

AUSTRALIAN
MARINE DEBRIS INITIATIVE®



# ANNUAL REPORT

Tangaroa Blue® Foundation

2425





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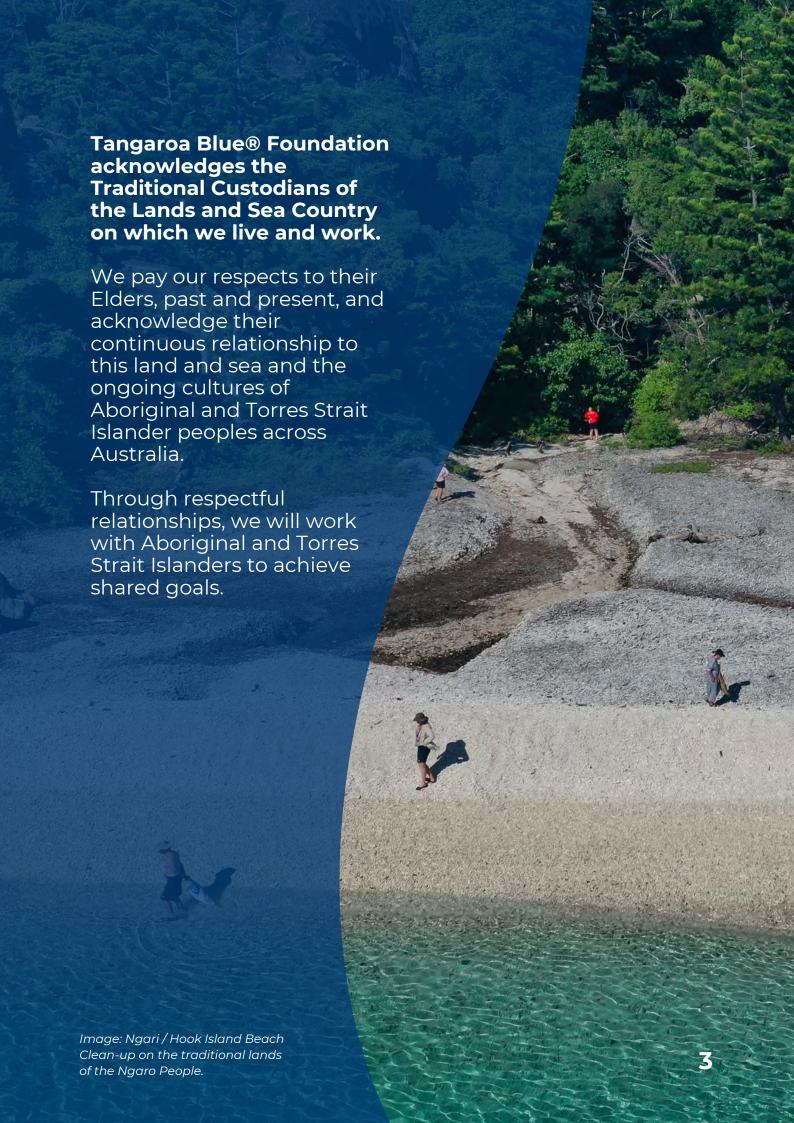
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# A Word from the Chair **Tom Godfrey**

As Tangaroa Blue® Foundation enters its 21st year tackling marine debris, our mission to remove and prevent debris in and around Australia remains unwavering, while the scale of our work has grown dramatically.

We are incredibly proud of our dedicated team and the citizen scientists who continue to protect coastlines through beach and waterway clean-ups across the country. Since 2004, when a small group of ocean enthusiasts gathered for a clean-up in Western Australia, volunteers have joined us more than 283,384 times across 4,954 clean-up sites — a scale unimaginable in those early days.

It isn't only our brilliant, diverse community of local clean-up heroes that sets us apart. Over the past two decades, we have established one of the largest collections of marine debris data through the Australian Marine Debris Initiative® (AMDI) Database. This rigorous citizen science resource empowers Tangaroa Blue, community groups and other NGOs to make science-driven decisions and influence plastic and waste legislation at local, national, and international levels.

Our AMDI Framework, which emphasises tackling marine debris at its source rather than only treating its symptoms, has driven impactful source reduction initiatives this year — from our Indian Ocean Territories Esky Library, addressing polystyrene waste, to our Rig Recycle program, closing the loop on monofilament fishing line.

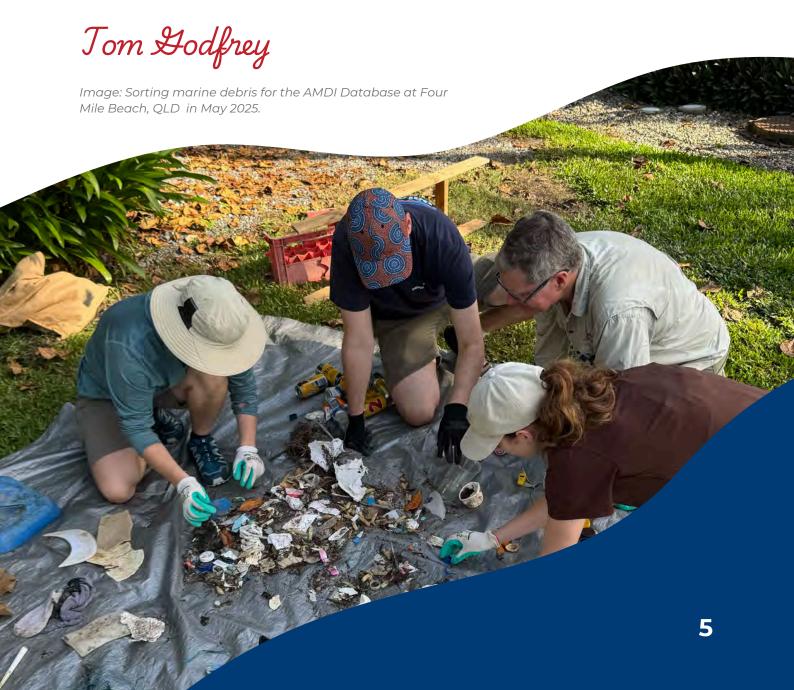
from Direction Island (Cocos (Keeling) Islands) in one single monitoring clean-up.



The AMDI Database has now recorded a staggering 29 million marine debris items. Our success is made possible through strong relationships with more than 3,200 AMDI Network partner organisations and project stakeholders. As the plastic pollution crisis worsens, we are committed to forging partnerships that are greater than the sum of their parts — from engineering innovations and surveying remote regions, to presenting evidence on the global stage.

As we launch into Tangaroa Blue's third decade, we are ready to intensify our work, creating tangible and lasting solutions to the plastic crisis. These efforts are backed by detailed data from more than 2,000 tonnes of collected debris, thousands of partners and citizen scientists, our passionate team, and the support of our donors and grant funders.

Finally, I thank my fellow Directors for their support and expertise as we continue to deliver the strategic vision for this unique organisation.





# Foreword Heidi Tait CEO & Founder of Tangaroa Blue Foundation

In our 21st year, I am incredibly proud of how Tangaroa Blue® has continued to innovate, lead, and inspire across the marine debris space. This year has been about strengthening the networks and collaborations that make the Australian Marine Debris Initiative® (AMDI) so impactful.

Our updated Strategic Goals have given the team a clear and ambitious roadmap, and I have seen our staff embrace them wholeheartedly. Whether working with local communities on grassroots projects, partnering with scientists to trial new technologies, or contributing evidence to influence policy, we've been leading the conversation from the beach to the policy table.

In November, we launched our white paper on non-functional slack filling at the Global Plastics Treaty negotiations. And earlier this year the Australian Competition and Consumer Commission (ACCC) secured an \$8.25 million fine against Clorox for false sustainability claims demonstrating the continued outcomes of our 2022 complaint and our ongoing work to address greenwashing across industry.

The AMDI network of partners is stronger than ever—sharing knowledge, resources, and solutions that are measurable and scalable. This collaborative spirit allows us to respond quickly to emerging issues, integrate new research, and ensure our actions are informed by the best available data.

What truly inspires me is the dedication of our volunteers, rangers, community groups, and partners. They are the heartbeat of Tangaroa Blue, turning shared values into tangible change for our oceans.

As we look to the year ahead, our focus remains clear: to harness the strength of our network, apply innovation to complex waste challenges, and continue driving solutions that protect marine ecosystems for generations to come.

Image: Marine debris workshop

Image: Marine debris workshop with the Yuwi Land and Sea Rangers and Sarina Landcare (Cape Palmerston, QLD).





**29 MILLION ITEMS REMOVED** 



**2081 TONNES OF MARINE DEBRIS** 



**5172 CLEAN-UP SITES** 



**VOLUNTEER OPPORTUNITIES** 



1.5 MILLION **VOLUNTEER HOURS** 



national and

international level.



**32 CO-AUTHORED SCIENTIFIC PAPERS** 



**3329 PARTNER ORGANISATIONS** 



Image: From various Tangaroa Blue Foundation clean-ups and events throughout 2024 and 2025.

# Our Mission

Tangaroa Blue® Foundation works to prevent and remove marine debris in Australia and across regions. We use the Australian Marine Debris Initiative® (AMDI) framework to inspire behaviour change, innovation and empower communities, industry and government to make data driven decisions that improves ocean health.

In 2024, we renewed our mission and vision for Tangaroa Blue® Foundation for 2024-2030.

# Meeting our Organisational Goals

As Tangaroa Blue® Foundation's impact continues to grow across Australia, we're focused on ensuring our efforts create meaningful change. From utilising the AMDI Database to influence data-driven global action to ensuring our charity remains stable and resilient, run by a dedicated team of subject experts, scientists, and community builders - we're constantly reflecting on how we keep moving towards our goal to prevent and remove marine debris in and around Australia.

Image: Gunggandji-Mandingalbay Yidinji Peoples PBC Rangers joined the Mapoon Clean-up working on Country with the Mapoon Rangers. Image on Page 9: Coral growing on a plastic thong found on Four Mile Beach, Port Douglas, QLD.





# **Impact Goals**

# 24 - 25 Highlights

# Data-Driven Global Action

Tangaroa Blue® is collaborating on new international projects. Our new collaboration with The Pacific Community (SPC) and Satlink aims to track and recover lost FADs (Fish Aggregating Devices) across the South Pacific as they enter Australian waters (read more about the project on page 28).

# 2 Evidence-Based Investment

We have secured grant funding through The Ian Potter Foundation that will enable us to reach our strategic goal to expand our current 70 monitoring sites to 150 sites around the country by 2030. This will involve engaging the local community to find priority areas.

# Inspiring Community

We continue to expand the AMDI network, develop new partnerships (100+ new partners) and deepening engagement with Traditional Custodians. We're raising awareness of the impacts of marine debris and have doubled our reach across social media.

# Regulated Recycling Pathways

Our commitment to regulated recycling pathways continues, as Clorox is fined \$8.25 million following an investigation initiated by our complaint to the ACCC. In tandem, we work alongside industry partners who are willing to make a change. For example, Marine Instruments' Blue Recovery Program, which allows us to repurpose GPS trackers recovered during clean-ups.

# A Stable and Resilient Organisation

We continue to diversify our funding pathways, through innovative commercialisation projects in collaboration with Circular Blue and developing public fundraising pathways. Non-grant funding is actively supporting 12 AMDI monitoring sites.



# Highlights Across Australia

#### **CLOROX WIN**

In a case sparked by a complaint from Tangaroa Blue and the Environmental Defenders Office, the Australian Competition and Consumer Commission (ACCC) successfully took action against Clorox, the parent company of GLAD, for making false and misleading claims about "ocean plastic" in their products. Clorox received an \$8.25 million fine for claiming their products were made from recycled ocean plastic. The story reached mainstream news, with articles on ABC and The Guardian helping to increase awareness of consumer product greenwashing.

# Garbage bag giant fined \$8.25m for falsely claiming products were recycled plastic

Australian Associated Press

Clorox, the company behind GLAD garbage bags, advertised them as made from 50% recycled plastic from the ocean



Image: Major news article on the GLAD greenwashing fine, instigated by Tangaroa Blue and the Environmental Defenders Office.

### CONTRIBUTING TO THE GLOBAL FORUM ON PLASTICS



Tangaroa Blue's Technical Writer, Bella Charlesworth, at Global Plastic Treaty INC-5 negotiations. In November, Tangaroa Blue's Bella Charlesworth joined global delegates in Busan, South Korea, for the INC-5 Global Plastic Treaty negotiations.

Disappointingly, the negotiations ended without agreement. Despite stalling and resistant voices, determination and ambition for a strong and comprehensive treaty shone through.

In partnership with the International Waste Platform, Tangaroa Blue launched "Wasted Space: An Investigation into Non-Functional Slack Filling" at INC-5. This paper highlights the widespread issue of non-functional slack fill (unnecessary empty space in packaging). Read more in our article on page 31.

In late 2025, Dr Randika Jayasinghe represented Tangaroa Blue at INC-5.2 negotiations in Geneva, Switzerland.

# **AMDI Network**

# Champions

#### Clean4Shore

Clean4Shore has completed 64 clean-ups, removing 27.5 tonnes of debris in 2024 and over 17,000 items in 2025! This is all while engaging local volunteers in protecting the Central Coast's waterways from key pollutants.

Showcasing some of the brilliant groups who regularly contribute to the AMDI Database



## Conflict Island Conservation Initiative

The Conflict Island's Conservation
Initiative has collected an
astonishing 53,400 items during
their 121 clean-up events across the
islands in 2025, totalling 2,310 kgs
removed from the Conflict Group in
Papua New Guinea.



Rhys and his dedicated team of BIEPA volunteers, including Doug, Irene, and Lizz, have made significant strides in cleaning up Pumicestone Passage, documenting 708 items in the AMDI Database in 2025 so far!



# Image

### **Phillip Island Volunteers**

Volunteers Patrick, Helen, Monica and Elise have completed 13 clean-ups on Phillip Island since February, recording an astonishing 3,141 items in the AMDI Database during monthly monitoring at Kitty Miller Bay & Anzacs Beach.

Images from each clean-up group shown above.



#### **COCOS (KEELING) ISLANDS**

A remote tropical paradise in the Indian Ocean, yet even here, marine debris washes ashore.

The Cocos (Keeling) Islands Marine Debris Initiative was launched in 2024. In just two years, volunteers and partners have removed more than 41,000 items (1,430 kg) from local beaches. Pulu Gangsa Beach stands out as the most polluted, with 28,161 items (232 kg) collected to date.



#### **CHRISTMAS ISLAND**

Over the last three years, the Indian Ocean Territories Christmas Island Project volunteers and partners have removed an incredible 240,722 items weighing 3,768 kg from local beaches, feeding vital data into the AMDI Database.

Together, we've removed and recorded 158,525 items (1,316 kg) of marine debris from Greta Beach alone (a hotspot for debris).



#### Data far Faul Davis and back

**FOUL BAY, AUGUSTA** 

Data for Foul Bay goes back to the beginnings of AMDI in 2005 (collected by original AMDI Database Manager Wally Smith), with over 240 clean-up days logged. 75,757 Items and 984kg of debris have been removed from this small beach.

The site is often inundated with plastic resin pellets and commercial fishing remnants. The team at the Marine Industry Mentoring (MIM) Network continues the quarterly AMDI monitoring.

AUSTRALIAN MARINE DEBRIS INITIATIVE®



# National Monitoring

With over 3329 contributing organisations and 29 million items, the AMDI Database is the largest of its kind in the Southern Hemisphere.



**WALKER BAY, COOKTOWN** 

ReefClean and South Cape York Catchments teams have been monitoring at Walker Bay, Cooktown, since 2019.

Over 68,500 items and 2.9 tonnes of debris have been removed so far. 88% is plastic materials including huge FADs (Fish Aggregating Devices) and fishing nets.

80

MARINE DEBRIS MONITORING SITES ACROSS AUSTRALIA

5181

DATA LOCATIONS ACROSS AUSTRALIA

#### SHELLY BEACH, WARRNAMBOOL

Tangaroa Blue, in partnership with Wannon Water, has been conducting weekly cleanups at Shelly Beach since 2019, monitoring and removing debris.

To date, over 65,000 items have been collected and meticulously categorised, of which 76% have been plastic. The project engages the local community and informs education and source reduction campaigns.



# **Clean-up Highlights**

#### Showcasing a snapshot of the 4699 clean-ups that took place this year!

#### **Four Tonnes Removed** from Mapoon Beach

In partnership with Mapoon Land and Sea Rangers, we were joined on the traditional lands of the Tjungundji people by the local community in June, removing more than four tonnes of marine debris in just a few davs!



#### **IOT Volunteer Voyage**

The Voyage team helped the local community collect more than 26,000 marine debris items from the Cocos (Keeling) Islands and 50,000 items from Christmas Island during June 2025! Our local Tangaroa Blue coordinators and island communities have worked diligently to conduct regular monitoring throughout the year.



#### 2025 Data Drive at the K'gari Clean-up

Thank you to 4WD QLD and their volunteers for hosting another hugely impactful event and for removing 8.3 tonnes of debris! The data we record on the AMDI Database from this clean-up provides significant insight into marine debris distribution in South East QLD.



#### **Darwin Harbour Clean-up**

This annual community initiative is led by the Larrakia Land and Sea Rangers, with data collection support from Tangaroa Blue. In 2024, this event brought together 9 organisations and many volunteers who collected more than 660 kilograms of marine debris.



# The 20<sup>th</sup> Anniversary WA Beach Clean-up

The 2024 Western Australian Beach Clean-up marked the 20th anniversary of Tangaroa Blue Foundation's longest-running community-driven environmental initiative. This milestone event saw record-breaking participation, with over 2,000 volunteers from 60 organisations, schools, and community groups dedicating 3,855 hours—valued at over \$162,397 to remove more than 7.2 tonnes of marine debris from Western Australia's coastline.

Image: The WABCU team for Bygnunn Beach made up of Bardi Jawi and Bardi Jawi Oorany IPA Rangers and DBCA's BJGMP team.

Thank you to sponsors Keep Australia Beautiful WA, Tallwood Custom Built Homes, Southern Ports Authority, GHD, and local WA government authorities, for helping to bring this event to life! WABCU has now engaged over 21,000 passionate volunteers from NRM organisations, Coastcare groups, Indigenous Land and Sea Rangers, businesses, schools, and local communities dedicated to preventing marine debris. The community mobilises across the state by 4WD, kayak, paddleboard, and on foot. Our collective efforts since 2004 have resulted in nearly 2000 clean-up collections, 88 tonnes of debris, and 1.8 million items audited into the AMDI Database.

7.2 tonnes removed

2,000 volunteers

60 organisations



Image: Volunteers at the Margaret River Brewhouse Sip 'n Sort, including some locals who have been part of the event since its inaugural year in 2005!

















# Engaging Young People in Ocean Protection

An essential part of our ReefClean program and the broader work of Tangaroa Blue Foundation is engaging and sharing knowledge with local communities, including young people, about the impacts of marine debris.

Whether schools choose to join one of our big community clean-ups in October, use our online educational resources (targeted at key learning stages), or invite us to deliver an educational workshop, Tangaroa Blue equips students with the tools and resources they need to become part of a new generation of ocean protectors.



#### Between July 24 - June 25:

Tangaroa Blue Foundation delivered 43 educational events (including beach clean-ups).

Schools helped to remove more than 9 tonnes of marine debris from the environment.

Images from events delivered with Cocos (Keeling) Islands District High School, Trinity Anglican School, Gladstone West State School, Christmas Island District High School and St Thomas More Catholic Primary School.



# ReefClean®

Tangaroa Blue® Foundation's ReefClean® program uses funding from the Australian Government and donations to bring communities together to tackle marine debris in the Great Barrier Reef region. Through clean-ups, monitoring, source reduction projects, and school workshops, ReefClean® empowers local people to play an active role in protecting their Reef.

The program worked alongside 185 different community organisations, NGOs, and local businesses in 2024 - combining strengths to make the biggest impact for the Reef and sharing knowledge on how to record marine debris data within the community.

"Our dedicated ReefClean community is a key line of defence against the wave of marine debris finding its way to the Reef. Whether you're a regular volunteer or join ReefClean's Great Barrier Reef Clean-up in October, you're playing an important part in keeping our waterways healthy for future generations."

Between July 24 - June 25, volunteers joined ReefClean® to tackle marine debris at more than 287 events, cleaning-up over 16,775 kg of debris!

ReefClean® is funded by the Australian Government's Reef Trust and is delivered by Tangaroa Blue Foundation.

# We would like to thank our key ReefClean® delivery partners:

- Australian Microplastic Assessment Project (AUSMAP)
- BehaviourWorks Australia
- Clean Up Australia
- Gunggandji-Mandingalbay Yidinji Peoples Prescribed Body Corporate Aboriginal Corporation (GMYPPBC)
- Pioneer Catchment Landcare
- Reef Check Australia
- South Cape York Catchments
- Whitsunday Catchment Landcare
- Woppaburra TUMRA Aboriginal Corporation
- Wuthathi Aboriginal Corporation





GREAT BARRIER













The event mobilises communities across the Reef catchment to remove marine debris, collect vital data, and take action to protect vulnerable marine ecosystems.

By combining grassroots participation with targeted environmental action, the Great Barrier Reef Clean-up plays a key role in preventing litter from entering Reef waterways (particularly before the wet season, when debris washes from catchments to the Reef) and supporting long-term conservation efforts.

Images: GBRCU 2024 St Josephs Catholic School Mundingburra. Above: Bustard Bay Clean-up

Since 2019, ReefClean® has supported 356 self-registered **GBRCU clean-up events** including 147 that took place in October 2024.

97,000

**MARINE DEBRIS ITEMS REMOVED**  2402

**KILOGRAMS CLEANED-UP** 

40 **LOCATIONS** 



**50 PARTNERS** 

1842

**VOLUNTEER OPPORTUNITIES** 

147 **CLEAN-UP** 

**EVENTS** 

13.5K





#### **CLAMP** - Colleen

Colleen discovered this part of a piggyback clamp on Shelly Beach (Warrnambool). After some investigation, she found they were used to decommission offshore oil and gas infrastructure only 60 km away.



#### ARMCHAIR - Anne- Marie

'Most of the time, we find fishing gear and plastic remnants, so this formerly elegant chair was definitely out of place at our monitoring site in Melbourne.'



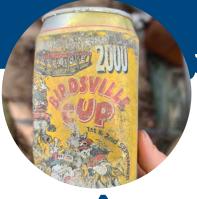
#### 70s CHIP PACKET - Heidi

This ETA chip packet was recently uncovered by sand dune erosion - it is estimated to be from the 1970s or 80s!



#### **METAL CANISTER – Attie**

Ever found an aluminium phosphate canister? Stay safe! DO NOT TOUCH. Stand upwind. Alert event coordinators or call 000.



### 2000s CAN - Tilly

This 25-year-old Birdsville Cup can was found in Mapoon - a long way from where it started, and in "quite good" condition.



#### **BUOY - Matt**

This large marine navigation buoy was found by the Kuuku Ya'u rangers and QPWS at Golden Beach; they are often used to indicate safe passage or hazards in waterways.

TTEMS FOUND ON CLEAN CA



# **Source Reduction**

Preventing marine debris before it reaches the ocean.

### **Clean-up Data**

Gathering detailed information on what we find, where and when during beach and waterway clean-ups



Once a SRP is underway, we can assess its impacts by looking at new data. Further analysis provides insights for improvements or widespread rollout of the initiative.

# Data Analysis

Recording and analysing large datasets over time and space via the AMDI Database.

**Source Reduction Plan** 

Using scientific evidence to target a specific waste item before it becomes marine debris.

Images: Top: Fly Point Clean-up with the NPARC Apudthama Rangers.

Middle: Sorting debris for the AMDI Database at Cape Kimberley.

Bottom: The new Tackle Back (Rig Recycle SRP) at the Great Barrier Reef Clean-up event with SCF.







# **Community Source Reduction Initiatives**



Image: Participants of the IOT Esky Library.



Image: LSTD volunteers at the Port Phillip EcoCentre, Victoria.

### **The Esky Library**

A community-led source reduction success! Reducing expanded polystyrene debris at its source.

Polystyrene is a major contributor to marine debris in the IOT, with the AMDI Database having consistently identified it as the most common marine debris item on Christmas Island since 2011.

The Esky Library replaces single-use expanded polystyrene eskies with a sustainable, reusable alternative, thereby significantly reducing polystyrene waste and extending the lifespan of local landfill resources.

100% of trial participants want to keep using the service, and 50+ households are ready to join a second stage trial.

# 6,187L

of polystyrene waste (269 foam boxes) were prevented from entering the island's waste stream.

### Let's Strain the Drains

Phase 4 of Let's Strain the Drains kicked off in June 2025 in collaboration with the Port Phillip EcoCentre and the Cities of Greater Dandenong and Glen Eira.

The data compiled from stormwater drain trap audits since 2019 continues to inform local council litter strategies and monitor the impact of Victorian policy changes, such as the single-use plastic ban and the Container Deposit Scheme. The closer to the source we can capture litter, the easier it is to identify the source, implement source reduction plans, and reduce litter's impact on the environment.

# 34,462 items ∠ removed

from LSTD traps between July 24 - June 25 (163.5 kg).



# Rig Recycle Driving Circular Innovation

This year, Tangaroa Blue Foundation's Rig Recycle program has expanded to over 86 locations.

Christmas Island joins Weipa as our two most remote stations. We also launched our Tackle Backs in Mandurah, WA and Magnetic Island, QLD as part of our Tackling Tackle campaign.

Innovation is driving the program forward. In partnership with Circular Blue, we developed the Line Cutter and new kiosk designs that let anglers despool and recycle fishing line in-store. We also teamed up with Tonic Eyewear to release sunglasses frames made from recycled line — a hit at fishing tradeshows ICAST (USA) and AFTA (Australia).

NEAROA, LE S 70.

Rig Recycle is showing how an industry with little recycling and high single-use plastic use can shift toward sustainability. The "From Anglers for Anglers" movement continues to grow, with anglers and brands collaborating with Rig Recycle for change.



Images: Left: Launching Rig Recycle in Mandurah, WA. Right: Line Cutter Kiosk at the AFTA show with Queensland's Minister of Fisheries.

Work on recycling mixed hard plastics is progressing, with scalable moulding solutions and new products expected in 2025.



# A new life for ocean plastic

What do we do with all the rubbish we collect? Most marine debris is plastic, often degraded after months or years in the ocean. On remote Cape York cleanups, we sometimes recover up to 3 tonnes per km, most of which currently goes to landfill - unable to be recycled.

Years in the making, Tangaroa Blue Foundation has moved a step closer to solving this problem. We've been working with chemistry specialists to develop a polymer that can integrate some of this degraded plastic and can be used to make new plastic products.

With the amazing help and support of our chemistry specialist partner, the first commercial batch production of Marine Derived Plastics (MDP) Pellets is now ready to be tested and formulated for scalable production.

One of the first MDP products will be sunglasses frames, traceable to individual beach clean-ups, launching in December 2025. New moulding techniques are also showing promise for a wide range of products.

Images: Top: Marine debris collected from Cape York to be turned into MDP Pellets. Middle: MDP Pellets. Next steps for ReefCycle MDP is to bring our partners together across the GBR and grow the recovery and diversion from landfill across Tangaroa Blue cleanups, facilitated by our new ReefClean recycling site in Townsville, with support from Martogg. Working alongside industry and councils, this site will also be utilised to recycle plastics that currently go to landfill due to low recycling rates in Far North QLD.



### **Donate or Collaborate**

This is an exciting step for recycling in Australia — one everyone can support. Watch this space for developments in 2025. Help by donating or getting in touch for opportunities to collaborate.

tangaroablue.org/donate

# Project ReCon: Designing a Worldfirst ocean E-waste recycling program

With a new initiative to tackle ocean E-waste, we're a step closer to completing the circle on discarded and lost GPS buoys.

For the last 2 years, we've been repurposing as many lost GPS buoys (sometimes referred to as tuna trackers) as possible to help track and remove ghost gear from the ocean. This relies on the complex inner workings of these buoys remaining intact and functional.

# But what happens when the recovered buoys are too far gone to save?

After rigorous testing, if we can't get a buoy working again, Tangaroa Blue has now developed solutions to enable a viable deconstruction process and a pathway to recycling.

Project ReCon has now expanded across <u>20 countries</u> and territories, with more than <u>150 vessels and 25 fishing</u>

Since launching Project ReCon in 2023 alongside Satlink, our repurposed GPS buoys have helped recover over 7 tonnes of ghost gear from the ocean.

#### **An International Solution**

This innovative approach to ocean E-waste is scalable internationally and is now being rolled out at select trial locations across Australia. This includes the distribution of our new "tracker cracker" tool, which enables quick and easy deconstruction of these buoys, once destined for the E-waste graveyard.



Images: Top: GPS Buoys found on Goolboddi (Orpheus Island) Bottom: Redeployment of a Project ReCon buoy onto a large piece of ghost gear washed up in the Whitsundays.



# Towards Zero Feedstock Loss: Operation Clean Sweep Expands Reach

Plastic resin feedstock pollution is a widespread problem needing a united response.

In **New South Wales**, the EPA has extended funding for Operation Clean Sweep (OCS) for a third year as part of its program to tackle microplastics, particularly in polluted estuaries.

In **Victoria**, we've been working with VIC EPA to update plastic industry guidance to take into account all plastic feedstock (now in line with NSW). We collaborated with Port Phillip EcoCentre and Environmental Justice Australia on a report that highlighted the need for the EPA to utilise environmental protection legislation.

And in **South Australia**, OCS is set to roll out thanks to generous funding from The Knights Family Jabula Foundation.

#### **OCS 2024**

We conducted **280** industry area inspections to identify ways to improve plastic resin handling practices.

We hosted plastic resin clean-ups with over **95** industry representatives attending.









The EPA is pleased to partner with
Tangaroa Blue Foundation on the OCS
NSW Program. Tangaroa Blue
consistently demonstrates exceptional
knowledge, expertise, and a strong
evidence base behind their work.
Extending our partnership with them for
another year has strengthened our
shared commitment to environmental
responsibility. Through the newly
introduced compliance focus within the
plastics industry, this collaboration is
helping to drive improved practices
across the sector.

Rupert Saville Manager Programs Circular Economy Programs Branch, Programs and Innovation Division -NSW EPA

Images: Top: The loss of plastic resin pellets into the environment captured during spot checks of plastic supply chain facilities. Left: Industry clean-up participants at Planespotters Great Nurdle Hunt, Sydney.

#### **ARTICLE**



Dr. Lauriane Escalle, Senior Fisheries Scientist, The Pacific Community

# Recovering FADs in the Pacific

The extensive use and loss of industrial FADs (Fish Aggregating Devices) have detrimental effects on the environment, contributing to marine pollution (reaching coastal areas and impacting fragile ecosystems).

To understand the impacts of lost or abandoned FADs, several Pacific Island Countries and Territories (PICTs) have collaborated with the Pacific Community (SPC) to implement voluntary programs that collect in-situ data. These programs for stranded and lost dFADs are now implemented in 16 PICTs, with 3,591 stranded events collected between 2004 and 2025.

Figure 1. Map of Australia with stranding positions (black dots) and the last known position of FADs from SPC and IATTC fishery databases. The colour of the lines indicates the time between the last known position and date found stranded.

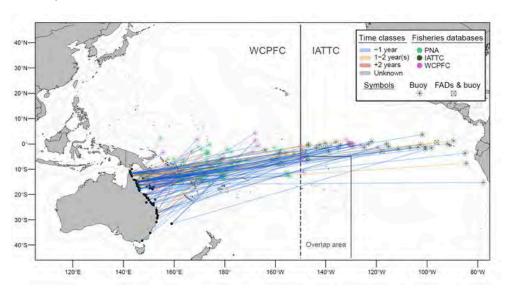


Figure 2: GPS buoys destined for reuse, collected in the GBR region.

#### **FADs in Australia**

In Australia, data collection related to Stranded FADs is primarily conducted through a collaboration between the Tangaroa Blue Foundation and SPC (initiated in 2022), with 393 data points shared by Tangaroa Blue to be added to the FAD database. This data has been recorded in detail through the Australian Marine Debris Initiative, with the majority found along the coast of Queensland.

When an echosounder buoy (see "What are FADs?") is present, its unique ID can provide information about its origin through cross-matching its ID with the fisheries database held at SPC and at the Inter-American Tropical Tuna Commission (IATTC) (Figure 1). Buoys and FADs arriving on Australian shores are coming from fleets fishing in the whole tropical Pacific Ocean (as most currents run westward in this part of the Pacific).



# Recovering dFADs that drift into Australian waters

More recently, Tangaroa Blue and SPC have entered into a new collaboration through a pilot project to recover dFADs that have been lost from the international purse seine fishing grounds and drifted into the Australian EEZ.

SPC, in collaboration with Satlink and partner fishing companies (the American Tuna Boat Association, Trimarine, Bolton Seafood, and Caroline Fishing Corporation), is using buoys to monitor dFADs outside the tropical fishing grounds, providing crucial information to increase our knowledge of dFAD fates throughout their entire lifetimes.

Through this collaboration, SPC, Tangaroa Blue, and Satlink are exploring a dFAD recovery pilot project in Australian waters, and a first dFAD satellite buoy was retrieved in early August 2025 (Figure 3).

Quantifying stranding events of dFADs and their impact on fragile ocean habitats, as well as reviewing options for their mitigation, including through retrieval projects, will help inform improved management and mitigation of dFADs' environmental risks in the Pacific Ocean.



#### What are FADs?

Fish Aggregating Devices (FADs) are anchored or drifting structures deployed to aggregate pelagic fish such as tuna.

Anchored FADs (aFADs) are used by artisanal and industrial fishers throughout the Pacific and have benefits in terms of livelihoods, food security, and the displacement of fishing effort from lagoons to oceanic areas.

Drifting FADs (dFADs) are used by industrial purse seine fishers and are typically constructed from a bamboo raft with plastic corks, often equipped with a satellite echosounder buoy to provide realtime information on location and tuna biomass.

Figure 3: The images below show a drifting Fish Aggregating Device (FAD) recovered by Tangaroa Blue's partners in the GBR through the pilot recovery program.



#### **GUEST ARTICLE**



In 2024, BehaviourWorks Australia (BWA) joined the ReefClean program with the objective of combining BWA's strong record of developing behaviour change programs with Tangaroa Blue Foundation's wealth of experience in marine debris management. This involved taking a multi-faceted, behavioural approach to source reduction using the BWA Method.



### A Behavioural Approach to Source Reduction

Dr Kim Borg, Research Fellow at BWA - A research enterprise within the Monash Sustainable Development Institute at Monash University

ReefClean's <u>Source Reduction Plans</u> (SRPs) aim to prevent marine debris from entering the environment, often by changing human behaviour. For example, 'Don't Dump on Our Reef' encourages dog owners to bin their dog's waste – ideally using single-use plastic alternatives and '<u>Ditch the Flick'</u> encourages smokers to correctly dispose of their cigarette butts.

#### The BehaviourWorks Method

Many organisations first need help understanding the problem they are trying to resolve. To address marine debris in the Great Barrier Reef, we 'Explored' the problem by reviewing existing behaviour-based SRPs and identifying behaviours surrounding marine debris. We then did a 'Deep Dive' to understand what influences priority behaviours from the target audience's perspective, allowing us to develop more effective interventions.

We then moved to the 'Application' phase, which draws from previous phases to design, trial, monitor and evaluate existing and new SRPs by 1) clearly defining measures of success and 2) trialling interventions with a smaller group and setting, before rolling them out more widely.

#### **Don't Dump on Our Reef**

Our behavioural review shows that ReefClean's existing SRPs exemplify the importance of having a robust behaviour change framework to support design, implementation and evaluation. For example, 'Don't Dump on Our Reef' was the least mature of the reviewed projects, with only a limited number of trials. As such, we identified several opportunities for improvement, including separating the program into multiple phases and trialling additional or alternative interventions to address additional behavioural drivers and barriers.

#### Ditch the Flick

In contrast, 'Ditch the Flick' is the most mature – and successful – of the reviewed projects. It involves a clear target behaviour and audience by addressing several key drivers and barriers. It has been trialed many times in different locations and contexts and has almost always been highly successful in reducing litter and changing smokers' behaviour. As a result, it is clear that the program is ready for widespread launch.



Image: A Ditch the Flick activation at QLD Country Bank Stadium, Townsville.

### **GUEST ARTICLE**

# Less is more: Quantifying nonfunctional slack filling and its role in reducing global packaging waste

Non-functional slack filling (packaging that is intentionally underfilled) is a tactic commonly used by manufacturers to increase profits while maintaining consumer confidence.

Globally, there are few quantitative data that demonstrate the environmental or social harm associated with this practice, including potential implications for municipal waste management.

#### **Calling on Citizen Scientists**

To address this issue, Tangaroa Blue Foundation partnered with the International Waste Platform to develop a rigorous method for measuring nonfunctional slack fill across four product types: human food, pet food, confectionery items, and cleaning products.

Through the support of our citizen science networks, we obtained data on non-functional slack fill for more than 180 products from 19 countries, including Argentina, Indonesia, France, and USA.

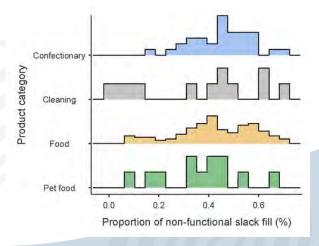




Image: Products showing non-functional slack fill (shown by the yellow arrows).

#### A worldwide problem

The results demonstrate that non-functional slack fill is globally widespread, regardless of the product type. On average, it accounts for 42% of the total material used as packaging. This problem presents an important opportunity to reduce excessive and largely avoidable amounts of unnecessary plastic production and waste, which can likely only be achieved with international standards, binding agreements, and industry innovation.

Tangaroa Blue & The International Waste Platform's paper on non-functional slack filling is currently in review with the journal: Waste Management

Article by paper co-authors Dr Jennifer Lavers (Tangaroa Blue Foundation) and Jella Kandziora (International Waste Platform).

Figure 1: Histogram showing % of non-functional slack fill for 184 products. The average percentage of non-functional slack fill was 42%, meaing 42% of the packaging was empty and played no functional role.



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Government Grants (including ReefClean)
68.4%





Other 0.4%

# Thank you

We would like to express our gratitude to all our philanthropic partners and public donors who continue to support Tangaroa Blue Foundation to protect the ocean from marine debris.

View a list of our key partners.

\*Operating expenses include project funding received in the 23-24 financial year and expended in the 24-25 financial year.

