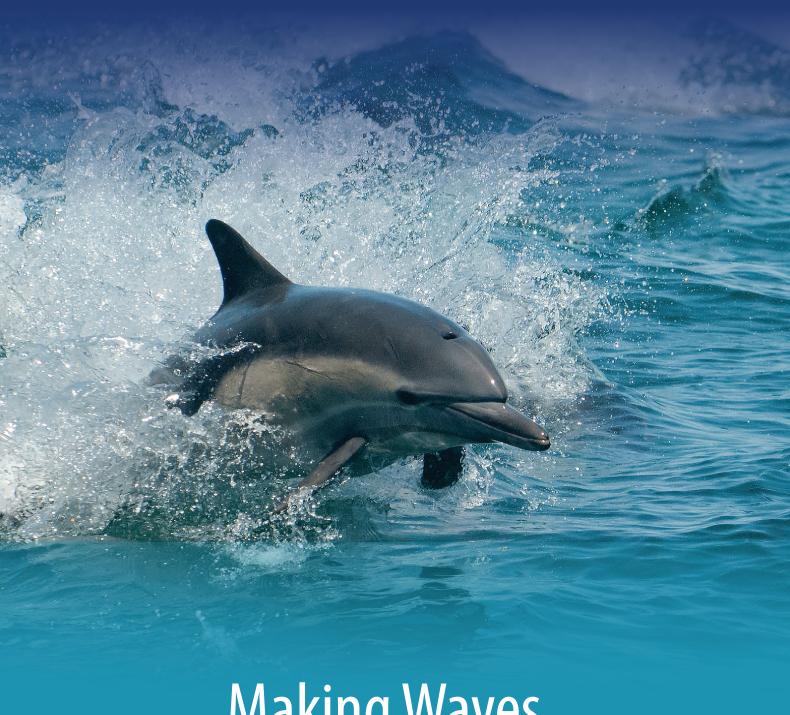
# 2023 IMPACT REPORT



# **Making Waves**

for Dolphins, Whales and their Environment

Research, Education and Leadership since 1991





# **2023 Impact Report**

This 2023 Dolphin Research Institute (DRI) Impact Report highlights the extraordinary commitment of our team and volunteers - all committed to our mission to safeguard the health of Victoria's dolphins, whales and their coastal environment.

The report is the second of its kind for DRI and reflects a great deal of thinking about the challenges, approaches and impacts needed to achieve change. The following table provides a high-level snapshot representing more than a year of thinking and dozens of pages of detail to guide our work.

# Four impact areas to drive change



# 1. Dolphins & Whales

#### The challenges

Insufficient long-term knowledge of population health, environmental needs, and human impacts in Victorian waters.

### Our approach

Critical long-term monitoring and reporting to environmental managers and the community. Including, water-based, shore-based and citizen science research programs.

## **Our impacts**

Crucial evidence to guide environmental assessments of proposed actions and decision-making. Reduced human impacts on dolphins and whales.



# 2. Environment

#### The challenges

Ecosystem resilience in the face of coastal pollution and climate change.

## Our approach

Monitor health of resident dolphins as indicators of environmental health and submit to environmental evaluation and reporting processes. Evidence-based behaviour-change programs.

## Our impacts

Reduced local coastal pollution and ecosystem resilience through changed behaviours in coastal communities.



# 3. Community

#### The challenges

Stewardship for our southern marine environments and life.

## Our approach

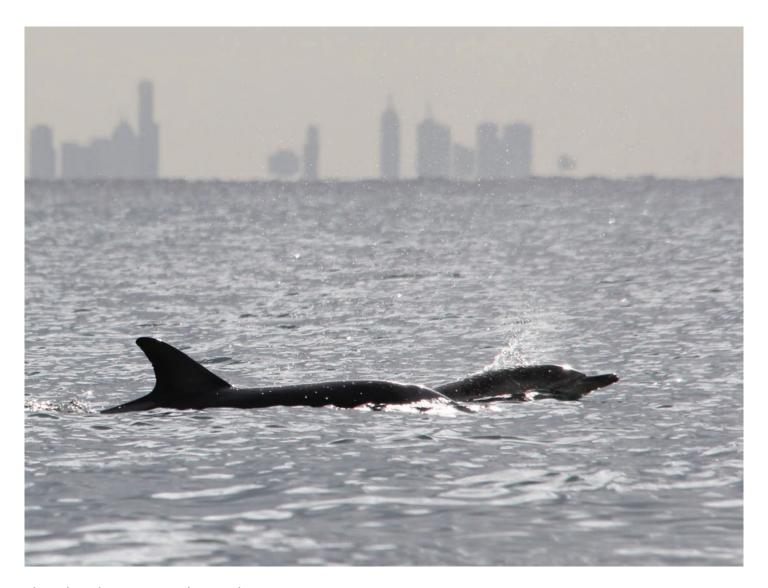
Marine education, behaviour-change programs, developing the next generation of environmental leaders and marine scientists. Intern and volunteering opportunities.

# Our impacts

A community that protects and champions our local marine ecosystems and life.
Growing numbers of marine leaders and scientists.

# 4. A strong organisation

The Dolphin Research Institute's goal is to become a role model for other for-purpose groups and to deliver much-needed impact on behalf of our communities. We work to take a whole-of-organisation approach to improve our capacity for impact evaluation, partnerships, fundraising, risk management and communication.



Three key things are evident in the report:

- 1. The synergy in our impact and activity areas: our research informs and enriches education programs, and our education programs provide the impetus for further knowledge.
- 2. The positive impact we have on the community and the lives of our ambassadors, interns and supporters.
- 3. The critical importance of three decades of long-term, integrated programs.

Above all, DRI's work shows that we have a remarkable success story with communities of dolphins in Melbourne's coastal backyard that seem to be thriving.

However, in the Dolphin Research Institute's fourth decade, we have no room for complacency. A future with a rapidly changing climate and human population will make our work even more critical.

Note: This document where you find numbers like 123 [789] refers to 123 in 2023 and 789 in 2022.

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# 1. Dolphins and Whales



DRI's research program has operated in both bays (Port Phillip and Western Port) since 1991. Its key objective is to obtain primary, non-invasive, long-term and contemporary data on common and bottlenose dolphins and whales in Victorian waters.

DRI is the only research organisation studying these species within this region that also ensures the best and current scientific evidence is readily available to the government and the community to impact conservation outcomes for cetaceans. This approach is integral to DRI's work, and we aim to release reports and update catalogues more regularly in the future.

During 2023, DRI submitted a "Notification of Concern" regarding the deformatiy of V-Nick's calf, a missing calf that should still be with another female, and a common dolphin with significant lesions, to the Department of Energy, Environment and Climate Action (DEECA). Changes within DEECA now make it difficult to inform them of issues and receive information crucial to our work. We see this as a barrier to achieving in this Dolphin and Whale impact area, which we are trying to address.



For a comprehensive overview of our research programs, we invite you to explore the 2023 Research Impact Report, which is readily available on DRI's website.

# **Key outcomes for 2023**





The story of the common dolphins now resident in Port Phillip is remarkable, as this species lives in the open ocean everywhere else.

Two highly significant findings flow from detailed work to improve how we identify individual dolphins, followed by a review of over 50,000 photo-ID images taken between 2005 and 2023. This enabled the expansion of the Port Phillip and Bass Coast catalogues.

- Evidence of 6 third-generation common dolphins born in Port Phillip since they entered the bay.
   Successful calving and calf survivorship have assisted in the numbers growing from fewer than ten in 2005 to 153 common dolphins 'using the bay' in 2023.
- 2. Evidence of common dolphins moving from Bass Strait past Phillip Island to Port Phillip by the presence of an animal in both catalogues. It suggests that the Port Phillip community is part of a much larger population, so we say 'using the bay' rather than 'resident'. Future surveys and analysis will clarify the extent of residence and migration.



In 2023, the Institute committed to bringing Killer Whales Australia under our Citizen Science umbrella, assuring the long-term sustainability of this important program.

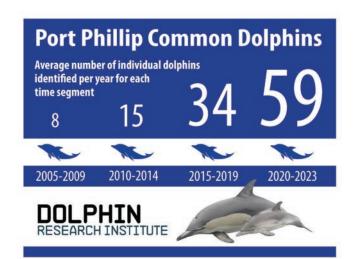


Figure 1. This data represents a discrete tally of the number of individual short-beaked common dolphins identified from photo-ID surveys in Port Phillip for each specific year, then averaged for the 5-year blocks. This measure is used as it provides a robust, testable basis to indicate the trend of the number of common dolphins using Port Phillip from 2005 to 2023. We never see all the 153 dolphins in the catalogue every year. The largest number of re-sightings of animals in the catalogue for any year is 81, which was in 2022.

#### **Western Port - Dolphin Project**

This project aims to understand the patterns of approximately two dozen bottlenose dolphins that use Western Port, especially on the Western side. This study uses university interns to build up hours of beach-based surveys, which is three years into a decade-long project.



### **Excitement Turns to Concern**

"V-Nick has a new calf!" came from an excited Research Fellow after trawling through thousands of survey images from July. V-Nick is the first common dolphin added to the Port Phillip catalogue 19 years ago. She had her first calf in 2009: this is her fifth.

What's remarkable is that V-Nick's second calf (#41) gave birth in February, which makes V-Nick's new calf younger than her grand calf! Our concern was raised following a survey in September when images seemed to show large lumps on both sides of its body. In 30 years, we hadn't seen anything guite like it.

Then, on a survey in early November, we were able to observe and photograph the calf more closely and realised that its back was distorted.

It's called scoliosis and is evident in all the above images.

Scoliosis is known in dolphins and whales, with cases reported worldwide. There seem to be three leading causes: congenital, where they are born with it, from disease, and injury from humans and other dolphins. Some dolphins with this condition are reported to cope well and even reproduce. Some don't survive.

We have seen different deformities in bottlenose dolphins in Port Phillip and the Gippsland Lakes but never in our common dolphins.

We believe that the calf's condition worsened between September and November, but it seems to be able to keep up with V-Nick and suckle.

A notice of concern was prepared and sent to wildlife managers. V-Nick and the calf were seen together in February 2024, and the calf seems to be doing well. We will continue to monitor their progress.

#### **Port Philip - Bottlenose Dolphins**

Port Phillip is also home to approximately 100 resident bottlenose dolphins, which has been stable for over three decades.

We collect data on this species during surveys, but they are not our primary focus unless we find something unusual, like the dolphin with significant skin lesions (right).

Claims that Port Phillip bottlenose dolphins are a new species flow from a PhD student paper published in 2011. We supported the student's work for many years and would like this to be true, but the evidence does not support it. The International Taxonomic Committee for Marine Mammal Species has rejected the validity of the species for the last 13 years. We maintain an up-to-date post on our website (search for burrunan dolphin).



# 1. Dolphins and Whales



#### Whales

Iln 2015, the DRI, with Wildlife Coast Cruises, established the Two Bays Whale Project (TBWP) to enlist citizen scientists to help fill a void in knowledge about large whale movements in the region of Barwon Heads to Inverloch. The TBWP dataset holds data dating back to 1984 and more widely across the coast.

TBWP is a contributing partner with the Southern Hemisphere Whales and Climate Project.

DRI is expanding the TBWP from 1 to 8 regions across the Victorian coastline in response to plans for many renewable and gas energy projects. Funding from ConocoPhillips supported the extension in 2023 east to Cape Liptrap and also added some locations in other regions. Further expansion and collating historical data into an overarching report will be completed in 2024.

Figure 2 shows a plot of validated sightings for 2023. In 2023, the TBWP received 152[177] validated sightings of approximately 266[315] whales across three species: humpbacks, southern right whales, and killer whales.

Figure 3 shows the Two Bays Tracker program data with timed surveys at 8 locations. A peak of 43 whale sightings per 100 hours of surveys in 2021 was less in 2022 and 2023.

Figure 4 shows the "whale season" length in days for the main migration through the Two Bays Region. The duration was shortest in 2021 and longest in 2023.

In 2024, we will continue to expand TBWP across Victoria and also bring more historical data into our analysis. We are optimistic that these actions, along with another year of data, will help our understanding of the variability and potentially changing patterns shown in the data to 2023.

What is clear is that the TBWP provides a crucial record of the presence of large whales in our region that is not available elsewhere. It is important we maintain and expand this program in the years ahead.

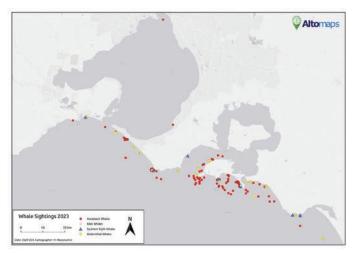


Figure 2. A plot of the validated sightings in the Two Bays region during 2023.

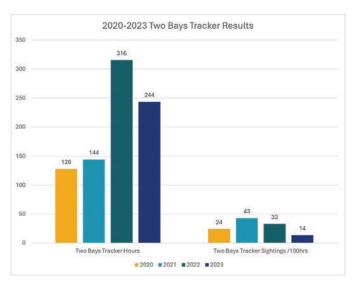


Figure 3. Data from the "Two Bays Tracker" showing the effort (hours) and whale sightings per 100 hours from eight locations between Portsea and Cape Woolamai for 2020 to 2023.

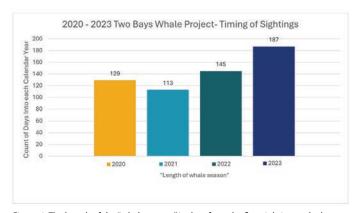


Figure 4. The length of the "whale season" in days from the first sighting to the last sighting of the main migration. (Outlier sightings of the odd very early or late whale are excluded.)

#### The Victorian Humpback Whale ID Catalogue

The Dolphin Research Institute hosts the Victorian Humpback Whale Identification Catalogue, the only one of its kind for our region. The catalogue contains images of the underside of tail flukes, the primary method used to identify individual humpback whales.

Citizen scientists on land, Wildlife Coast Cruises vessels, and DRI surveys contribute fluke images like that in Figure 5. The catalogue covers all Victorian waters.



Figure 5 .The fluke of whale VIC\_0283. Image by Stav Mihelakos.

Thirty new flukes were added to the catalogue in 2023 (136 since 2020). Because of the large numbers of whales (>35,000) migrating along the Australian east coast each year, it is no surprise that new flukes are added every year. Some re-sights of individuals show that at least some whales use Bass Strait as a migratory corridor that was previously not understood.

We also now understand that some areas of Bass Strait are important feeding grounds for humpback whales during their migrations.

Images from this catalogue are shared with the online citizen science fluke matching platform 'Happywhale' (Figure 6). This platform provides an automated fluke ID matching system that operates globally.

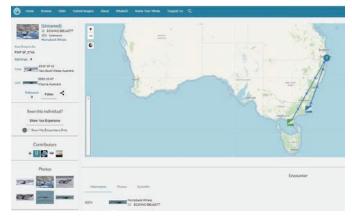
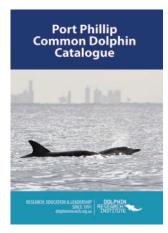


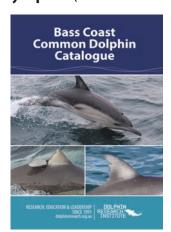
Figure 6. Example of Happywhale citizen science web page.

To date, flukes contributed by citizen scientists via the Two Bays Whale Project have been matched to sightings in Queensland, New South Wales, Tasmania, Western Australia, and Victoria. One match in 2023 linked an image taken off Wilsons Promontory in September of 2023 to a photo taken off Karratha, Western Australia, in 1998!

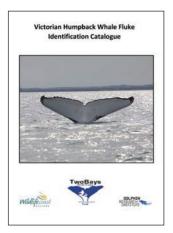
#### **2023 DRI Catalogues and key reports** (available on our website)



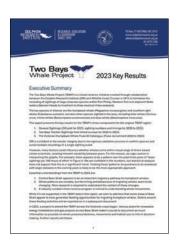
Added 51 [32] dolphins to make 153 [102] in the catalogue. Many re-sightings in surveys suggests this is a smaller community than Bass Coast.



Added 32 dolphins to make 125 [93] in the catalogue. Few re-sightings in surveys, suggests a much larger community than Port Phillip.



Victorian Humpback Fluke Catalogue - added 30 [46] animals to make 286 [246].



Two Bays Whale Project Report - 152 [177] validated sightings of 266[315] whales of 3 species: humpback, southern right and killer whales.

# 2. Environment



The challenges for coastal ecosystems facing population and climate change extremes are larger than any one organisation can achieve in isolation. The Dolphin Research Institute's response is to leverage its key assets of long-term programs and collaborations to achieve the greatest impacts.

- Research findings about the success and health of our dolphins at the top of the food chain - are shared with environmental managers at State, Federal and International levels.
- Research outcomes are also shared through our education and *i sea*, i care Ambassador Program.
- DRI pioneered using stormwater gross pollution traps in our education programs, and now it is a formal part of the i sea, i care Ambassador Program (next page).
- Many *i sea, i care* Ambassadors follow suggestions to join community beach cleanup groups.
- Partnerships with four councils and Melbourne water with the *i sea*, i care Ambassador Program, support their stormwater management work and help to achieve much greater outcomes than possible working alone.

### 2023 Key Outcomes

- We submitted research data to the Port Phillip Environmental Management Plan report and established a process to create an improved and standardised reporting framework.
- Twelve catchment workshops for *i sea, i care* Ambassadors and the messages being shared with 84,000 in their school communities.
- Strengthed the alignment of our programs with six of the United Nations Sustainable Development Goals.



**Environmental Management** 

dolphins based on Dolphin Research Institute data.



Alignment of programs to the United Nations Sustainable Development Goals





## The products of our lives drain into the sea

Research shows that diffuse pollution from land is one of the biggest threats to coastal environments, with over 90% of the pollutants washed up on beaches coming from suburbia. However, DRI's social research shows that 66% of Melburnians think the rubbish on beaches is left there by swimmers. We don't see ourselves as part of the problem! We held 12 catchment workshops for *i sea, i care* Ambassadors in 2023. First, they see and smell the refuse emptied from a gross pollution trap on stormwater drains that trap large items in nets before entering the environment. The top image is of artificial wetlands created to capture sediment and

many chemicals that pass through the nets. These systems effectively reduce pollutants flowing to the coast - where they are fitted. Unfortunately, most drains don't have these traps, so everything from our lives in the suburbs gets to the sea.

Ambassadors then go to a local beach to clean up and analyse the litter, with the data contributed to a national database.

Most importantly, Ambassadors share their experiences with their school communities - audiences of 45,000 at assemblies and 84,000 through our *i sea, i care* newsletters. They have done this for twenty-three years.

# 3. Community



Our work with the community is at the heart of DRI's ability to achieve impact. It empowers our ability to influence through education, behaviour change and leadership programs and provides opportunities for volunteers, citizen scientists, interns and donors to contribute to our work. It also creates a synergy between our core activities, research informing and enriching education and our education programs, providing the impetus for further knowledge.

#### **Education**

Education programs complement DRI's impact areas and draw content from our research and messaging on coastal pollution, climate change and sustainability. Our programs link to 24 core goals of the Victorian school curriculum.

DRI's education programs have operated from our education centre in Hastings since 2001, providing programs for primary and secondary schools, TAFE, universities, and the community through clubs and events. We work mainly with schools on the Mornington Peninsula and the Southeastern suburbs of Melbourne.

During 2023, we continued to reconnect with our schools and community groups after COVID and created new relationships with groups we hadn't seen before.

Late in 2023, our Education Manager, Mandy Robertson, retired after 13 years. Ellie Collins, a Monash Biological Sciences graduate and enthusiastic marine educator, has taken over the role.



Figure 8. An enthusiastic participant in our Rocky Shores Program and our 19m whale providing a 'hands on' experience in our Whale Out of Water Program.



#### 2023 - formal marine education programs (Post-COVID):

- Formal education programs with 7,158[3,880] children and adults.
- Formalised links to 24 key goals in the Victorian School Curriculum.



#### 2023 - informal community programs (Post-COVID):

- Informal talks to wide audiences exceeding 2,000.
- Community engagement at 4[7] festivals with a reach exceeding 10,000.

# isea icare School Ambassador Program

The award-winning *i sea, i care* Ambassador Program, established in 2001, works to build community stewardship for Victoria's dolphins and whales and their marine environment. We provide motivational and learning experiences with four (mostly) Ambassadors from our primary schools, who work for us in their school communities. We work with four—they work with hundreds.

Ambassadors speak at assemblies and peer-teach classes about their experiences and ways to reduce coastal pollution and live sustainably. Participation assists schools with their accreditation with the Resource Smart Schools Program and other sustainability programs.

Ambassadors have four workshops each year: a motivational trip to swim with seals, seadragons and dolphins, a workshop to learn to be peer teachers in their own school, a catchment pollution workshop (see page 9), and a coastal workshop where they assist coastal rangers and learn from local traditional owners.

It is a life-changing experience for many Ambassadors: their first trip on a boat, overcoming the fear of public speaking, and helping to change behaviours in their school communities. We now see some return as university interns. Both our Research Fellows were influenced by *i sea, i care* when they were younger.



Figure 9. The first two Ambassador workshops are on Moonraker Dolphin Swims and then learning to be peer educators.



# i sea, i care School Ambassador Program numbers in 2023

- **8,500** Ambassadors since 2001.
- More than 500 new Ambassadors from 91 schools (Sorrento to the Yarra Valley and down to Torquay).
- 57[62] Ambassador workshops.
- **45,000** engaged by Ambassadors speaking at their school assemblies (3 a year).
- **84,000** audience circulation of our *i sea, i care* Newsletter (4 a year).
- 22,000 P-2 children peer-taught by Ambassadors.
- More than 47,000 volunteer hours contributed by Ambassadors.

# 3. Community



This area of community engagement and leadership relates to our programs that help to develop future scientists through internships and the inaugural Research Fellowship position. These programs and our citizen science programs support community involvement and contribute to our research programs, especially the Two Bays Whale Project and the Western Port and Port Phillip studies.

Another initiative started in 2022 was creating an Intern Director role on our board in partnership with the Master of Environment and Sustainability degree at Monash University. The goal is to add diversity to board discussions and to help develop the next generation of directors. The trial was so valuable that Rebecca Rawlings, the first Intern Director, was appointed as a full director in November 2023.

## **Thought Leadership**

Plans for offshore wind farms around Australia gained momentum during 2023, with nearly 10 planned for Victoria. Legitimate questions about the potential risks they pose to marine life must be addressed as part of a rigorous approvals process.

Community opposition to farms proposed off the southern NSW coast mobilised protest groups claiming the proposed offshore turbines would kill 400 whales per year. Claims they support with a paper published in a respected journal Marine Policy regarding a study by the University of Tasmania. It turns out that the paper was forged, to look authentic, and the study never happened!

This is an extreme case but the Institute is very concerned that many once objective organisations have become driven by winning campaigns by 'argument' rather than evidence.

Our Director was interviewed by the ABC and reinforced that credible sources such as the US National Oceanic and Atmospheric Administration (NOAA), has found no evidence to suggest that offshore wind farms kill whales.

The Institute plans to step up with these types of issues relevant to our work, to provide a trustworthy voice to combat misinformation.

(ABC Illawarra, 7 Nov. 2023).

### Editor of scientific journal says fake study linking whale deaths to wind farms is 'deliberate misinformation'

ABC Illawarra / By Tim Fernandez and Melinda James
Posted Tue 7 Nov 2023 at 11:18am, updated Tue 7 Nov 2023 at 2:42pm





## 2023 Intern Program

- 9[9] interns hosted, contributing ~1,000 formal hours + volunteer time.
- Contributed to the Western Port Study, data analysis, content creation, DRI behaviour-change and citizen science programs.
- Students from Monash, Deakin and Federation Universities.



#### **2023 Citizen Science**

- PodWatch 162[270] total sightings of dolphins and whales.
- Two Bays Tracker 244[316]hrs, 8[9] people, 33[104] humpback, southern right and killer whale sightings.
- Western Port Pod Surveyor 96(22) hours surveyed, 25[5] sightings.
- Port Phillip Pod Surveyor 24.8 hours surveyed, 4 sightings.



#### Williamson Research Fellowship

We proudly introduce Ella Hutchinson as the second Williamson Research Fellowship recipient.

Ella is an outstanding young scientist who recently graduated from Monash University with an Honours degree focused on studying marine algae.

Together with her colleague Leanne, they discovered evidence of the three generations and the movement between Port Phillip and the Bass Coast.

Donor support enabled us to develop the fellowship concept, which has been so impactful that the Hugh D.T. Williamson Foundation has committed \$240,000 to grow the program.

Leanne Nguyen has accepted a position with the Pacific Whale Foundation as the next step in her career - precisely what the Fellowship is aimed at.

Our next goal is to fund multiple fellows with at least six months of overlap.



**Dolphin Distancing** is a DRI initiative initially launched just before COVID hit in 2019, relaunched in 2022, and expanded with Whale Distancing during the whale season in 2023.

Rather than the usual signs on boat ramps, media releases, calls for more policing, or blaming and shaming, we are taking a new approach that is a world-first for behaviour change around dolphins and is known to have worked in other situations.

It's like 'Neighbourhood Watch' for dolphins and whales. Boaters are invited to commit to Dolphin Distancing and receive a sticker to proudly display on their vessel, reinforcing their pledge and triggering reminders.

We want to change the social norm by building a community of boaters who do the right thing and know when to report harassment to authorities.

By the end of 2023, we had individuals and over twenty yacht, lifesaving and other groups around Port Phillip and Western Port, a collective buy-in by well over 2,000 people.



# 4. A strong organisation



The Dolphin Research Institute's goal is to become a role model for other for-purpose groups and to deliver much-needed impact on behalf of our communities. We take a whole-of-organisation approach to improve our capacity for our activity areas, impact evaluation, partnerships, fundraising, risk management and communication.

March 2023 marked DRI's thirty-second anniversary. Our community, organisation, and programs face challenges in a still-evolving post-COVID world. Like many organisations, we are still working through the challenges of remote work, staff and client illness, and the increased cost of living.

We turned COVID lockdowns into an opportunity to build capacity, innovate, and delve into 'impact thinking'—refining our view of what we do and why. The four impact areas, stronger synergy of programs, and capacity-building projects flowed from using the years of turmoil as an opportunity. Our extraordinary staff, board, and supporters made this possible.

#### **Key organisational outcomes for 2023**

- Two significant capacity-building projects:
  - Further development of our website on WordPress to improve functionality, security and future stability.
  - Further development of our core database on the Salesforce Not-For-Profit Success Pack platform and integration across our systems.
- Maintaining key partnerships with four councils, Canada Steamship Lines (Aust), Kiss Print Services, Midland Insurance Brokers, Salesforce, Google and Microsoft.
- Maintaining partnerships with Monash University (Master of Environment and Sustainability) Fathom Pacific (Marine environmental consultants), Destination Phillip Island (Island Whale Festival).
- Extending the Research Fellowship Program for young career scientists to build research capacity. And gaining support from the Hugh D.T. Williamson Foundation recognised this success through its commitment of \$240,000 to fund the Fellowship for the 2024 to 2026 financial years.
- Securing funding to expand DRI's Two Bays Whale project to two additional segments of Victoria's coast.
- Bringing the Killer Whales Australia citizen science program into DRI's core research to ensure the long-term viability of this important program.
- Succession planning and renewal of board directors and appointing an Intern Director role for a Monash University Master of Environment and Sustainability student, who progressed to being a full member.
- Progressing Major Gift and Corporate Partnership programs as significant elements to our diverse revenue mix.

Thank you to our key partners and our loyal supporters, some have been with us for over 33 years!























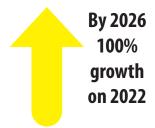








# **Future plans**





**Education for** 

10,000 p.a.

1,000 i sea, i care

Ambassadors p.a.



scientists

500 citizen 20 interns and 50 ves

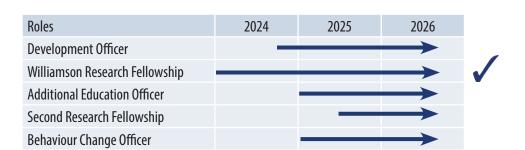


20 interns and 50 vessel surveys per year

50,000 volunteer hours per year

## Resourcing

Subject to onging strategic review and potential role-sharing



In presenting the Dolphin Research Institute's 2023 Impact Report and goals for 2026, we are resolute about the enormous opportunity ahead of us to strengthen Victorians' shared stewardship of dolphins, whales and their environment.

The joy that comes from caring for dolphins and whales is at the heart of DRI. So many of our volunteers and donors tell us that supporting DRI brings them joy. The same is true for thousands of schoolchildren who participate in our education programs.

We know that much more must be done to fulfil our mission. Our plans focus on creating a lasting impact that will benefit dolphins and whales, their environment, and the Victorian community.

We plan to scale up field research and citizen science and double the number of i sea, i care schools and education programs. In particular, we are investigating how a "hybrid i sea, i care Program" could engage distant school communities using technology to overcome the barriers of distance.

With your support and leadership, we will build capacity to support this growth, including nurturing young leaders, scientists and educators.

Our promise to you is that we will always strive to achieve lasting impact and make the most of your support through innovation and leadership.

Jeff Weir OAM
Executive Director



"We will always strive to achieve lasting impact"

# Thank You For Helping to Make Waves...



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