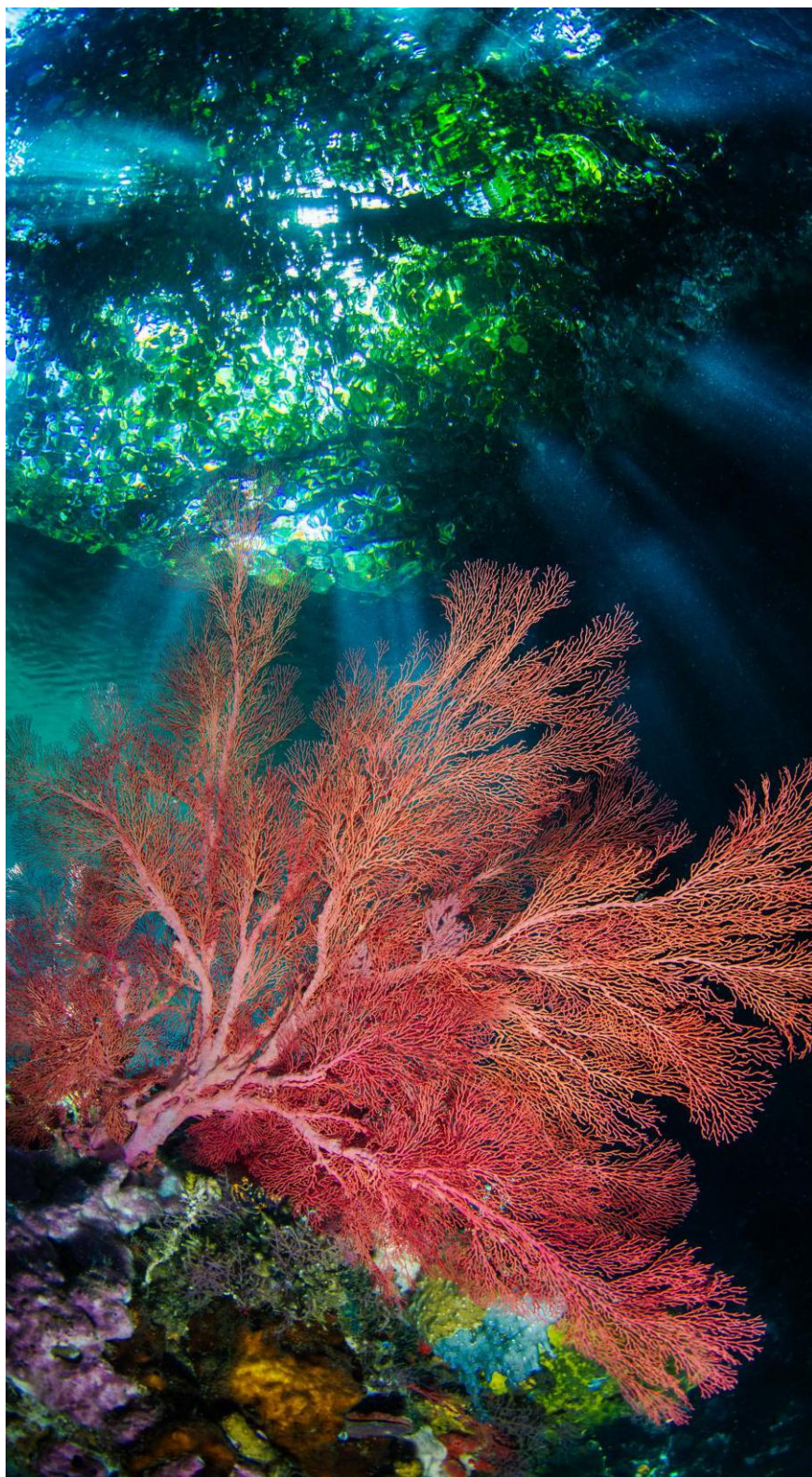


PHOTO BY Taner Atilgan



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projects@emiratesdiving.com

EDA Admin | Kacy Torres

projects@emiratesdiving.com

Reef Check Trainer | Rania Shawki Mostafa

reefcheck@emiratesdiving.com

Health, Safety & Technical Chief Inspector

Mohamed Faraj Abdulla Jaber

inspection@emiratesdiving.com

MISSION STATEMENT

Our mission is to conserve, protect and restore the UAE's marine resources by emphasising and promoting the underwater environment and environmental diving.

LEGISLATION

EDA is a non-profit NGO registered with the Ministry of Community Development as per the Ministerial Decree No. 149. The Decree stipulates the following responsibilities for EDA:

- Ensure environmentally respectful diving practices in all EDA members.
- Support the diving industry within the UAE by coordinating the efforts of the diving community.
- Promote safety in the commercial and recreational diving fields through standardisation of practices.
- Preserve historical aspects of diving within the Gulf region and enhance environmental education to diving and non-diving communities through EDA projects and events.

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Emirates Diving Association
P.O. Box 33220, Dubai, UAE

Office Location: Jumeirah 1, Al Hudaiba Awards Buildings, Block B, 2nd Floor, Office 214

Tel: +971 4 393 9390

Email: projects@emiratesdiving.com

Website: www.emiratesdiving.com

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