



TIC

TENGAH ISLAND
CONSERVATION

Annual Report

2025

tengahislandconservation.org



About Us



A science-based, community-driven conservation organisation based in Johor, Malaysia.

TIC | Tengah Island Conservation is a science-based, community-driven conservation organisation based in Johor, Malaysia. As a registered non-profit, TIC is dedicated to preserving and restoring the rich biodiversity of Johor's island ecosystems through an integrated approach that combines environmental protection, sustainable practices, and community engagement.

TIC's work is structured around four core conservation pillars:


1

Habitat and Species


2

Integrated Island Waste Management


3

Sustainable Tourism


4

Education and Outreach



We operate in close collaboration with local communities, government agencies, researchers, and international partners. Our mission is to protect the island ecosystems of Johor, so that nature and people can thrive in harmony.



Contents

04	TIC President Foreword
05	TIC Executive Director Message
06	TIC Vision Where are we and Priority Conservation Areas
08	Pillar 1 Habitat and Species
28	Pillar 2 Rumah Eko Integrated Island Waste Management
31	Pillar 3 Sustainable Tourism Festival Pulau Besar
33	Pillar 4 Education and Outreach
35	Financial Report
36	Summary Impact
37	Partners and Funders

TIC President Foreword



I write this as the rain pelts against my window and thunder shakes the walls. This is TIC's first full Annual Report, and the storm is making me think back to why we started this.

In 2010, when we first began construction on Pulau Tengah, I had a simple — but not so simple— wish: not to destroy the amazing nature around us. I never dreamt that we would be able to make meaningful positive impacts like the statistics this report shares today.

Sixteen years on, I write this foreword from those same beaches. A dedicated team of Malaysian biologists has spent these years protecting the turtles, monitoring the reefs, listening to the communities, and building something that we hope will last. The dugongs have returned to Pulau Tengah. Brah, one of our resident turtles, came home this year after years away. The water feels more alive than it did when we began.

In a decade, we have released over 33,000 sea turtles into waters that were once data poor. We have engaged more than 19,000 people through education and outreach. In 2025 alone, our team safely released 2,954 hatchlings to the ocean, surveyed and monitored the reefs across six islands and worked alongside the community on Pulau Besar to manage 3,519 kg of waste through Rumah Eko. We have also welcomed over 11 interns from Malaysian universities, who have gained valuable conservation experience in the field.

I am endlessly humbled by our team. They are scientists and they work hard — with rigour, with passion. They swim out from the boat at low tide when they spot a nest. They wake through the night at the first sign of an emergence. Behind every number in this report are these committed people, choosing this hard work because they care about our future.

I must also thank our friends, partners, collaborators, allies, funders, cheerleaders and supporters. Without your allyship we would not have travelled nearly as far.

In the last ten years, we have gone against the instinct of growth and scale, choosing instead to do more in one place, and with great care. We work in Mersing and her islands — and in doing so for over a decade, we have grown to know the landscapes, the reefs and the seagrass meadows, the dugong individuals, the beaches, and of course the people who live and work here.

Rumah Eko on Pulau Besar began as a waste management hub, but it has turned into something larger: a space to engage meaningfully with an island's community, to learn from them and about the place's history, to understand the relationships between people and their place.

This report tells the story of 2025 honestly, including the parts that are difficult to read. Live coral cover declined from 54% to 46%. Twenty-four nests were lost to poaching despite our best efforts. Rising incubation temperatures produced 78% female Hawksbill hatchlings, with implications we are only beginning to understand.

This magical place — along with our planet more widely — is under threat, and we cannot afford to be quiet about it. Climate change is not a future concern; it is reshaping our reefs, our beaches, the very biology of the turtles we protect. It is imperative that we all act now. We need to raise our voices, tell the honest truth about what is happening, engage with those who will listen, and incite action,

We look to you to spread the word, to get involved, to follow-us, to share a reel, to adopt a nest or recommend a contact, or even to come and see the nature and the work for yourself. Let the islands and the awe-inspiring nature here be an inspiration.

I am hopeful that together, we can make a difference.

With gratitude,

Cher

Cher Chua-Lassalvy | President, Tengah Island
Conservation, Mersing, Johor, Malaysia



TIC Executive Director Message



When I joined TIC, I had the privilege of shaping a framework that would carry our work forward across our four pillars: Habitat and Species, Integrated Island Waste Management (Rumah Eko), Sustainable Tourism, and Outreach & Education. It gave us a shared home to grow into, and 2025 was the year we truly settled into it, room by room. Rumah Eko, in particular, came into its own this year, growing from a waste management point into something warmer: a coordination hub where data collection, community engagement, and cultural work now happen under one roof, with one shared purpose.

None of this works without trust, and trust takes years to earn. This year we secured deeper, more formal partnerships with the islanders and coastal communities across Pulau Besar and Mersing, moving from cooperation to genuine action and collaboration in conservation.

We also deepened our partnerships across government, local and central, along with agencies and other stakeholders, contributing our data to support the wider Marine Protected Area network across Johor. Making sure what we see on the reefs reaches the people shaping policy is central to how we measure our own impact.

Perhaps the work I'm most proud of this year doesn't show up easily in conservation metrics. We ran a month-long festival on Pulau Besar and helped revive Zapin Pulau, a dance many on the island hadn't performed in years. We worked with elders to document island heritage before it was lost for good; laksa pulau, sira gula ketapang, and other foods and traditions that exist nowhere else.

I've come to believe this is not separate from conservation efforts; it is the heart of it. It is difficult to ask a community to protect a reef or a nesting beach when they might be disconnected from the heritage that makes that place theirs. Identification comes before protection. You cannot ask people to love what they no longer recognise as their own.

This is the thread running through everything we did in 2025: science tells us what's happening to the reefs and the turtles; local knowledge tells us how this place has always worked; a renewed sense of heritage deeply connects the community to the place which drives the wish to protect and steward the place. Bring all three together, and you get something stronger than any single approach — a Marine Protected Area that isn't just designated on a map, but genuinely activated and managed by the people who live there.

That is the thinking behind our four pillars, and the one we intend to keep building on.

With appreciation for the team that made this possible,

Naja

Noor Azariyah Mohtar | Executive Director,
Tengah Island Conservation, Mersing, Johor, Malaysia

TIC Vision

Malaysian ecosystems, full of life and rich in biodiversity, where threatened species and local communities thrive side by side.



TIC History

The Boat People

From the mid-1970s to early 1980s, Pulau Tengah was a United Nations' Refugee Council Transit Camp for around 120,000 refugees from Vietnam who took perilous journeys by boat to seek sanctuary in Malaysia.

Turtle Hatchery

The resort noticed that turtle nests were being poached from the back of the island. They collaborated with the Marine Park and the Department of Fisheries to start a hatchery to safeguard the eggs.

TAJ Conservation Centre

TheTunku AbdulJalil (TAJ) Conservation Centre was officially opened by His Majesty the Sultan of Johor on September 4th 2018.

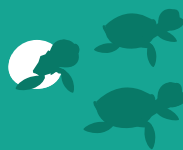
1978



2012



2014



2015



2018



2019



Batu Batu

The resort opened its doors with the aim to provide an authentic experience whilst treading lightly on the island's wild and natural environment.

Turtle Watch Camp

A volunteer project was started to support the sea turtle hatchery and conservation efforts on Pulau Tengah.

Tengah Island Conservation

As our projects expanded and diversified, the project transitioned from Turtle Watch Camp to Tengah Island Conservation in September 2019 to reflect the variety of work being carried out.



TIC Field Offices in Johor



Field Office

- 1 Tunku Abdul Jalil Conservation Centre —  Pulau Tengah
- 2 Rumah Eko —  Pulau Besar
- 3 TIC Hub —  Mersing

Pillar 1 | Habitat and Species

Green and Hawksbill Turtles of Johor: A Decade of Sea Turtle Monitoring and Protection



Our sea turtle conservation programme began as a strategic partnership with Batu Batu Resort Johor State Government and the Department of Fisheries Malaysia. Since 2015, it has grown significantly – expanding from Pulau Tengah to cover six neighbouring islands, and encompassing daily boat patrols, an operational hatchery, scientific data sharing with government agencies, and active community outreach.

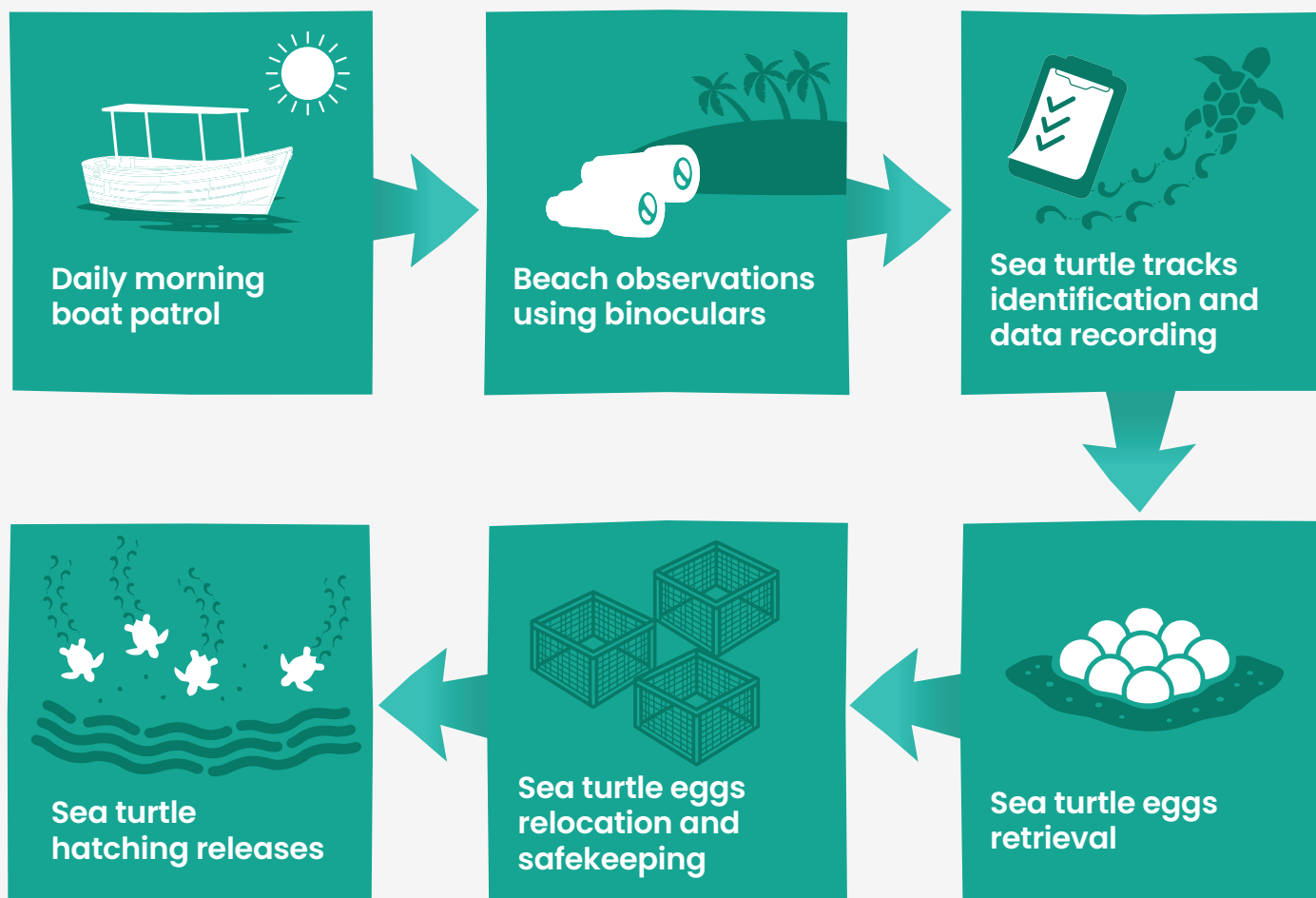


Figure shows the daily patrol routes and monitoring sites for sea turtle protection within the Besar Islands Cluster



Patrolling Efforts

In 2025, TIC conducted daily boat patrols across an 85 km² area covering six islands within the Besar Islands Cluster during the nesting season (March–September). Patrols documented all recorded sea turtle activity — including confirmed nests, false crawls (abandoned attempts) and poaching incidents. Newly discovered nests were relocated to TIC's hatchery on Pulau Tengah for protection and incubation.



The monitoring period ran from March to September 2025 — 213 days in total. Full-effort monitoring was maintained at Pulau Tengah throughout. Across the remaining five islands, boat patrols were conducted on 138 days (64.8% effort) and walking patrols on 55 days (25.8% effort), with 20 days (9.4%) without patrols due to adverse weather, low tides, or boat availability. Despite these constraints, boat patrol efforts increased by approximately 33% compared to 2024. Sustained by dedicated project funding.

Boat patrol efforts increased by approximately 33% compared to 2024.



Fieldwork in marine conservation demands immense resilience — TIC officers and interns navigate low-tide swimming conditions to safely locate and protect vulnerable turtle eggs.

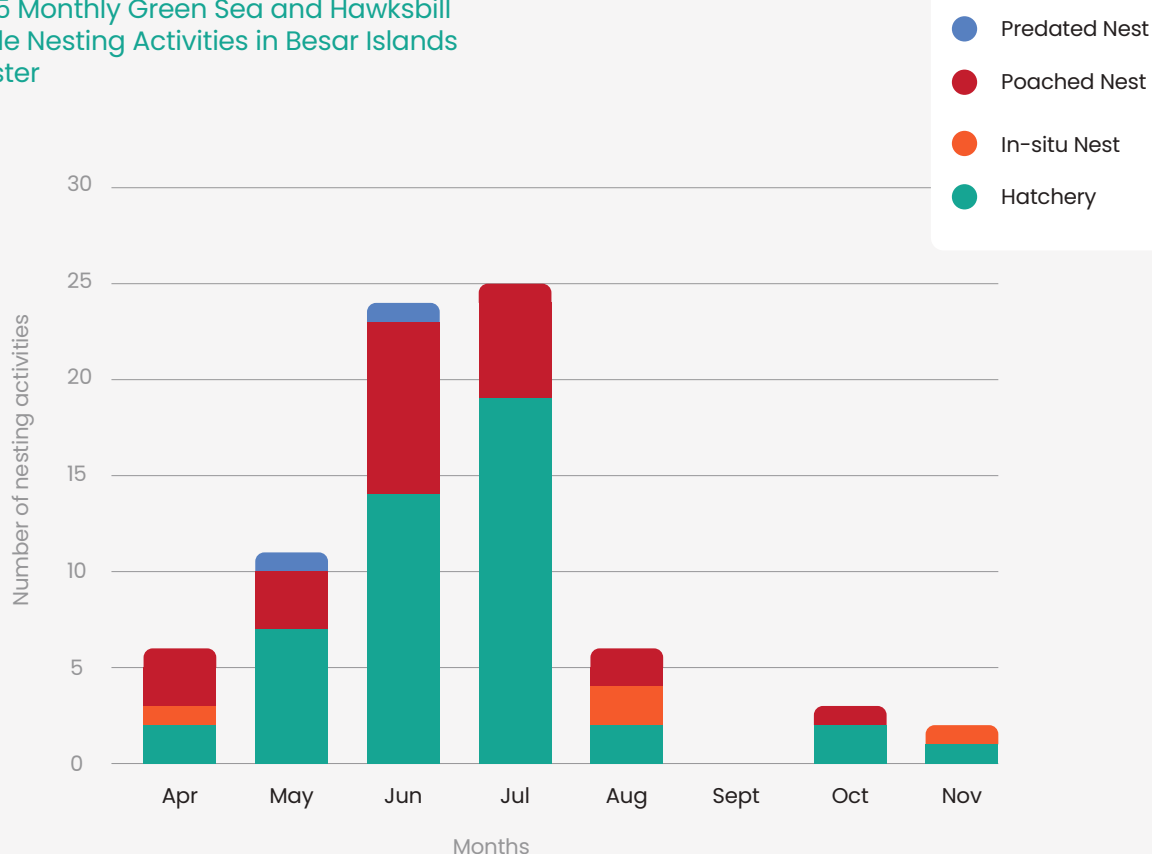


2025 Nesting Season Results

The 2025 nesting season ran from April to November. A total of 125 sea turtle activities were recorded across all six islands. Of 47 nests successfully relocated to the hatchery — an 88% increase on the previous year — 31 were collected directly by TIC, and 16 were received from licensed egg collectors through the Eggs Buy Back Programme.

Nesting activity peaked in June and July, with no activity recorded in September and low levels in October and November. The highest proportion of activity was recorded at Pulau Tengah (32%), followed by Pulau Harimau (21%), Pulau Mensirip (17%), Pulau Tinggi (15%), Pulau Besar (9%), and Pulau Hujong (6%).

2025 Monthly Green Sea and Hawksbill Turtle Nesting Activities in Besar Islands Cluster





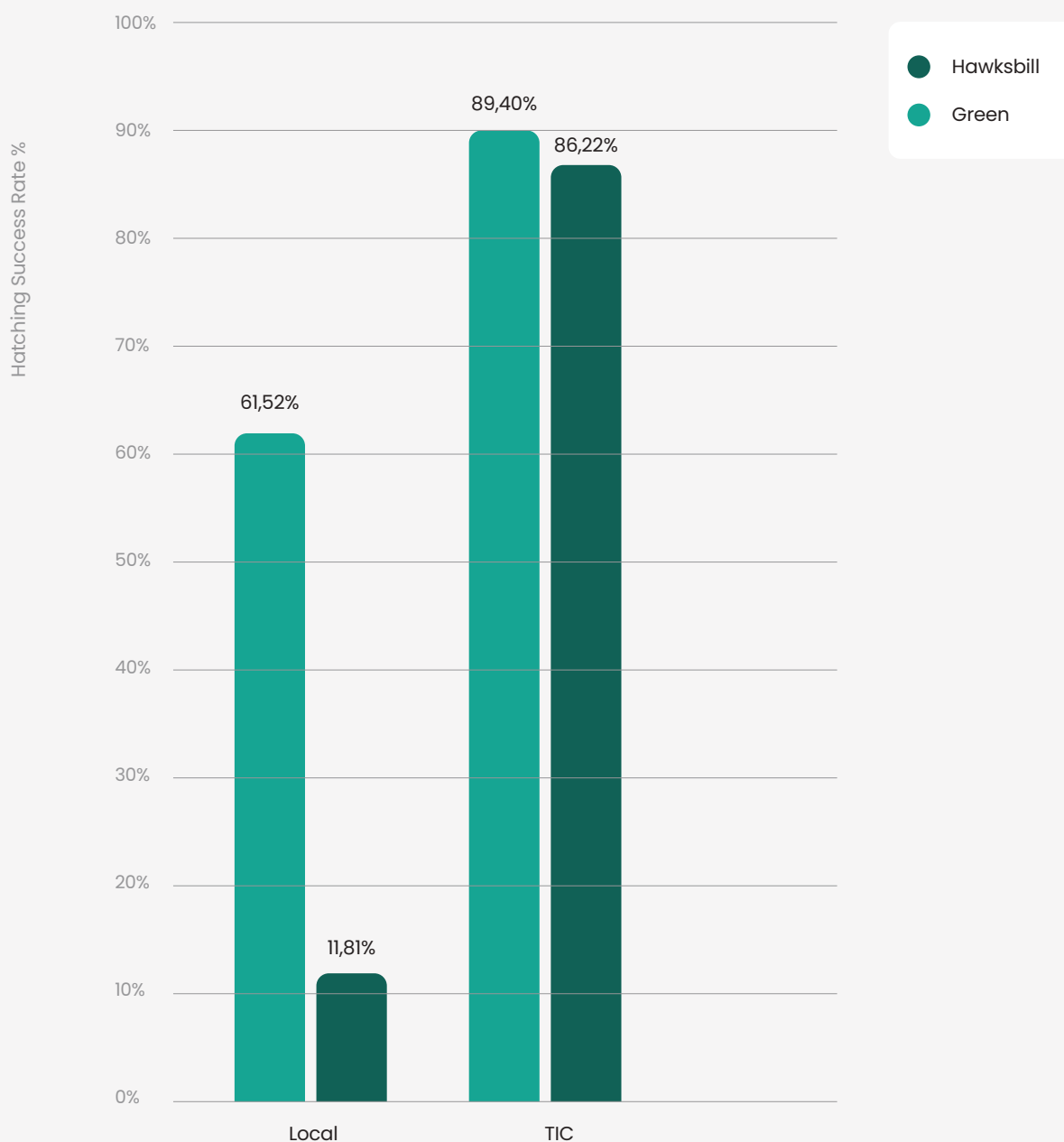
Sea Turtle Hatchery Management

TIC operates a sea turtle hatchery on Pulau Tengah, established with permission from the Johor State Government and Department of Fisheries Malaysia. The hatchery accommodates up to 40 relocated nests at a time and is designed to protect eggs from natural predators — including crabs, monitor lizards, and rats — as well as from poaching.

2025 Hatchery Results

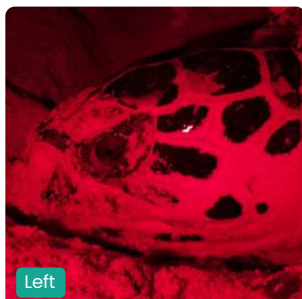
In result, 2,954 hatchlings successfully released for 2015— 942 Hawksbill and 2,012 Green Turtle hatchlings. TIC's hatching success rates have improved consistently: from 78.93% in 2023 to 81.86% in 2024, and 88.31% in 2025.

2025 Hawksbill and Green Sea Turtle Hatching Success

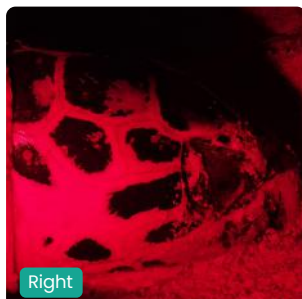


New Individual Sea Turtles Identified

In 2025, six new sea turtles were identified: two Hawksbill and four Green Sea Turtles. Five were confirmed nesting mothers, and six were successfully tagged. Since 2015, TIC has now documented 27 individual sea turtles — ten Hawksbill and 17 Green — building a long-term dataset that underpins our understanding of local population trends.



Left



Right

ID (Metal Tag Serial Number)
TICHB0010F
(M0062, M0063)

Species
Hawksbill

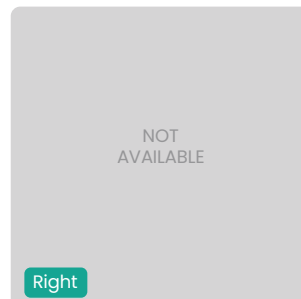
Juvenile/Adult
Adult

Sex
Female

No of Sightings
2



Left



Right

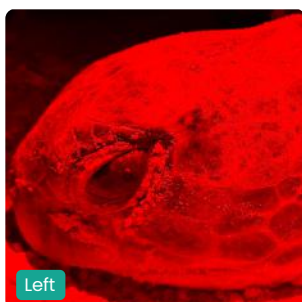
ID (Metal Tag Serial Number)
TICHB0011J

Species
Hawksbill

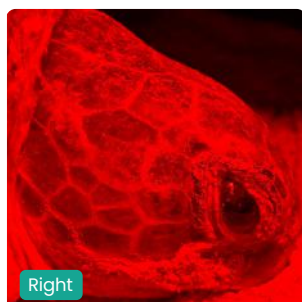
Juvenile/Adult
Juvenile

Sex
Unknown

No of Sightings
1



Left



Right

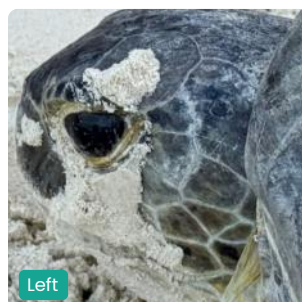
ID (Metal Tag Serial Number)
TICGT0009F
(M0069, M0057)

Species
Green Sea

Juvenile/Adult
Adult

Sex
Female

No of Sightings
3



Left



Right

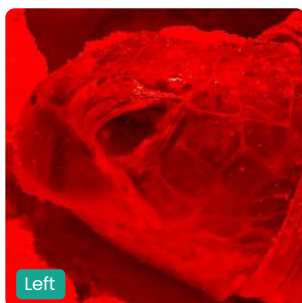
ID (Metal Tag Serial Number)
TICGT0010F

Species
Green Sea

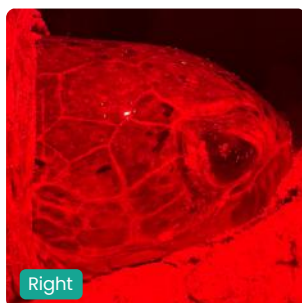
Juvenile/Adult
Adult

Sex
Female

No of Sightings
1



Left



Right

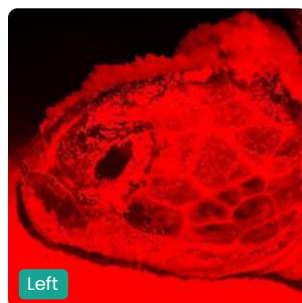
ID (Metal Tag Serial Number)
TICHB0011F
(M0072, M0075)

Species
Green Sea

Juvenile/Adult
Adult

Sex
Female

No of Sightings
1



Left



Right

ID (Metal Tag Serial Number)
TICGT0012F
(M0093, M0094)

Species
Green Sea

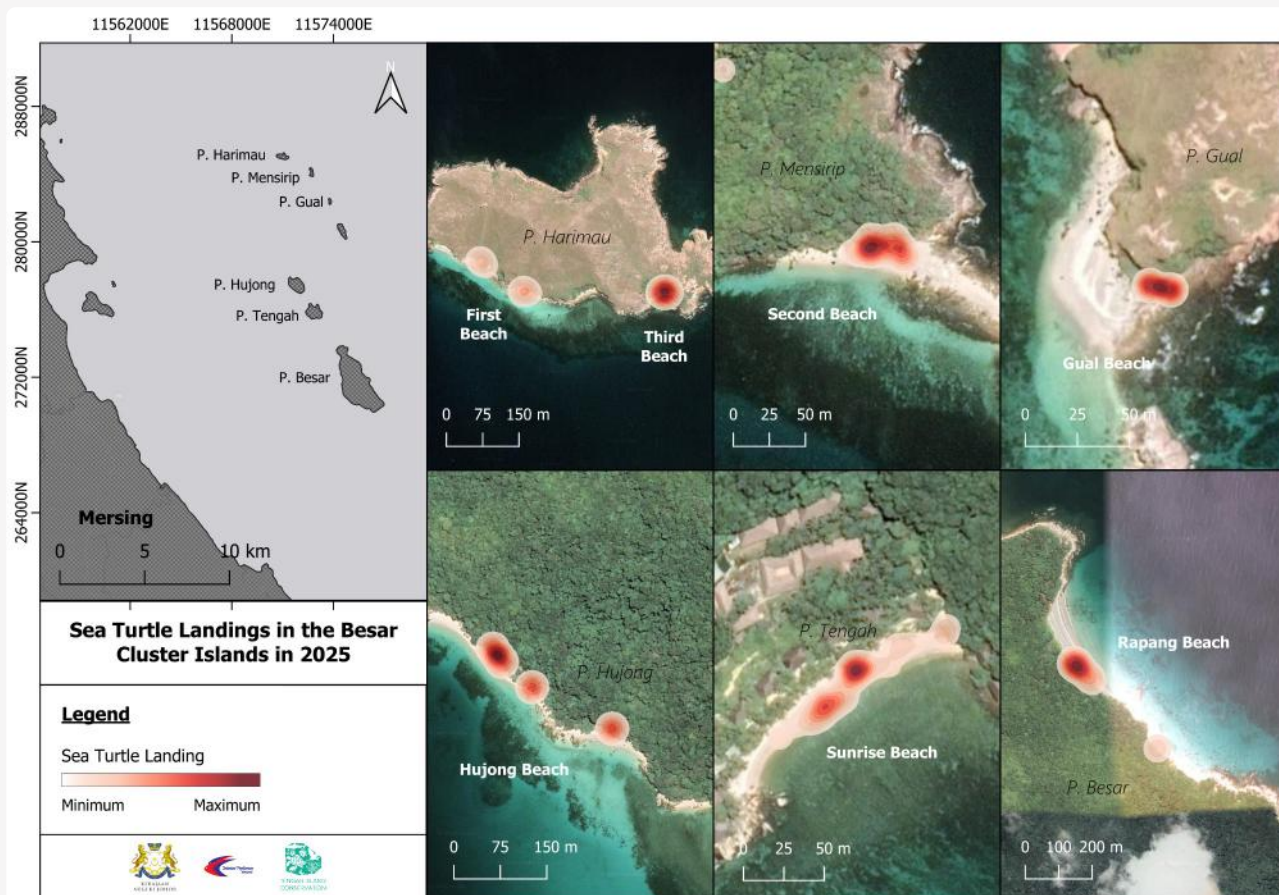
Juvenile/Adult
Adult

Sex
Female

No of Sightings
1



Sea Turtle Landings in Besar Cluster Islands (2025)

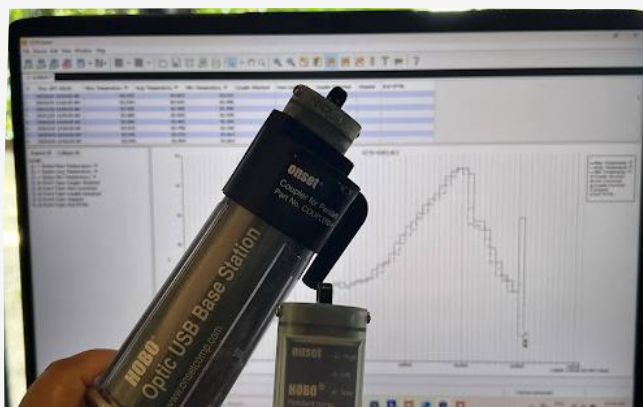


Technology and Innovation

In collaboration with Politeknik Mersing Johor (PMJ) and Jabatan Pendidikan Politeknik dan Kolej Komuniti (JPPKK) we are in the final phase of developing Solarpowered IoT Environmental Monitoring Station (SPIES) for Sea Turtle Nesting Conditions— a multisensor IoT system to improve hatchery monitoring through a live data dashboard. Four pilot studies have been conducted, showing promising results.

Climate and Sex Ratios

Temperature data loggers (HOBO) were deployed in 23 of 47 nests to monitor incubation temperature as an indicator of climate-related impacts on hatchling sex ratios. The average incubation temperature was 28.57°C for Green Turtle nests and 29.08°C for Hawksbill nests. Based on these readings, the estimated proportion of female hatchlings was 58.81% for Green Turtles and 78.60% for Hawksbill Turtles — a finding with significant implications for long-term population health under a warming climate.





I Poaching Pressure

Despite TIC's efforts, 24 nests were poached in 2025. Pulau Harimau recorded the highest number of poached nests (13), followed by Pulau Mensirip (7), Pulau Besar (3), and Pulau Tengah (1). The Pulau Tengah incident occurred during the off-season, when patrols were not active.

A key achievement this year was the identification and engagement of one unlicensed local egg collector, which led to the recovery of 16 nests. This reinforces TIC's approach of working with, rather than against, local egg collectors – with plans to train willing collectors as Johor Turtle Guardians and integrate them into coordinated patrol schedules. Priority monitoring in 2026 will focus on Pulau Harimau and Pulau Mensirip, identified as the critical poaching hotspots.

Sea Turtle Stranding and Mortality

During the reporting period, ten deceased sea turtles were recorded – eight Green Turtles and two Hawksbill Turtles. No visible external injuries were observed. One deceased dolphin was also reported and the information shared with the Department of Fisheries.

Local community observations suggest actual mortality may be higher than documented. TIC will focus in 2026 on establishing baseline data on sea turtle bycatch and mortality across the Johor Marine Park, in close collaboration with local communities and partner agencies.

Reefs of the Johor Islands

TIC's reef monitoring programme covers seven islands within Besar Clusters of Northern Johor Marine Park: Pulau Besar, Pulau Tengah, Pulau Hujung, Pulau Harimau, Pulau Mensirip, Pulau Gual, and Pulau Rawa. In 2025, a total of 43 sites were surveyed using the Reef Check Medium-Scale Survey Method, with a small number of sites surveyed in collaboration with Reef Check Malaysia (Mersing Team).



Figure: Survey sites for coral reef monitoring within Besar Islands Cluster

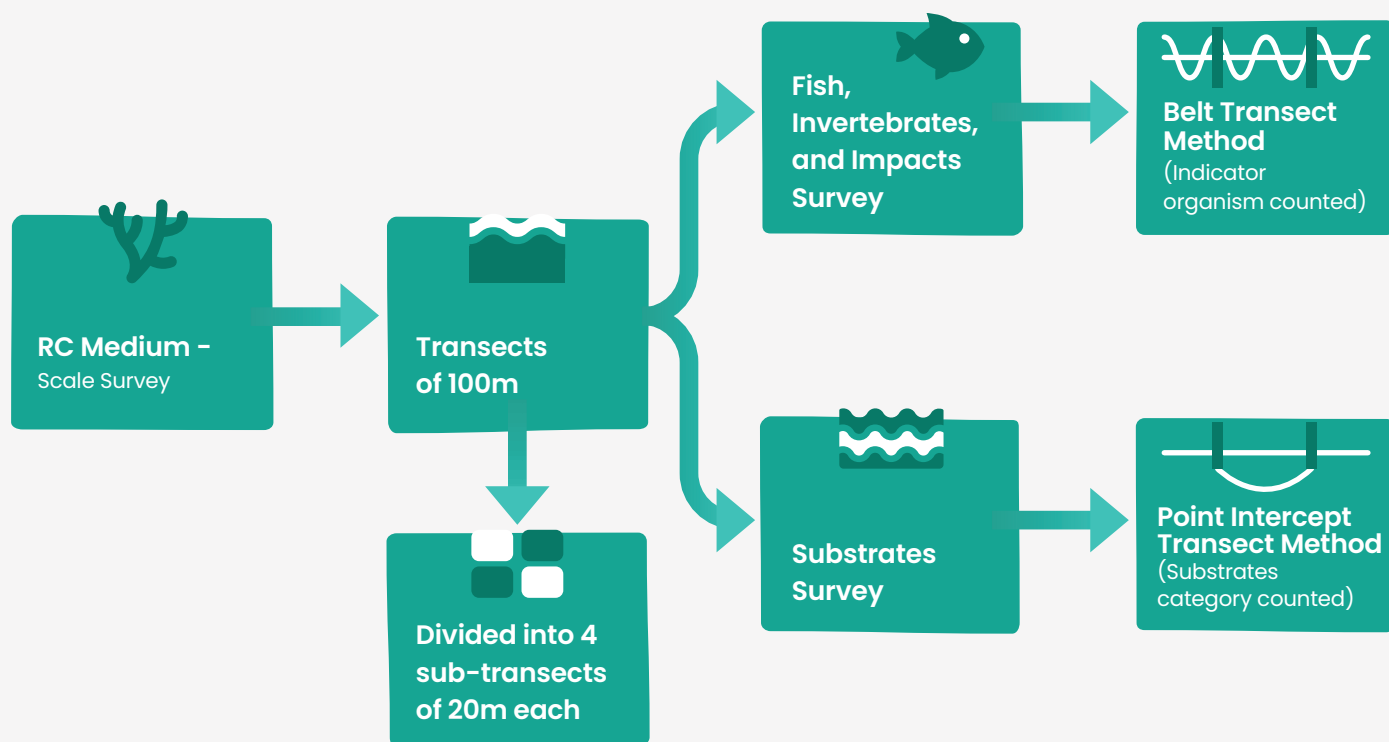


Diagram: Reef Check Medium-Scale Survey Method

Reef Health Results

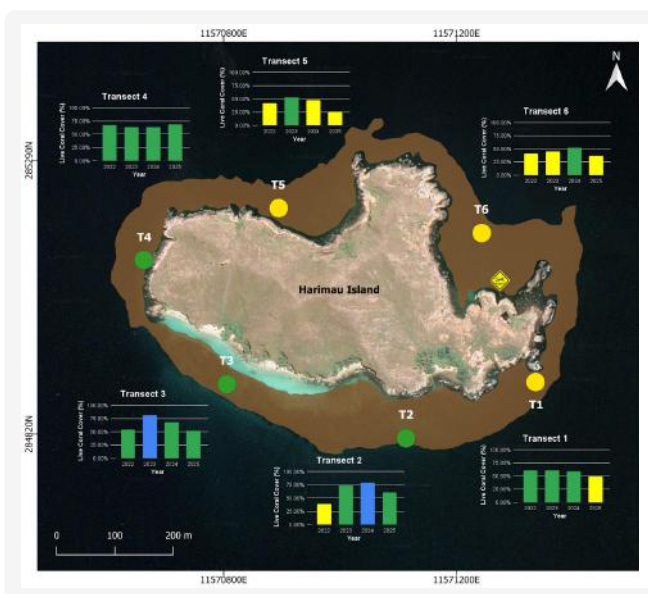
Live Coral Cover (LCC) across the Besar Islands Cluster was recorded at 46% in 2025 — a decline from 54% in 2024 and 58% in 2023. This represents a consistent downward trend since 2022, with several sites transitioning from "Good" to "Fair" category. No sites were classified as "Excellent" in 2025.

Health Rating	Live Coral Cover (%)	Number of Sites
Excellent	76-100	0
Good	51-75	18
Fair	26-50	24
Poor	0-25	1

Table: Overall reef health summary, 43 survey sites, 2025

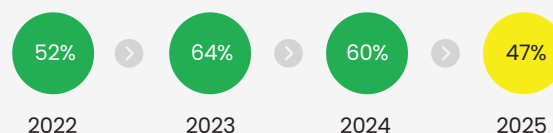
Of particular concern, Pulau Harimau, Pulau Gual, and Pulau Rawa showed the most significant reductions in live coral cover between 2024 and 2025. One site near the Pulau Besar main jetty recorded "Poor" condition (22% LCC), attributed to nearby construction activity.

Pulau Mensirip remained the strongest-performing island, consistently within the "Good" category across all four years of monitoring.

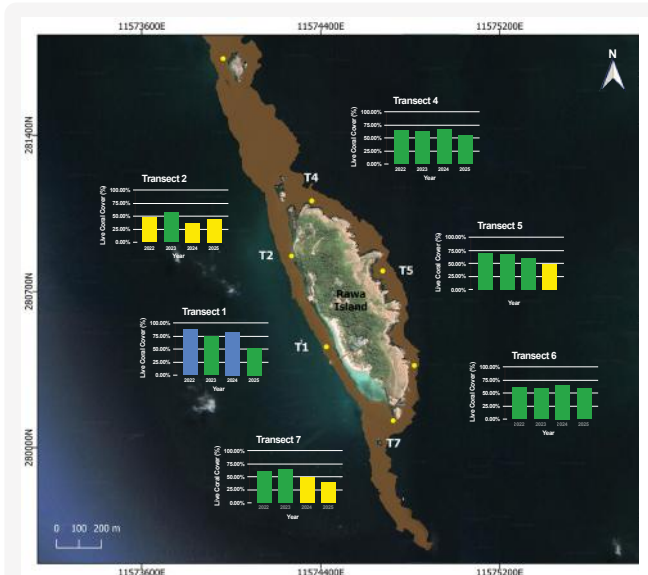


Health Comparison of Live Coral Cover in Harimau Island (2022–2025)

Yearly Live Coral Cover Trends

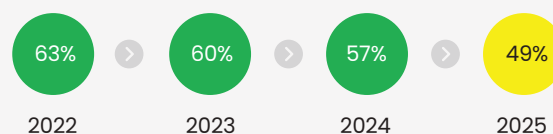


Legend
Live Coral Cover

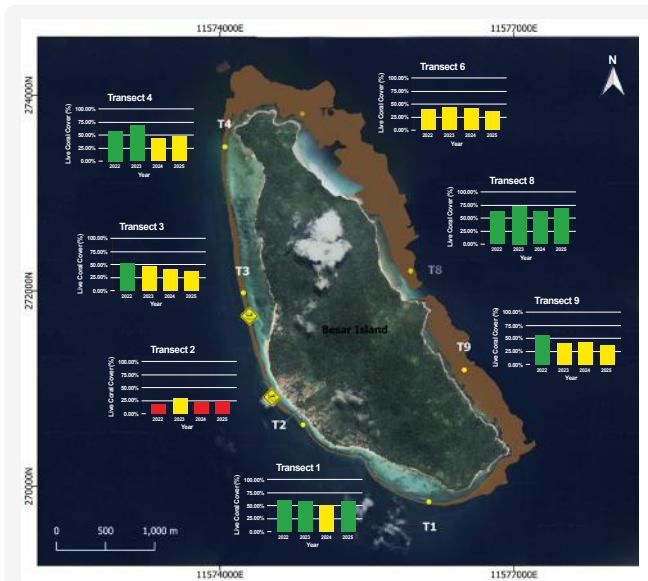


Health Comparison of Live Coral Cover in Rawa Island (2022–2025)

Yearly Live Coral Cover Trends

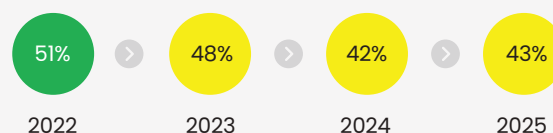


Legend
Live Coral Cover



Health Comparison of Live Coral Cover in Besar Island (2022–2025)

Yearly Live Coral Cover Trends



Legend
Live Coral Cover



Figure: Reef health trends at Pulau Besar, Pulau Harimau, and Pulau Rawa, 2022–2025



Reef Restoration

TIC continued coral restoration efforts within the Northern Johor Marine Park in 2025, experimenting with three restoration methods: coral biscuits, metal frames, and metal poles.

A metal frame contributed by corporate partners Tenaga Nasional Berhad (TNB) was monitored for over eight months. Of 28 new coral nubbins tagged across multiple genera, a survival rate of 75.29% was recorded. Genera including *Stylophora*, *Pavona*, and *Porites* showed strong performance alongside *Acropora*.

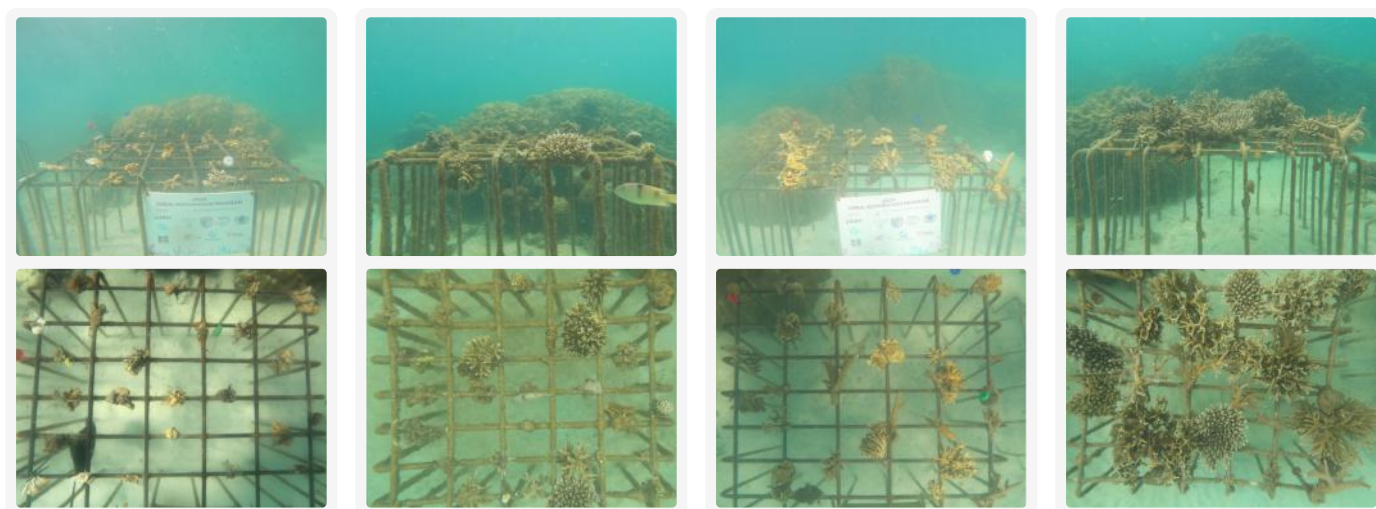
In collaboration with Chasing Karang IIUM and Terumbu Tegar Services, TIC adopted 3D photogrammetry for long-term coral monitoring, enabling more accurate and consistent measurements of coral growth over time.

September 2024

August 2025

September 2024

August 2025

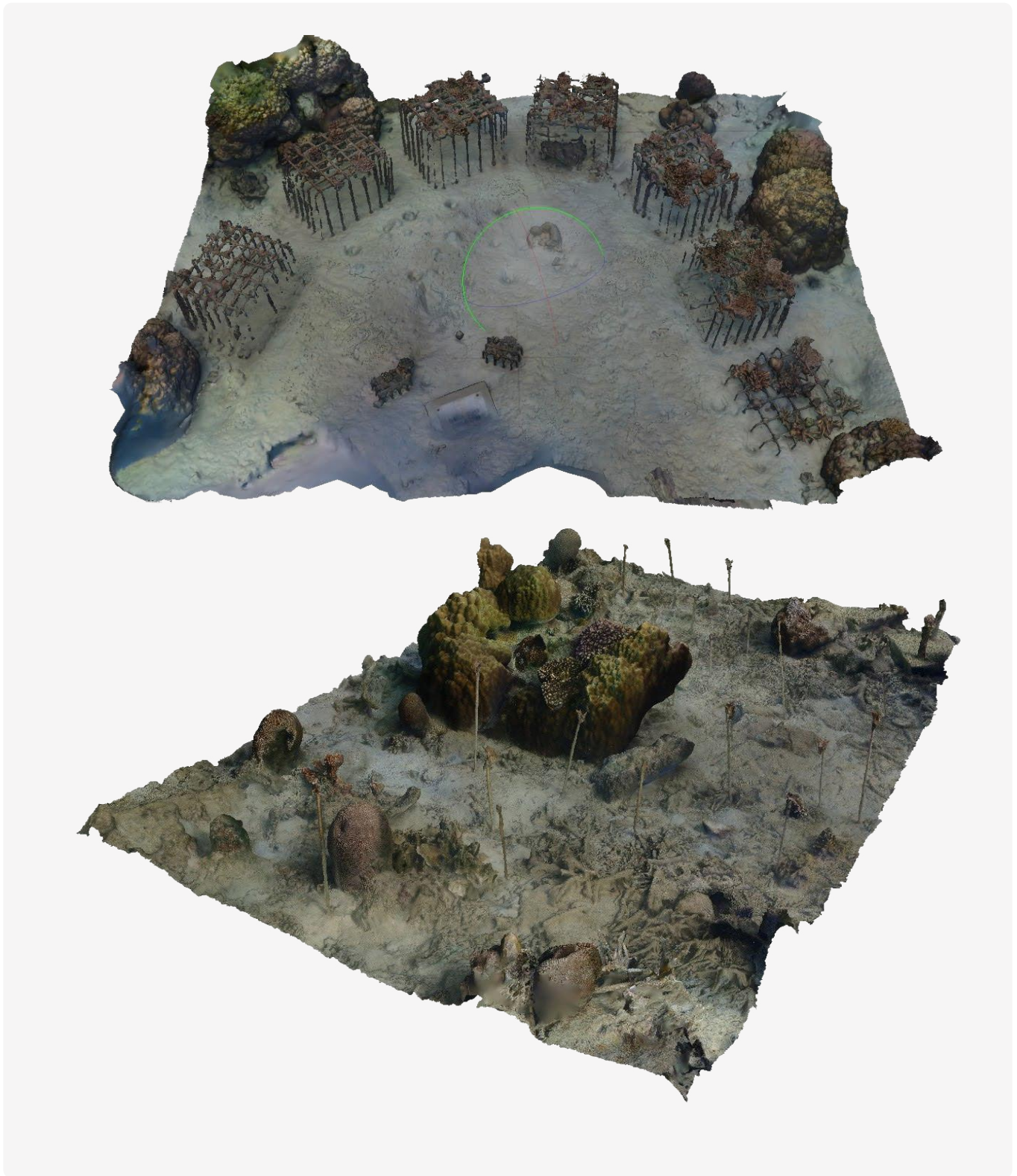


Coral Frame 2

Coral Frame 6



Figures show the photographs of the metal bar frame and a comparison between the start and end of the one-year monitoring period.



Figures show the photographs of the 3D model of the metal bar frame (top) alongside the metal poles (bottom).

Scan QR code to view
the Coral 3D model video





Seagrass Meadows

TIC monitors seagrass habitats across Pulau Besar, Pulau Tengah, and Pulau Hujung — three islands where meadows have been documented within the Johor Marine Park. Seagrass is ecologically linked to coral reefs, mangroves, dugongs, and sea turtles; TIC's integrated approach reflects these connections.

In 2025, monitoring followed the Seagrass-Watch guideline (McKenzie *et al.*, 2009), using a Fixed Single Transect Method. Eight sites were surveyed across the three islands, selected to represent boat movement areas (jetty), tourist activity zones, and control sites with minimal disturbance.

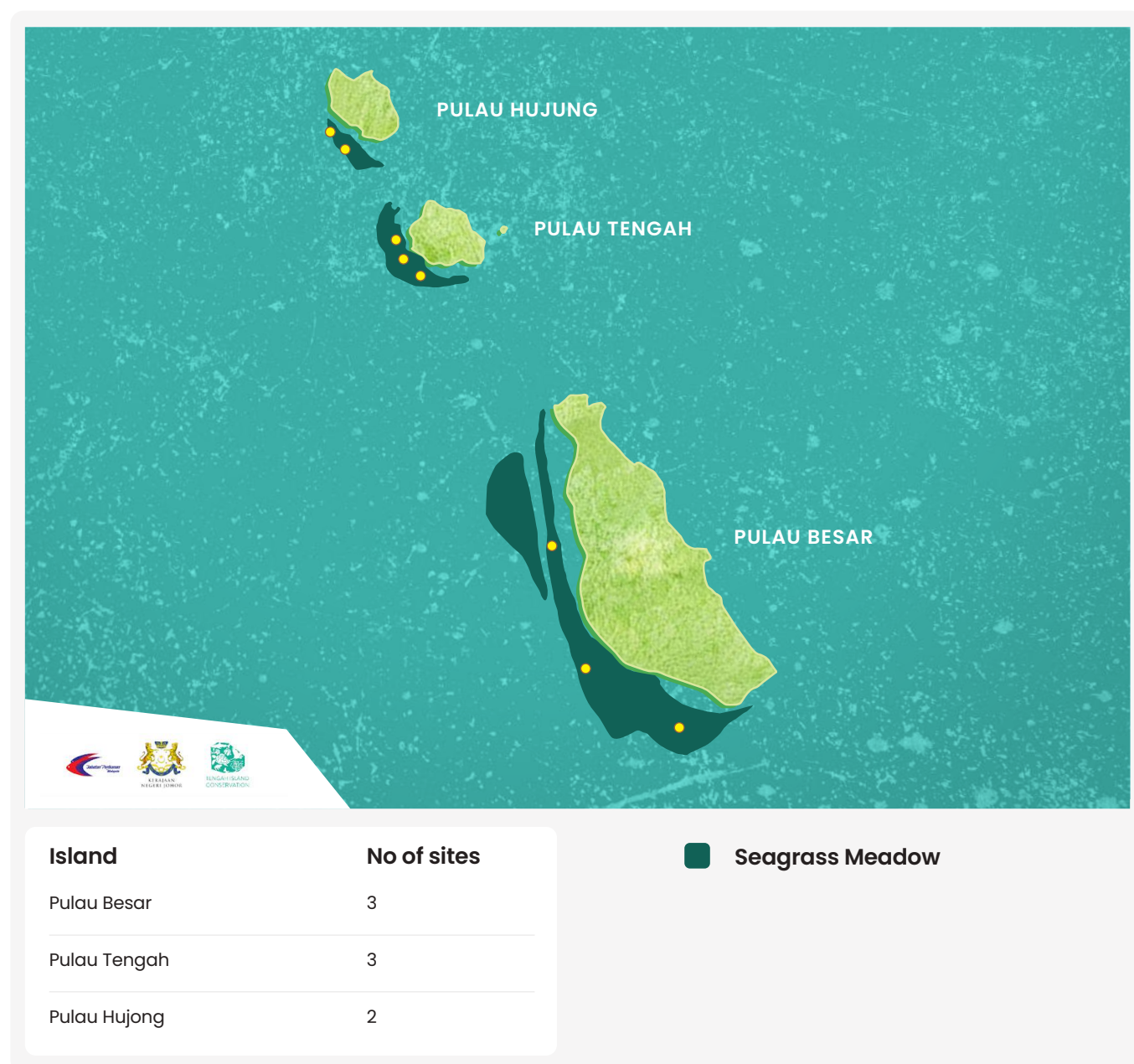


Figure: Seagrass survey sites, Besar Islands Cluster

Results

Seagrass cover showed an overall increasing trend from 2024 to 2025, with control sites consistently recording higher coverage than tourist and jetty areas. Pulau Besar has the highest overall seagrass abundance. All sites show clear seasonal variation, peaking in July–August and declining toward October–November. Seagrass species available on these sites are *Cymodocea serrulata*, *Halophila ovalis* and *Halodule uninervis*. *Syringodium isoetifolium* was recorded at Pulau Besar and represented the least abundant seagrass species observed.

Of note, dugongs have been sighted around Pulau Tengah two to three times, and their grazing trails observed during surveys — a significant indicator of ecosystem health given that Johor hosts one of Malaysia's largest seagrass meadows.

Seagrass abundance and seasonal pattern across study sites (2024–2025)

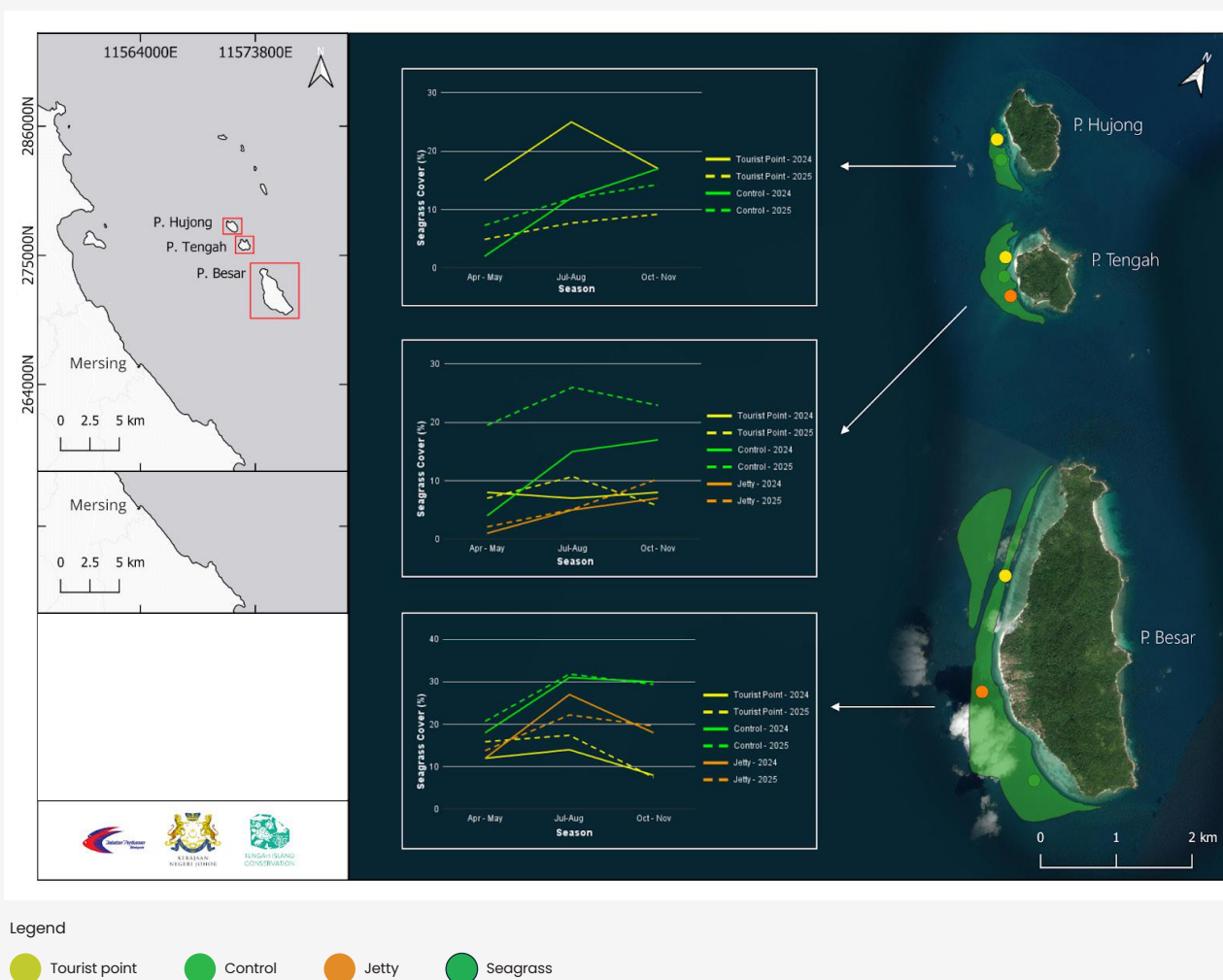


Figure: Seagrass abundance comparison, 2024–2025

Scan QR code to view the
Dugong video at Pulau Tengah





Marine Debris Action Plan

Marine debris poses a serious threat to the ecosystems TIC protects — from sea turtle nesting beaches to coral reefs. In 2025, TIC launched a systematic Marine Debris Action Plan, conducting hotspot surveys during post-monsoon, inter-monsoon, and pre-monsoon periods to assess shoreline pollution and establish baseline data for long-term management.

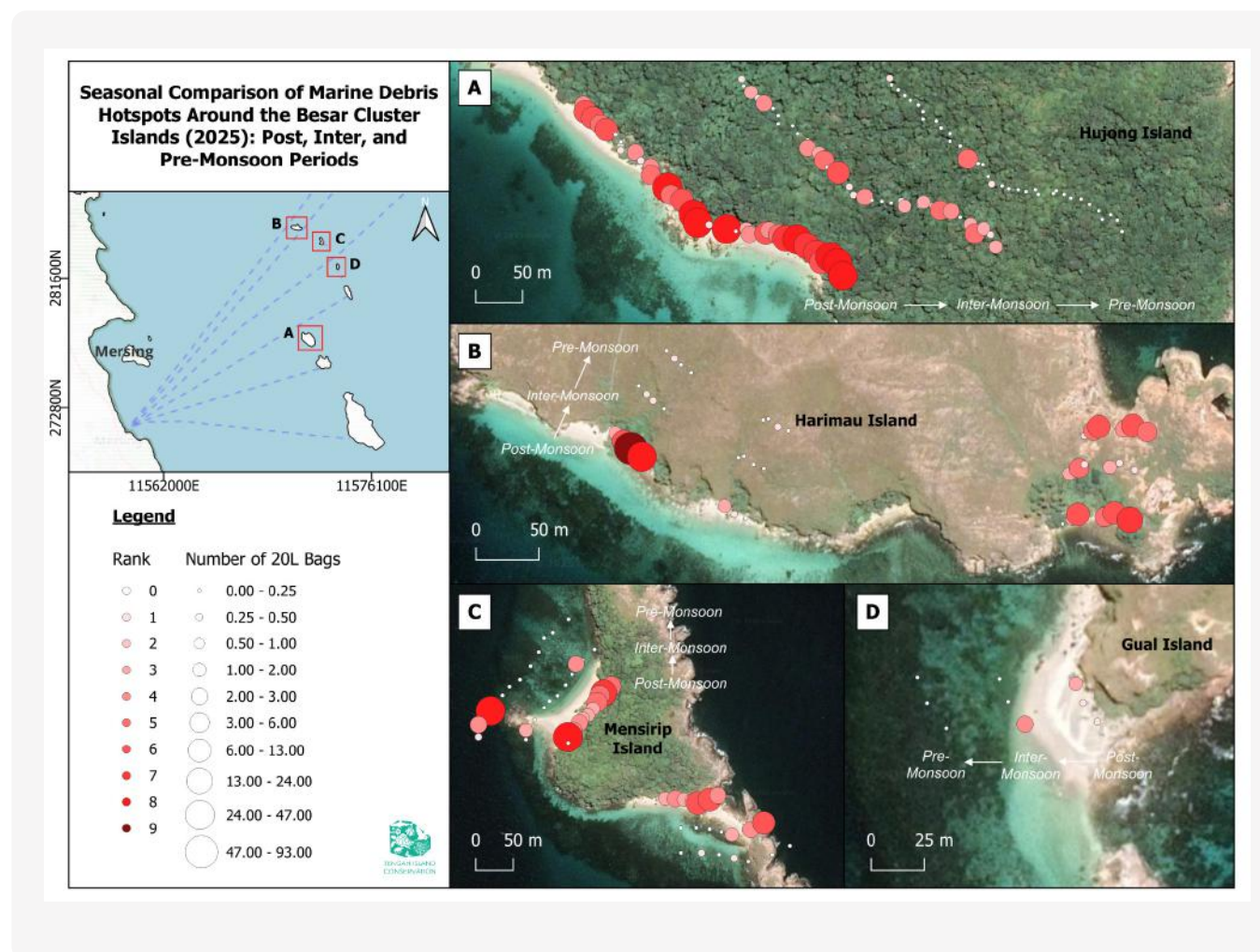


Figure: TIC Marine Debris Action Plan mapping

Hotspot Survey Results

Surveys across Pulau Hujung, Pulau Harimau, Pulau Mensirip, and Pulau Gual showed clear seasonal variation. Post-monsoon periods recorded the highest debris loads — with some sites at Pulau Hujung and Pulau Harimau recording more than 40 bags of debris per 100 m². Debris generally decreased during the inter-monsoon period following clean-up efforts, before rising again at some islands in the pre-monsoon season.

Pulau Gual consistently recorded the lowest debris levels throughout the year. Pulau Hujung had the highest overall accumulation, dominated by fishing gear and plastic containers. Debris composition varied by island: plastics dominated at Pulau Hujung and Pulau Gual, fishing-related waste was most prevalent at Pulau Mensirip, and Pulau Harimau showed a mixed profile.

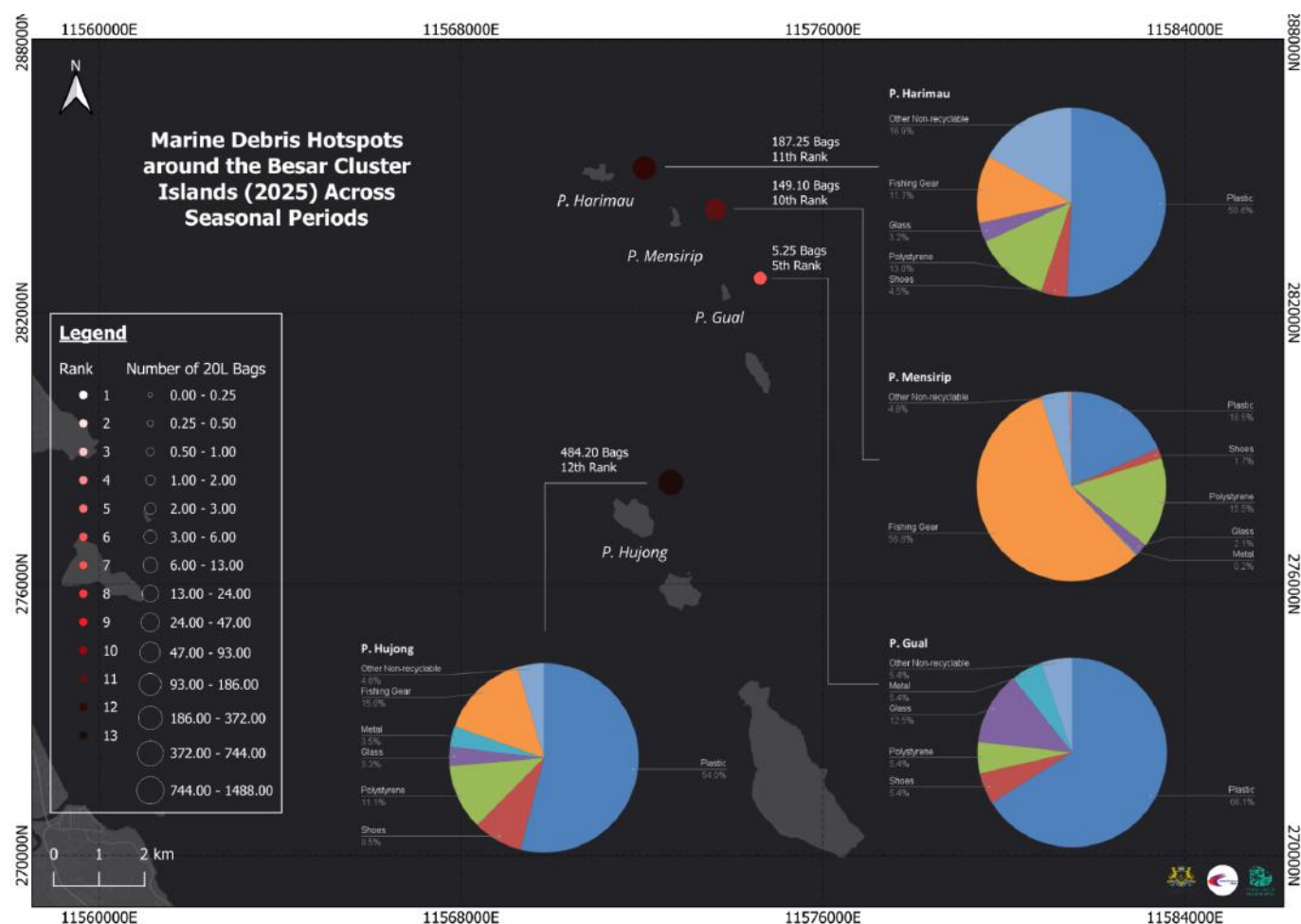


Figure: Cumulative marine debris hotspots, Besar Cluster Islands, 2025

Beach and Underwater Clean-Ups

Based on hotspot survey findings, TIC conducted targeted clean-ups at 20 sites across six islands in 2025. At Pulau Tengah, TIC partners with Batu Batu Resort and guests through a daily plogging initiative and weekly beach clean-up. Across other islands, TIC coordinates with local islanders and coastal communities, government agencies, NGOs, universities, corporate partners, and individual volunteers.

A highlight of 2025 was the Rapang Beach Clean-Up on 8 September, which brought together over 60 participants from Johor Plantation, Batu Batu Resort, Majlis Gabungan Belia Mersing, and TIC — collecting 410.65 kg of marine debris in a single day.



Underwater clean-ups focused on ghost net removal, with 238.7 kg of ghost nets safely extracted from coral reefs and transported to Rumah Eko for the BlueNet project.



Table shows the quantity of targeted marine debris collected within Besar Island Cluster in 2025.

Plastic Bottles	Plastic Straws & Lollipops	Plastic Toothbrushes	Plastic Lighters	Big Plastic Container /Drums
13,515 	1,496 	101 	655 	321 
Shoes	Glasses	Metals	Buoys	Fish Traps
1,537 	1,039 	277 	2,719 	0 

Table shows the weight of marine debris collected per category within Besar Island Cluster in 2025.

Plastics	Shoes	Glasses	Metals	Buoys
1,526.95 kg 	165.20 kg 	217.05 kg 	111.10 kg 	303.30 kg 
Fish Traps	Other Fishing Gears including Ghost Nets	Polystyrene	Contaminated Sand	Others Non-Recyclables
0 kg 	1533.45 kg 	490.90 kg 	129.50 kg 	264.50 kg 

Table shows the total weight of marine debris collected per island within Besar Island Cluster in 2025.

Year	Islands (kg)					
	P. Besar	P. Tengah	P. Hujung	P. Harimau	P. Mensirip	P. Gual
2025	699.45	2822.30	372.30	77	475.60	28

BlueNet: Turning Ghost Nets into New Products

Ghost nets — fishing nets that have been abandoned, lost, or discarded at sea — are among the most damaging forms of marine pollution, entangling wildlife and smothering coral reefs. The BlueNet Project, funded by the Ministry of Finance (MoF) and supported by the United Nations Development Programme (UNDP) with a multidisciplinary collaboration between Politeknik Mersing Johor (PMJ), Universiti Tun Hussein Onn (UTHM) Pagoh, Universiti Teknologi Malaysia (UTM) Skudai, Universiti Teknologi Mara (UiTM) Pasir Gudang and Universiti Teknikal Malaysia (UTeM) Melaka, aims to transform recovered ghost nets into 3D printing filament.

In 2025, the team developed three specialised machines for cleaning, shredding, and filament production. Looking ahead, BlueNet plans to develop a dedicated 3D printer in 2026, opening the door to a range of circular economy products made from recovered marine waste.



Photos: BlueNet processing equipment and sample products



Climate Impact on Nesting Beaches

Small island ecosystems along the east coast of Peninsular Malaysia are increasingly vulnerable to climate change. Rising sea levels, stronger monsoon patterns, and shifting coastal dynamics are accelerating beach erosion — directly threatening the sea turtle nesting habitats TIC works to protect, as well as the livelihoods of island communities.

In 2025, TIC deployed UAV drones for beach profile monitoring across 18 beaches on six islands — a more efficient and accurate approach than conventional in-situ surveys for remote island environments. Most nesting beaches showed little to no change in elevation between monitoring periods in 2025, indicating general morphological stability. Some beaches facing the southwest showed slight changes consistent with seasonal wave exposure.



In 2025, TIC deployed UAV drones for beach profile monitoring across 18 beaches on six islands — a more efficient and accurate approach than conventional in-situ surveys for remote island environments.

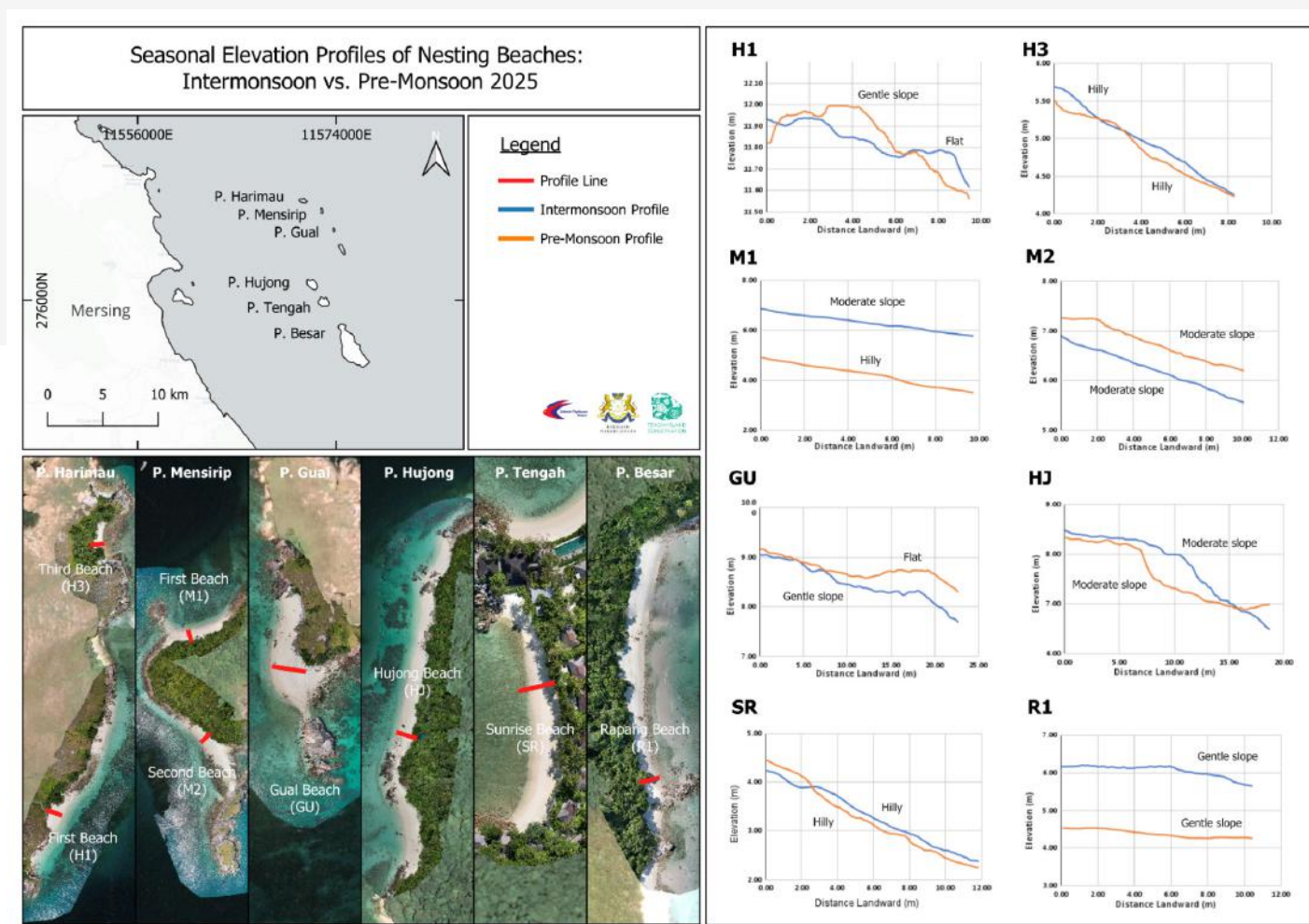


Figure: Seasonal elevation profiles of nesting beaches, 2025

Pillar 2

Integrated Island Waste Management



Rumah Eko

Managing waste on islands is one of the most persistent challenges in marine conservation. On an island like Pulau Besar, which lacked any established collection, disposal, or recycling infrastructure, the problem was acute. Rumah Eko — TIC's integrated island waste management hub — is our initiative.

The name combines "Rumah" (home in Bahasa Malaysia) and "Eko" (ecology), reflecting the centre's dual role as a working environmental facility and a community space. Officially launched in April 2025, Rumah Eko operates as a model hub for integrated island waste management, eco-tourism, and sustainable learning.

In 2025, in collaboration with the local communities and six resort operators on Pulau Besar, TIC collected a total of 3,519.77 kg of waste between mid-March and the end of October. Of this, 48% was recycled — consistent with the previous year — and 1,663.24 kg of food waste was converted into organic compost through the RIDAN Food Composter, has been made available to local resorts and communities to support sustainable crop production.

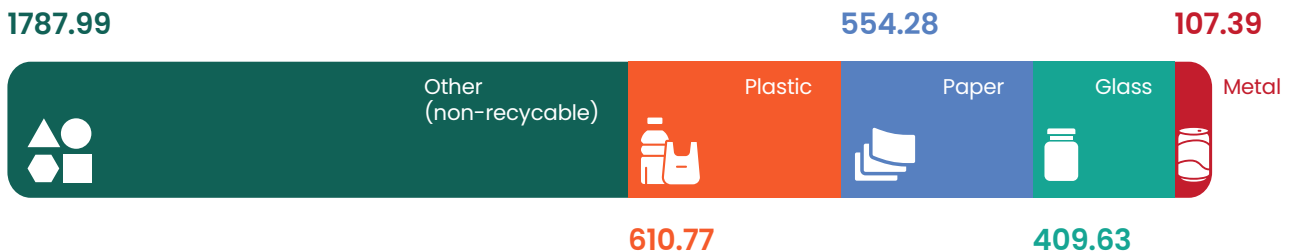


Chart: Waste collected on Pulau Besar, 2025

A growing number of resort operators are responding to the data Rumah Eko provides. Several have adjusted menus and improved kitchen management as a result of waste monitoring insights, reducing food waste while improving operational efficiency. Among them, Emerald Sands Resort demonstrated particularly consistent commitment by regularly transporting waste to Rumah Eko for proper management.

Beyond waste, Rumah Eko has become a platform for community livelihoods and knowledge-sharing. The island community now harvests vegetables from TIC's syntrophic forest garden. Community members serve as facilitators in Rumah Eko Immersive Learning workshops. Mak Odah shares traditional knowledge through ketupat weaving and island cooking demonstrations; Yana hosts Immersive Learning guests through her family homestay and produces scented candles from recycled cooking oil; and Pak Zul cares for the garden and maintains the space for the community.



TIC believes the Rumah Eko model — community-owned, financially self-sustaining, and replicable — has significant potential to reduce the land-based pressures affecting marine environments across Malaysia's marine protected areas. We are actively seeking partners and funding to support its replication on other populated islands.



Photos: Rumah Eko Immersive Learning programme, 2025



Photos: Activities involving the community of Pulau Besar Mersing, Johor



Roundtable on Sustainable Wastewater Management for Off-Grid Areas — Series II

In December 2025, TIC co-hosted the second in a series of roundtables on off-grid wastewater management, alongside The Habitat Foundation and Fuze Ecoteer at Asia School of Business (ASB). The session brought together 27 participants from government agencies, research institutions, NGOs, and the private sector.

Presentations covered off-grid sewage treatment challenges, regulatory frameworks, biocatalyst pilot projects from the Perhentian Islands, AI-based water monitoring tools, and the development of hybrid wetland systems. Funding opportunities from UNDP Malaysia, Singapore, and Brunei Darussalam for sustainable tourism projects across key Malaysian island destinations were also highlighted.

The roundtable strengthened cross-sector partnerships and produced concrete insights for improving wastewater management in off-grid-settings — an essential complement to TIC's broader marine conservation mission.



Pillar 3

Sustainable Tourism



Strengthening Sustainable Tourism and Community Livelihoods in Johor Marine Park

In 2025, TIC continued to demonstrate that sustainable tourism and conservation are not in tension — they are mutually reinforcing. With support from the Johor State Government and funding from the Ministry of Finance Malaysia, TIC advanced both environmental sustainability and community-based livelihoods across the Johor Marine Park.

Under the Sustainable Tourism Malaysia programme, which TIC co-chairs together with The Habitat Foundation, the team delivered nine environmental sustainability workshops, two immersive learning programmes, one community-based event, and the month-long Festival Pulau Besar. Together, these initiatives engaged over 300 participants and attracted more than 2,000 visitors.

Workshop themes included boat operator upskilling, sustainable tourism practices, development of local tourism products, and environmental awareness. Many activities also celebrated the cultural heritage of the Pulau Besar community — reinforcing the connection between conservation, culture, and sustainable livelihoods.



Photos: Rumah Eko launch and Hari Raya celebration with island communities

Festival Pulau Besar: Celebrating Island Heritage, Nature, and Community

The Festival Pulau Besar, held from 20 August to 20 September 2025, was designed to revive the cultural heritage of Pulau Besar, promote sustainable tourism, and introduce visitors to the Rumah Eko waste management initiative.

Over 2,000 visitors attended during the month-long festival, many reporting that the event — including weekly Zapin Pulau traditional dance performances — was their specific reason for visiting the island. The festival created meaningful opportunities for alternative community livelihoods and significantly raised the profile of Rumah Eko among tourism operators and the wider public.



Highlights included a biocultural mapping walk led by Dr. Jarina Mohd Jani with local community participants; a four-day visit by Yellow Tree Malaysia to assess community readiness for sustainable tourism integration; and a Tourism Guiding Upskilling Workshop for recreational boat operators, by trainers from Universiti Malaysia Terengganu (UMT), led by Dr Kalsitnoor Set, covering marine ecosystem awareness, park regulations, and professional standards.

A Sustainable Tourism Public Workshop also featured Dr. Jillian Ooi from Universiti Malaya, a seagrass expert, who highlighted that Johor hosts one of Malaysia's largest seagrass meadows — a reminder of what sustainable tourism ultimately exists to protect.

Climate Journalism Workshop

From 18 to 20 September 2025, TIC hosted a three-day Climate Journalism Workshop on Pulau Besar, bringing together 20 journalists from diverse media platforms. The workshop provided first-hand exposure to island-based conservation and sustainability practices, with the goal of enabling more accurate and solutions-oriented climate reporting. This initiative supports TIC's broader commitment to climate communication — ensuring the story of what is at stake in places like Johor reaches the public through credible, well-informed media voices.

Community Celebration

TIC also hosted a Sukan Rakyat on Pulau Besar — a community sports day featuring traditional and interactive games — to strengthen social ties and celebrate local culture through shared experience.



Pillar 4

Education And Outreach



Strengthening Community Awareness and Ocean Stewardship

In 2025, TIC significantly expanded its marine conservation education reach — engaging schools, communities, resort guests, and the wider public across Mersing and beyond.

Through the PEDAS programme¹ — a collaborative initiative involving TIC, Majlis Daerah Mersing, Pejabat Pendidikan Daerah Mersing, and partner organisations including the Department of Fisheries Malaysia, Reef Check Malaysia, Trash Hero Mersing, and The MareCet Research Organisation — TIC coordinated outreach across four schools, engaging 433 students in hands-on marine conservation learning. Since PEDAS began in 2019, over 1,900 students have participated in the programme.

Name of Schools	Total Students
SK Mersing Kanan	110
SK Tanjung Resang	25
SK Felda Tenggaroh	65
SMK Felda Tenggaroh	125



Table: Schools engaged through PEDAS, 2025

TIC engaged 19,612 participants through workshops, webinars, and talks in collaboration with government agencies and NGOs, promoting sustainable marine practices and responsible use of marine resources. Resort guests at Batu Batu were reached through conservation talks and hatchling releases, and over 5,000 people were engaged indirectly through exhibitions and social media.

¹ PEDAS — Pasukan Ekologi Dan Alam Sekitar

Title of Workshop/Programs/Webinars	Dates	Total Participants
Sustainability Talk with The International School@Park City	21 st April	146
Webinar Rendah Karbon IMELC Iklim Berubah: Murid Bijak, Bumi Selamat	4 th July	13,643
Kem Lestari Madani with Kementerian Pendidikan Malaysia, Negeri Johor	15 th July	200
Kung Fu Sorting and Trash Audit with UTM, SMK Felda Tenggara	28 th & 29 th July	35
FIESTA Stem SK Pusat Air Tawar, Endau	27 th August	80
Edufluencer Program at Hotel Sri Malaysia with Jabatan Pendidikan Negeri Johor	27 th & 28 th September	14
Webinar Biodiversiti Hidupan Marin: Pemuliharaan Terumbu Karang di TIC at SK Taman Pelangi Indah, Ulu Tiram Johor	1 st October	5,451
Mersing Community Engagement Programs in Mersing (Mari Ber cerita, Mersing Reads, Canting Batik)	July to October	43
Immersive Learning (2 programs)	July and Aug	48

Table: Outreach workshops, programmes, and webinars conducted in 2025

These combined efforts — from schoolchildren in Mersing to journalists and tourism operators — advance TIC's long-term mission: a Johor Marine Park community that understands, values, and actively protects its marine environment. Looking ahead, the PEDAS team aims to expand to additional schools across Mersing, introduce Training of Trainers sessions for teachers, and in the long term establish PEDAS modules as an established co-curricular activity in all Mersing schools.

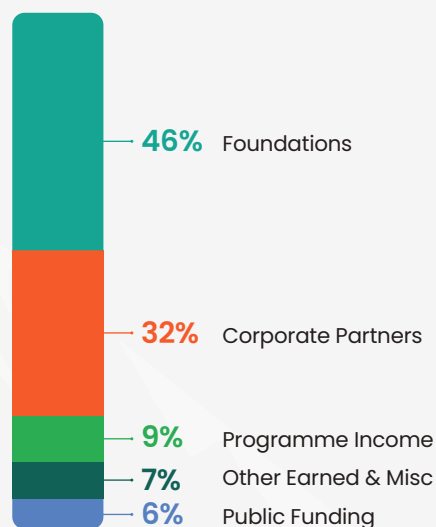


Financial Report

Revenue (MYR)

In FYE 2025, TIC raised RM 860,959 from foundations, corporate partners, public funding, programme income, and other earned and miscellaneous income.

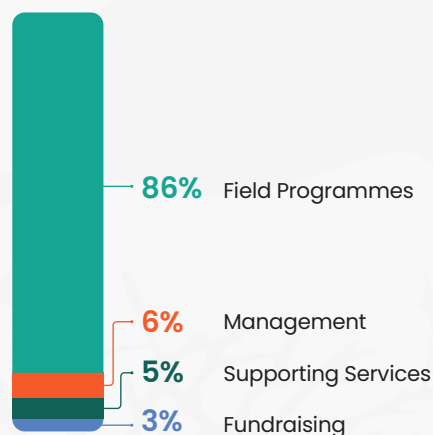
Total Revenue		860,959
 Foundations		394,692
 Corporate Partners	Cash and in-kind support	276,983
 Programme Income		79,928
 Other Earned & Misc	Merchandise sales & misc. income	56,423
 Public funding		52,933



Expenses (MYR)

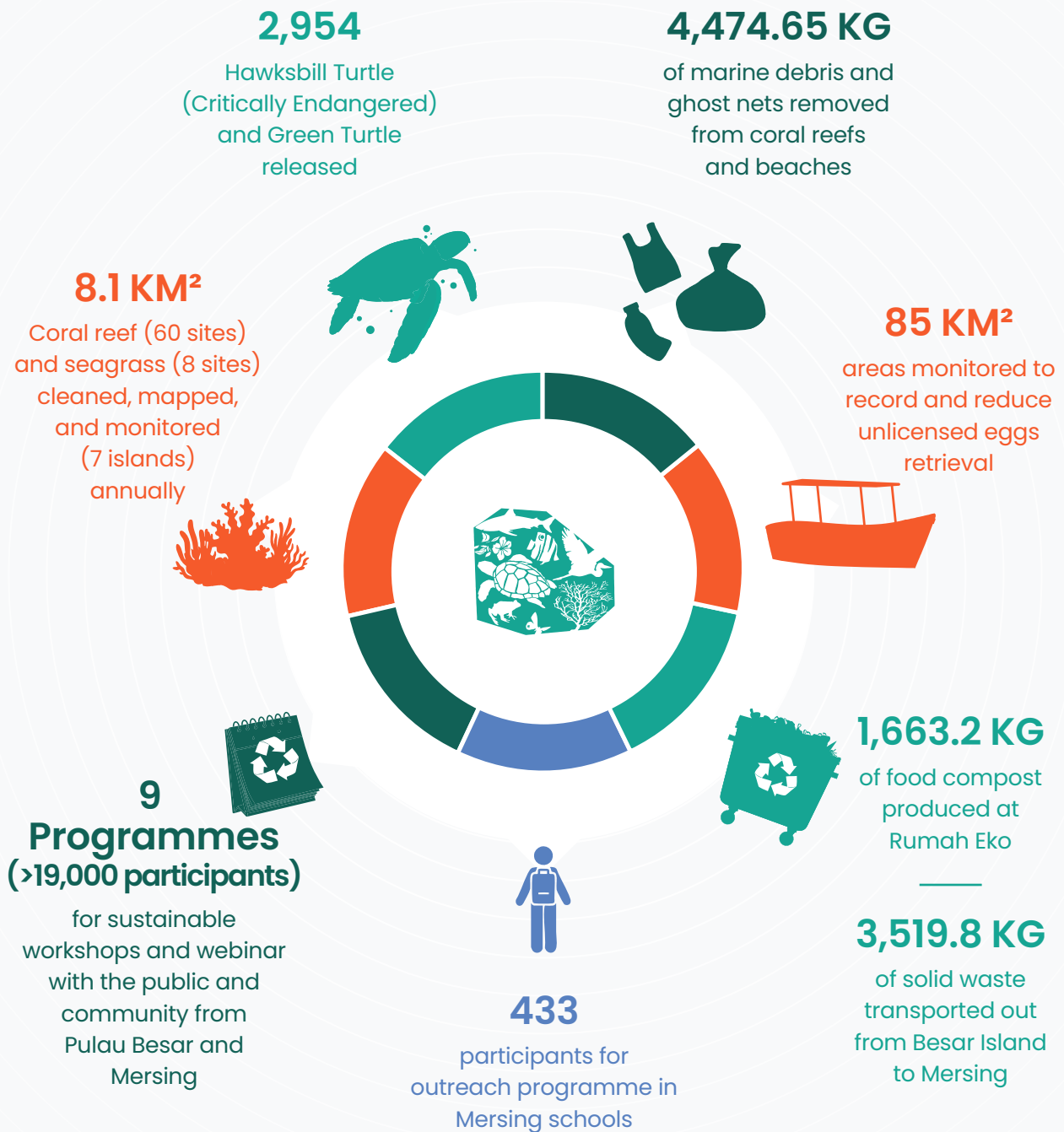
TIC's FYE 2025 expenses totalled RM 1,141,587. Field programmes — direct conservation delivery and the costs of supporting field staff — accounted for 86% of spending.

Total Expenses		1,141,587
 Field Programmes	Conservation, research, projects, field staff costs & facilities	981,725
 Management	Executive leadership & governance	68,465
 Supporting Services	Finance, audit & admin overheads	56,425
 Fundraising	Donor engagement & communications	34,972



Expenditure in 2025 exceeded incoming funds, as a portion of grant funding received late in 2024 — delayed by monsoon-season disruption to fieldwork — was carried forward and deployed during the 2025 reporting year. Figures are drawn from TIC's audited financial statements for the year ended 31 December 2025.

2025 Impact Summary



info@tengahislandconservation.org



www.tengahislandconservation.org



Partners And Funders

TIC's conservation work is made possible through the commitment of our partners and funders.

Our operational partners in 2025 include Batu Batu Resort, District Office Mersing, District Council Mersing, the Education Department of Johor, and the Department of Fisheries Malaysia, with the support of the Johor State Government.

We are deeply grateful to our funders: Batu Batu Resort, UNDP Malaysia, Singapore and Brunei Darussalam, The Habitat Foundation, Sustainable Tourism Network Malaysia, and the Ministry of Finance Malaysia — for their belief in our mission and their investment in the long-term protection of Malaysia's island ecosystems. To our NGO partners, Reef Check Malaysia and MareCet lets keep going. Thank you to Monash University Malaysia as our educational institution partner. We sincerely acknowledge Pineapple Studio for their creative contributions to our work.





TIC

TENGAH ISLAND
CONSERVATION

Your support protects Malaysia's island ecosystems.



Every contribution directly funds sea turtle conservation, coral reef monitoring, island waste management, and marine education across the Mersing Islands — ensuring that the biodiversity and beauty of Johor Marine Park endures for generations to come.

Donate at:
tengahislandconservation.org/donate



tengahislandconservation.org

