



Tactical Research Fund: Reducing the impact of discarded recreational fishing tackle on coastal seabirds

November 2013

Matthew Campbell

FRDC 2011/057

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Queensland
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Tactical Research Fund: Reducing the impact of discarded recreational fishing tackle on coastal seabirds

Matthew Campbell

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FRDC Project No 2011/057

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ISBN 978-0-7345-0437-1

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2011/057**

2013

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Contents

Acknowledgements	i
Executive Summary	ii
Introduction	1
Objectives.....	1
Methods.....	3
Results and Discussion.....	7
Conclusion	24
Implications.....	26
Recommendations	27
Extension and Adoption.....	28
Project coverage	28
Project materials developed	33
Appendix 1: Project Staff.....	33
Appendix 2: Intellectual Property	33
Appendix 3: Stakeholder workshop minutes	34
Appendix 4: Radio interview transcript.....	35
Appendix 5: Project webpage	38

Tables

Table 1: Common and scientific names of the 1063 (14 species) birds rescued and rehabilitated by Twinnies Pelican and Seabird Rescue as a result of interaction with discarded fishing tackle in 2012..... 8

Table 2: Percentage of rescued birds by species as a function of a) body part affected and b) level of rehabilitation required – where Level 1 is a short rehabilitation process (less than 2 weeks), Level 2 is released after an extended rehabilitation process (up to 8 weeks) and Level 3 is death of the individual as a result of the injury sustained – for birds rehabilitated at Twinnies Pelican and Seabird Rescue in 2012... 10

Figures

- Figure 1: Radiograph of an Australian pelican showing the location of a set of ganged hooks and a swivel. This bird was taken into care at Twinnies Pelican and Seabird Rescue but died of its injuries three days later. 2
- Figure 2: Discarded fishing tackle recovered from an area adjacent to fishing platforms located on Tingalpa Creek after a 15 minute search on 13/9/2011 during project development. 2
- Figure 3: Fishing Line Recovery Bin installed at the Bongaree Jetty (location 1 in Figure 5) and the sticker designed for the bins. The FLRBs are constructed from 150mm diameter PVC sewerage pipe. 4
- Figure 4: Method of attachment of Fishing Line Recovery Bins to existing infrastructure including (a) street sign poles and (b) wooden jetty. 5
- Figure 5: Location of the 12 Fishing Line Recovery Bins used to reduce recreational fishing tackle discarded into the environment. 5
- Figure 6: Number of individuals by species rehabilitated by Twinnies Pelican and Seabird Rescue during 2012. 7
- Figure 7: (a) level of rehabilitation required – where Level 1 is a short rehabilitation process (<2 weeks), Level 2 category birds are released after an extended rehabilitation process (up to 8 weeks) and Level 3 results in the death of the individual as a result of the injury sustained – for birds rehabilitated at Twinnies Pelican and Seabird Rescue and (b) injury location due to fishing tackle. Note this data relates to all species combined in 2012. 9
- Figure 8: Level of rehabilitation required as a function of the body part affected of birds rescued due to interaction with fishing tackle and rehabilitated by Twinnies Pelican and Seabird Rescue. Note this data relates to all species combined in 2012. 9
- Figure 9: Some examples of the injuries and entanglements that occur as a result of recreational fishing – (a) hook and sinker in the bill of a pelican; (b) feet entanglement of a pelican (note the feather quills in the tangle); (c) feet entanglement of an ibis; (d) hook caught in the beak of a pied cormorant; (e) lure caught in the beak of a juvenile silver gull; and (f) line tangled around the foot of a white-faced heron. All photos courtesy of Pelican and Seabird Rescue Inc, Capalaba, Queensland. 11
- Figure 10: Total discarded fishing waste – fishing line, fishing tackle and bait bags – observed during weekly sampling of bin contents. The amount of fishing waste was calculated as the proportion of a 20L bucket used throughout the project to collect bin contents. 12
- Figure 11: Occurrence of fishing line, fishing tackle (hooks, etc), bait bags and non-fishing waste in bins as a function of (a) sampling week and (b) bin location from Figure 5. 13
- Figure 12: Modification made to the Bongaree Jetty FLRB to deter vandals. 15
- Figure 13: Design of the 12 signs installed at the locations described in Figure 5. The signs were designed by DAFF Communications staff after input from project workshop participants. This particular sign is located at Spinnaker Sound Marina. The Bribie Island Bridge can be seen in the background at lower right. 15
- Figure 14: The Bribie Island Bridge is a popular recreational fishing venue despite the fact that fishing is not allowed on the bridge. The photo at left depicts a large toad (*Lagocephalus* spp.) discarded on the bridge adjacent to the platform from which fishing occurs. On this day, there were also two flat-tail mullet (*Liza argentea*, below) on the road, along with discarded bottles and fishing line (below left). These pictures reinforce the issues highlighted by survey participants regarding recreational fishing and its impact on the environment. 19
- Figure 15: Discarded rubble and a small toadfish (*Torquigener* sp.) from cast-netting activities undertaken on the Bribie Island Bridge. 19
- Figure 16: The western side of the Bribie Island Bridge showing the discarded rubble and weed from cast-netting activities left on the roadside and on the walkway. 20

Figure 17: Project media release on the Fishing World website.	21
Figure 18: An article that appeared on the website of the Redcliffe and Bayside Herald on 20 May 2013.22	
Figure 19: Newspaper article that appeared in the Redcliffe and Bayside Herald on 29 May 2013 and the corresponding web-based article published in response to the article regarding a sea turtle injured as a result of fishing line entanglement (see Figure 18).	23
Figure 20: Unwanted fishing tackle discarded to the Bongaree Jetty Fishing Line Recovery Bin during the week ending 21/10/2013.	28
Figure 21: Project media release as it appeared on the recreational angling website Ausfish Australian Angling Forums. This post had been viewed on 1,124 occasions at the time of writing.	29
Figure 22: Article that appeared in the Gympie Times on 10 May 2013, page 26.	29
Figure 23: Article that appeared in the Bribie Weekly on 10 May 2013, page 9.	30
Figure 24: Article that appeared in the Ayr Advocate on 17 May 2013, page 10.	30
Figure 25: Article that appeared in the Herbert River Express on 15 May 2013, page 4.	31
Figure 26: Article that appeared in the Whitsunday Guardian on 15 May 2013, page 33.	31
Figure 27: Article that appeared in the Sunday Mail on 9 June 2013, page 78.	32
Figure 28: Article that appeared in the June 2013 edition of Bush and Beach magazine.	32
Figure 29: Article that appeared in the August 2013 edition of Queensland Fishing Monthly magazine. .	33
Figure 30: Screen shot of the webpage built by DAFF Communications staff for the project.	38

Acknowledgements

This project was funded by the Fisheries Research and Development Corporation (Project number 2011/057) and the Queensland Department of Agriculture, Fisheries and Forestry. I thank them for their support throughout this project.

I would like to thank workshop participants – Matt Barwick, Debbie Bain, Ian Bell, Chris Bell, Mishele Blizzard, Lidia Davidovics, Ed Guallo, Debra Henry, Diane Oxenford, Judy Lynne, Helen Powers, Bridgette Powers, Paula Powers and Richard Proudfoot – for attending the project workshop and providing direction for the project. Further, thanks to Dr. Barry Pollock, who gave his support for the project and participated in the workshop.

Lidia Davidovics provided excellent advice regarding the manufacture and placement of the Fishing Line Recovery Bins. Lidia was always happy to help out and I thank her sincerely for her patience and persistence. Thanks also to Deb Henry, from Oceanwatch Australia, for advice regarding the construction of the Fishing Line Recovery Bins.

Thanks to Nat and Hammy Forrest from Pelican and Seabird Rescue for assisting in the development of the project and also for the numerous photos of the injured birds they have rescued. They also offered advice during the development of project extension products and I thank them for their help.

Sincere thanks go to Sacha Kitson, DAFF Media and Communications Officer, who provided invaluable advice when developing all of the extension products such as signs, bin stickers, webpage design, etc.

I am also grateful for support provided by Diane Oxenford, Councillor Gary Parsons and Lisa France MLA throughout the project. Also thanks to Pat Pathmanathan from Moreton Bay Regional Council for providing advice regarding the installation of bins in the council area.

I am grateful Bunnings hardware stores, specifically Jenny Fourez from Bunnings Morayfield, for donating approximately \$1000 worth of PVC products for the manufacture of the FLRBs.

Lastly, I wish to thank the team at Twinnies Pelican and Seabird Rescue – Helen Powers, Bridgette Powers, Paula Powers and Mishele Blizzard – who provided rescue and rehabilitation data.

Executive Summary

A Fishing Line Recovery Bin (FLRB) program was developed by the Queensland Department of Agriculture, Fisheries and Forestry in response to several emotive articles detailing the effects of discarded recreational fishing tackle on seabirds in Queensland. Twelve FLRBs were installed across northern Moreton Bay at popular shore-based fishing locations and boat ramps during late 2012. The FLRB program, combined with signage installed as part of the project, informed recreational fishers as to the consequences of discarding fishing tackle into the environment and also allowed fishers to discard unwanted tackle in a responsible manner.

This project was initiated after Sunfish Queensland's Scientific Officer, Dr. Barry Pollock, highlighted published material that reported the serious injuries that can occur when seabirds become entangled in recreational fishing equipment that has been discarded into the environment. This was confirmed by numerous wildlife rescue agencies, who stated that hundreds of birds are rescued each year suffering terrible injuries when fishing lines are caught on limbs and wings or when hooks and other tackle are swallowed.

The objectives of the project were: 1) quantify the number and species of birds affected by recreational fishing tackle; 2) convene a stakeholder workshop to discuss methods for mitigating seabird entanglements; and 3) promote the responsible removal of discarded fishing tackle from popular fishing locations in northern Moreton Bay.

In order to quantify the number of interactions between seabirds and discarded tackle, several rescue agencies were approached to provide data. Data from one agency revealed that in excess of 1000 birds had been rescued from the area between the Sunshine Coast and the Redcliffe Peninsula in 2012. The most rescued bird species as a result of interactions with discarded fishing tackle were the Australian pelican and the white ibis, although significant numbers of white-faced herons, pied cormorants, wood ducks and silver gulls were also rescued. Approximately 60% of birds rescued presented with wing or feet injuries with most birds affected released after less than two weeks. However, the remaining birds suffered beak or internal injuries and required longer-term rehabilitation, 6% of which died or were euthanised as a result of their injuries.

Discussions among the workshop participants provided support for the FLRB program mentioned above. Initially, 12 FLRBs were installed at various locations throughout the Moreton Bay Regional Council area, from Donnybrook to Clontarf. The FLRB located at the Bongaree Jetty was the best performing bin and regularly contained fishing line, fishing tackle and bait bags. However, this bin also suffered the most vandalism and was modified to ensure the bin continued to perform correctly. FLRBs located at Scarborough, Spinnaker Sound Marina and Beachmere boat ramps also performed well. Although recreational fishers did use the FLRBs, non-fishers deposited a significant amount of material into the bins.

Apart from the FLRBs themselves, signage, a media release and an interview on a fishing-related radio program were also used to convey project objectives and generate interest in the FLRB program.

The number of birds rescued as a result of interactions with discarded fishing tackle has drawn the attention of environmental groups. In 2009, recreational anglers were removed from around 16% of Moreton Bay, through the introduction of the Moreton Bay Marine Park, and the continued impact of discarded recreational tackle on seabirds provides these groups with reason to seek further restrictions. As such, it is imperative that initiatives such as the FLRB program continue so that the amount of discarded fishing tackle is significantly reduced over time. This issue, along with other issues including the retention of undersize fish and the discarding of rubbish at fishing locations, present areas of conflict (which are largely avoidable) with environmental/conservation groups. Further, feeding undersize or unwanted fish to birds and discarding unwanted catch from cast-netting activities are examples of fisher behaviour and active fishing practices that likely attract birds to fishing locations. These practices teach birds that recreational fishers are a source of food and encourage birds to wait for an opportunity to grab unattended

food items. Unfortunately, some of these food items are baits used by fishers, resulting in birds being injured by, or entangled in, fishing tackle

Should seabird entanglement continue to occur as a result of discarded recreational fishing tackle, funding for programs such as the FLRB program introduced as part of the current project should be sourced from recreational fishers directly. This is difficult without the imposition of a Recreational Fishing Licence (RFL). Currently, in Queensland, recreational fishers contribute to fisheries-related research, infrastructure and enforcement through the Recreational Use Fee (RUF), paid as part of vessel registration. However, all registered recreational vessels in Queensland, including jet ski's and ski boats, are required to pay the RUF, making this source of funding for recreational fishing-related programs inequitable.

Keywords

Fishing Line Recovery Bin, seabird entanglement, pelican, ibis, discarded fishing tackle

Introduction

This project was initiated after discussions with Dr. Barry Pollock, the Scientific Officer of Sunfish Queensland. Dr. Pollock was concerned with the negative image portrayed on a poster published (www.healthywaterways.org/HealthyWaterways/Resources/Posters.aspx) on the Healthy Waterways website, which depicts a pair of budgerigars surrounded by fishing line and fishing tackle. The poster is a provocative statement about the effects of discarded fishing tackle in the environment and reflects poorly on all recreational fishers. Dr. Pollock's main concern was that, although a minority of recreational anglers do discard fishing tackle in a careless manner, the majority of fishers care for the environment and act responsibly when discarding unwanted fishing tackle. Apart from the Healthy Waterways poster, several articles appeared in newspapers and other press during the project proposal phase, as well as during the funding period. For example, an article published in the fishing section of Queensland's only daily newspaper, the Courier Mail, on Friday November 23, 2012, reached a large audience. The article depicts a white-faced heron, a shearwater and a pelican all affected by fishing tackle in some way. In the article, RSPCA spokesperson Michael Beatty is quoted as saying that entangled birds "die a slow, painful death."

During early research for this project, bird rescue agencies Australia Zoo Wildlife Hospital and Pelican and Seabird Rescue (PASR) Inc. were contacted in order to gauge the extent of the problem in terms of the number of rescues performed per year. These agencies suggested that seabird entanglement in discarded fishing tackle was of major concern, with over 700 calls being fielded for birds affected by fishing tackle. These figures were unacceptable and measures were required to decrease the incidence of seabird interactions with discarded recreational fishing tackle. The injuries that result from these interactions can be fatal, with some entangled animals being euthanised as a result of their wounds (see Figure 1). In response to these figures, a fifteen minute search at a recreational fishing location in the northern suburbs of Brisbane (13/09/2011 - Tingalpa Creek) by two people resulted in the collection of the fishing tackle pictured in Figure 2.

As such, there is a need to educate recreational anglers as to the consequences of discarding fishing tackle in an irresponsible manner. This education needed to be directed toward those fishers that go fishing occasionally and may not be aware of the consequences of discarding unwanted fishing tackle. The methods used educated these fishers as to these consequences of discarding unwanted fishing tackle as well as ways of mitigating this issue.

This project addresses the FRDC Recfishing Research priority area "Assessing the impact of recreational fishing methods on conservation values of aquatic habitats" as announced in the 2012 Annual Competitive Round Call for Expressions of Interest. During the development of this project, support was sought from bird rescue agencies, the World Wildlife Fund (WWF) and Fisheries Queensland (FQ), all of whom were fully supportive of the project. Further, recreational fishing representative bodies Sunfish Queensland and Ecofishers gave their full support for the project.

Objectives

1. Quantify the extent of seabird entanglement in northern Moreton Bay
2. Convene a workshop involving relevant stakeholders in order to establish methods for mitigating seabird entanglements
3. Promote the responsible removal of discarded fishing tackle from popular fishing locations in northern Moreton Bay



Figure 1: Radiograph of an Australian pelican showing the location of a set of ganged hooks and a swivel. This bird was taken into care at Twinnies Pelican and Seabird Rescue but died of its injuries three days later.



Figure 2: Discarded fishing tackle recovered from an area adjacent to fishing platforms located on Tingalpa Creek after a 15 minute search on 13/9/2011 during project development.

Methods

Extent of seabird entanglement in northern Moreton Bay

In order to assess the bird species affected by discarded fishing tackle and the frequency with which this occurred, data were obtained from Twinnies Pelican and Seabird Rescue, a rescue and rehabilitation, not-for-profit organisation located at Landsborough on the lower Sunshine Coast. In recent years, Twinnies Pelican and Seabird Rescue have kept records regarding the number of rescues undertaken in the area from the Sunshine Coast to Redcliffe. Along with birds they rescue, Twinnies Pelican and Seabird Rescue receive birds from a number of bird rescue agencies, including Bribie and District Wildlife Rescue and Australia Zoo, for rehabilitation and eventual release depending on the extent of injuries. Birds rescued as a result of interactions with discarded fishing tackle were categorised by Twinnies Pelican and Seabird Rescue as:

Level 1: health check, wormed, anti-biotic administered and released within two weeks;

Level 2: as above and care required for up to 8 weeks; and

Level 3: bird died as a result of interaction with discarded fishing line.

Stakeholder Workshop

A stakeholder workshop was held in the Gillespie Room, Bribie Island Research Centre in February, 2013.

Workshop participants

Debbie Bain (Twinnies¹)

Matt Barwick (Recfish Research)

Ian Bell (BIEPA²)

Chris Bell (BIEPA)

Mishele Blizzard (Twinnies)

Lidia Davidovics (NICA³)

Ed Guallo (Oceanwatch)

Debra Henry (Oceanwatch)

Apologies

Natalie Forrest (PASR⁴)

Sally Arthur (BDWR⁵)

Judy Lynne (Sunfish)

Diane Oxenford (BIEPA)

Barry Pollock (Sunfish)

Helen Powers (Twinnies)

Bridgette Powers (Twinnies)

Paula Powers (Twinnies)

Richard Proudfoot (BIEPA)

Hammy Forrest (PASR)

Workshop objectives

The workshop was convened in order to seek the opinions of stakeholders regarding the FLRBs and the design of the stickers used on the bins. Information was provided on similar FLRB programs in areas adjacent to the area of interest for the current project. Further, staff from Twinnies Pelican and Seabird Rescue provided some information regarding the number of seabird rescues in the area from the Sunshine Coast to Redcliffe. As required in Schedule 3 of the Project Agreement, participants also discussed other fishing practices that adversely affect the environment and contribute to the number of seabird entanglements.

Responsible removal of discarded fishing tackle

Several methods were used to promote the responsible removal of discarding fishing tackle from popular fishing locations in northern Moreton Bay.

1. Fishing Line Recovery Bins

Part-way through 2012, Lidia Davidovics appeared on the recreational fishing-related radio program *Outback and Bay*, hosted by Brisbane fishing identity Dave “Nugget” Downie. Lidia detailed the Fishing

¹ Twinnies Pelican and Seabird Rescue

² Bribie Island Environmental Protection Association

³ Noosa Integrated Catchment Association

⁴ Pelican and Seabird Rescue

⁵ Bribie and District Wildlife Rescue

Line Recovery Bin program that was being run by the Noosa Integrated Catchment Association (see http://www.noosariver.com.au/index.php?article=fishing_line_recovery_bins). A similar program was being run by Oceanwatch Australia in southern Moreton Bay and by the Sunshine Coast Council. As such, the northern Moreton Bay was the only area in the greater Brisbane area not serviced by such a program.

During the stakeholder workshop, participants agreed that a Fishing Line Recovery Bin (FLRB) program would be beneficial, given the results reported by Lidia during the workshop. As such, Fishing Line Recovery Bins were designed and materials sourced for their manufacture. Bunnings Morayfield were approached to donate the materials for the FLRBs and provided approximately \$1,000 worth of PVC pipe and fittings.



Figure 3: Fishing Line Recovery Bin installed at the Bongaree Jetty (location 1 in Figure 5) and the sticker designed for the bins. The FLRBs are constructed from 150mm diameter PVC sewerage pipe.

The FLRBs were constructed from PVC sewerage pipe with a diameter of 150mm. A 90° angle was glued to one end of a 650mm length of pipe, while a threaded end section was glued at the other end, which allowed for the removal of waste at the base of the FLRB (see Figure 3). This design is the same used by NICA, Oceanwatch Australia and the Sunshine Coast Council. Further, a similar devices are used Miami, Florida (see <http://mrrp.myfwc.com/>) via the Monofilament Recovery & Recycling Program.

After the stakeholder workshop, stickers were designed for attachment to FLRBs to inform the public as to the purpose of the bins (Figure 3). Drafts of the sticker were sent to workshop participants before a design was approved by the group. The final stickers were 180mm wide and 220mm long and displayed a QR bar code which directed observers to the project web page (see Point 6, below).

Prior to installation, the Moreton Bay Regional Council (MBRC) was approached regarding the installation of the FLRBs. The MBRC Waste Services Manager, Pat Pathmanathan, provided support for the installation of the bins at the locations indicated above. Further, Division 1 Councillor Gary Parsons and the State member for Pumicestone, Lisa France MLA, were supportive of the FLRB program.

In accord with the NICA program, FLRBs were attached to existing infrastructure using stainless steel fittings (see Figure 4). Locations were chosen with the assistance of Lidia Davidovics, so that the FLRBs were installed close to council-maintained general waste bins in order to minimise the amount of general waste being placed in FLRBs. For the most part, FLRBs were installed close to a boat ramp, adjacent to fish cleaning table facilities, where possible via manufactured attachment clamps (Figure 4a). On the Bongaree Jetty, the FLRB was attached directly to support structures (Figure 4b). FLRBs were deployed on 15 April 2013, the Tuesday after the Easter school holidays.



Figure 4: Method of attachment of Fishing Line Recovery Bins to existing infrastructure including (a) street sign poles and (b) wooden jetty.

FLRBs were emptied on Mondays, excluding public holidays where the FLRBs were emptied on the next available day, which ensured that bin contents were removed after weekends when angling traffic was at a maximum. Contents were removed to a 20 litre bucket. All non fishing-related material was removed and its presence/absence recorded. Further, the presence/absence of fishing line, tackle and bait bags was recorded. The fishing-related material was left in the bucket and the next bin was checked. Once all bins had been checked, the volume of the bucket contents was used as a measure of the amount of fishing-related waste discarded to the bins.

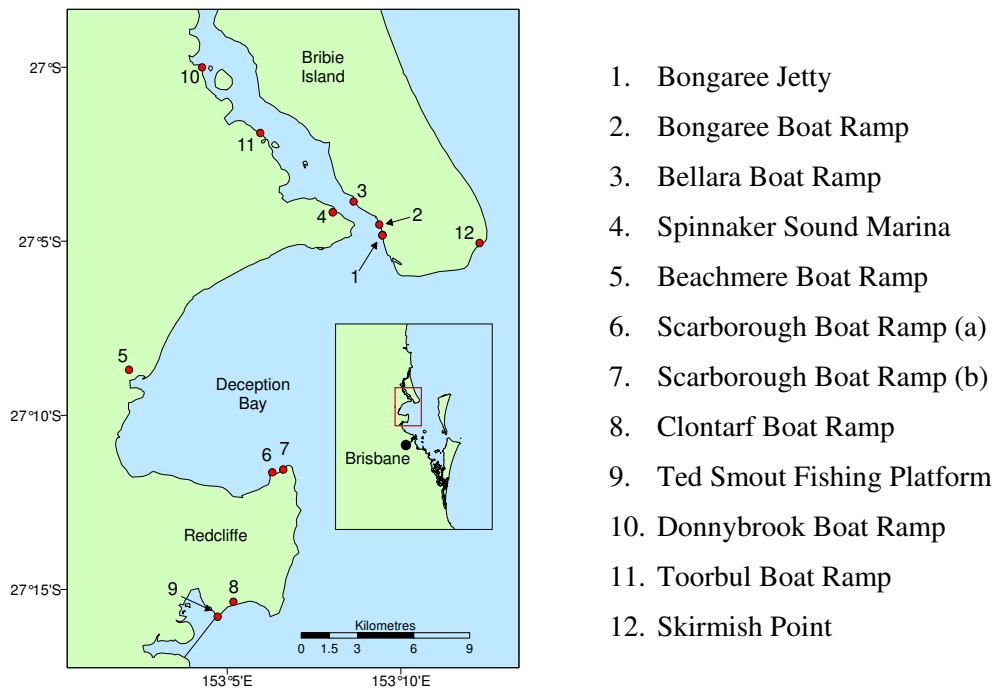


Figure 5: Location of the 12 Fishing Line Recovery Bins used to reduce recreational fishing tackle discarded into the environment.

On emptying, each bin was wiped down with disinfectant to ensure they were clean. Further, where necessary, the interior of the bins were washed to minimise any smell that may have resulted from discarded fish matter, especially residual bait left in bait bags.

2. Signage

During the project workshop, participants were asked to provide advice as to the contents of the signs that would be installed at the locations outlined in Figure 5. From these discussions a first draft was sent to

Communications staff within DAFF, who then provided a final draft. The signs were manufactured on Bribie Island by Island Signs.

3. *Radio Interview*

The PI sought an interview with Dave “Nugget” Downey, the popular host of *Talking Fishing*, broadcast weekly on Friday night and Saturday morning on 4BC (1116 kHz), and *Outback and Bay*, broadcast on the same radio station weekly on Sundays.

4. *Opportunistic Survey*

In order to further assess the impact of FLRBs, an *ad hoc* survey was formulated. The purpose of the survey was to collect information on the effectiveness of the FLRBs as an education method to highlight the issues associated with the discarding of unwanted fishing tackle into the environment.

Further, in response to item 4 of Schedule 3 – Special Conditions in the Project Agreement, the survey was also used to discover the behaviour and active fishing practices, apart from the discarding of fishing material, that participants felt adversely affected the environment adjacent to popular fishing locations within northern Moreton Bay.

Both recreational fishers and non-fishers were questioned at random, where possible. The survey was conducted on an opportunistic basis, in a non-structured way during conversations with people on Bongaree Jetty (Location 1, Figure 5) and at the boat ramps located at Spinnaker Sound Marina (Location 4), Clontarf boat ramp (Location 8), Beachmere (Location 5), Bellara (Location 3) and Donnybrook (Location 10) over the course of the FLRB project.

Although the survey was not intended to be structured, participants were asked the following questions during conversation:

1. Are you a recreational fisher?
2. Did you notice the FLRB?
3. Do you think the FLRB is a good way of highlighting the issue of discarded fishing tackle?
4. What method would be best for highlighting the issue?
5. What other issues do you feel should be addressed regarding recreational fishing and the environment?

5. *Media Articles*

Information regarding the project was sent to various media outlets via a media release dated 7 May 2013. The media release was written by Communications staff in collaboration with the PI.

6. *Project Webpage*

A webpage was designed in consultation with DAFF Communications staff informing interested people as to the purpose of the project.

Results and Discussion

Extent of seabird entanglement in northern Moreton Bay

In 2012, Twinnies Pelican and Seabird Rescue rescued and/or rehabilitated a total of 1063 birds, from 14 species (see Table 1).

These figures are based on bird rescues between the lower Sunshine Coast and the Redcliffe peninsula. The most rescued seabird injured as a result of interactions with fishing tackle was the Australian pelican, with 420 individuals in care during 2102 (Figure 6), three times as many as the next most rescued species – the white ibis (135).

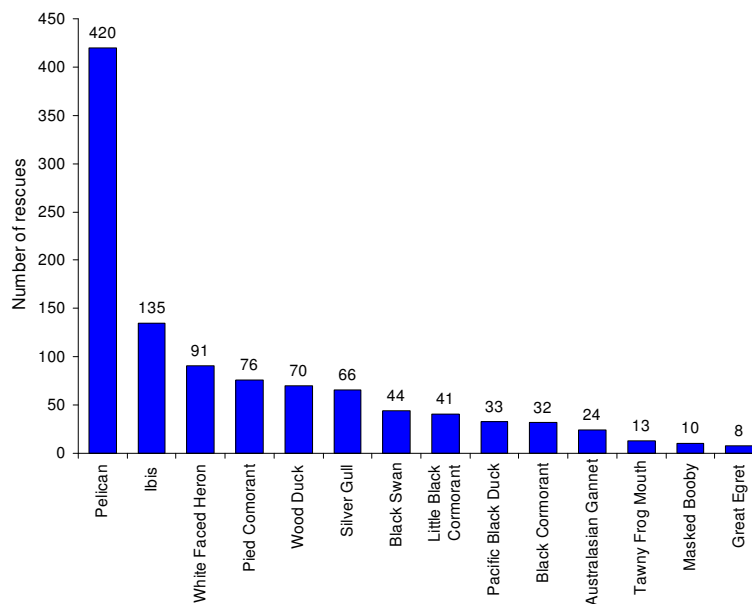
















Figure 6: Number of individuals by species rehabilitated by Twinnies Pelican and Seabird Rescue during 2012.

For all species, most of the injuries resulted from interactions with discarded fishing tackle, although some individuals were affected by active fishing where, for example, a fisher cast out his/her line and accidentally hooked/entangled a bird. All of these birds are characterised as water or wading birds apart from the tawny frogmouth, which is classified as insectivorous. Of all the birds affected by fishing tackle a total of 29 individuals (~3%) were euthanised or died of their injuries (Figure 7a). However, most (51%) birds were rehabilitated and released within two weeks, while the remaining 46% were released after extended rehabilitation. 18% of all birds rescued were found to have internal tackle (Figure 7b) which resulted in a higher proportion of deaths compared to birds subjected to injuries of the beak or feet (Figure 8).

Forty-six percent of all birds rehabilitated at Twinnies Pelican and Seabird Rescue were in care for over 2 weeks. During this time, antibiotics were administered where appropriate and all birds were cleaned and fed nutritious diets until release.

As such, 97% of all birds affected by fishing tackle can be rehabilitated and released. All birds affected with internal tackle injuries required Level 2 care. The majority of birds affected by injuries to wings or feet were released within two weeks of rescue, while those individuals with beak injuries were most likely to remain in care for between two and eight weeks (Figure 8). Examples of common injuries can be found in Figure 9.

Table 1: Common and scientific names of the 1063 (14 species) birds rescued and rehabilitated by Twinnies Pelican and Seabird Rescue as a result of interaction with discarded fishing tackle in 2012.

<p>Australasian gannet <i>Morus serrator</i></p>			<p>Pacific black duck <i>Anas superciliosa</i></p>
<p>Great cormorant <i>Phalacrocorax carbo</i></p>			<p>Australian pelican <i>Pelecanus conspicillatus</i></p>
<p>Black swan <i>Cygnus atratus</i></p>			<p>Pied cormorant <i>Phalacrocorax varius</i></p>
<p>Eastern great egret <i>Ardea modesta</i></p>			<p>Silver gull <i>Chroicocephalus novaehollandiae</i></p>
<p>White ibis <i>Threskiornis molucca</i></p>			<p>Tawny frogmouth <i>Podargus strigoides</i></p>
<p>Little black cormorant <i>Phalacrocorax sulcirostris</i></p>			<p>White-faced heron <i>Egretta novaehollandiae</i></p>
<p>Masked booby <i>Sula dactylatra</i></p>			<p>Wood duck <i>Chenonetta jubata</i></p>

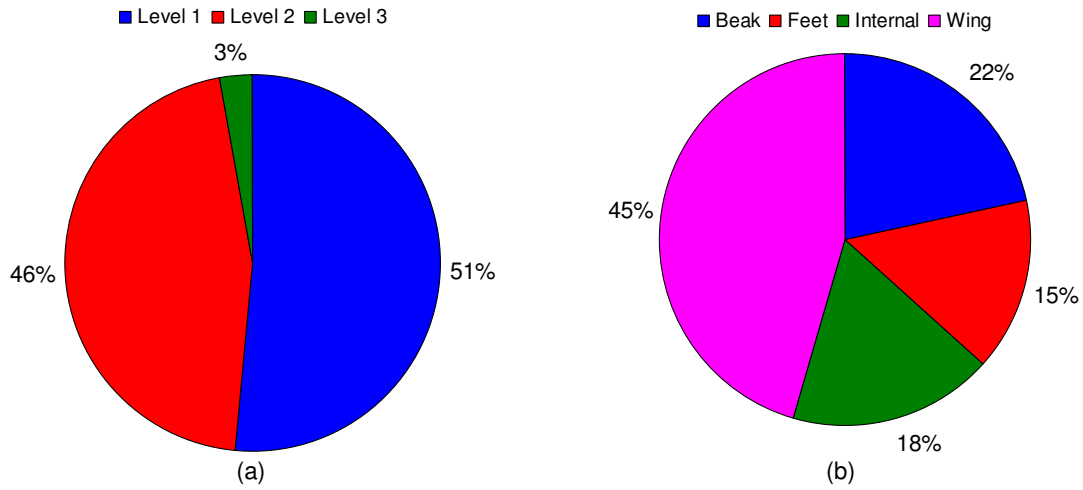


Figure 7: (a) level of rehabilitation required – where Level 1 is a short rehabilitation process (<2 weeks), Level 2 category birds are released after an extended rehabilitation process (up to 8 weeks) and Level 3 results in the death of the individual as a result of the injury sustained – for birds rehabilitated at Twinnies Pelican and Seabird Rescue and (b) injury location due to fishing tackle. Note this data relates to all species combined in 2012.

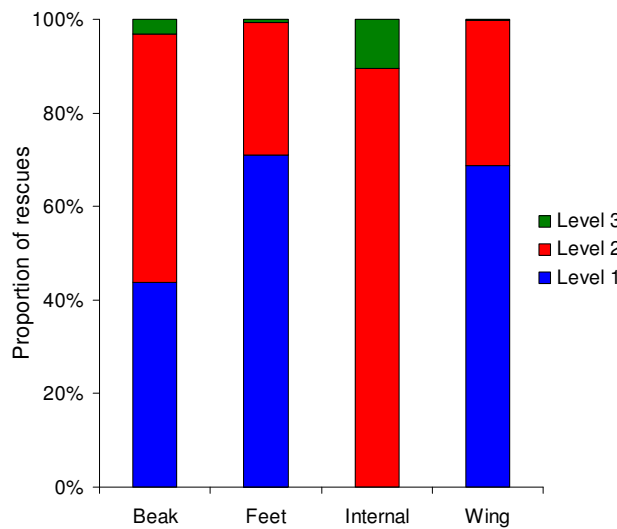


Figure 8: Level of rehabilitation required as a function of the body part affected of birds rescued due to interaction with fishing tackle and rehabilitated by Twinnies Pelican and Seabird Rescue. Note this data relates to all species combined in 2012.

Of the birds with internal tackle injuries, 10.5 % died or were euthanised, while only 3% of birds with injuries to the beak died as a result of their injuries. Those birds with foot or wing injuries were less likely to die as a result of interaction with fishing gear with only 0.6% and 0.2% mortality, respectively.

Those species most affected by internal tackle injuries – such as Great egrets, Australasian gannets, masked booby’s, little black cormorants, pied cormorants and black cormorants – are more likely to require extended periods of rehabilitation or die as a result of their injuries (Table 2). These species likely ingest baits being actively fished during feeding, particularly the cormorants which swim to the bottom and hunt small fish. As such, most fishers would “catch” these and cut the line when they realise what they have caught. Further, these species are also likely to ingest unattended baits in areas of high recreational fishing traffic such as the Bongaree Jetty. The practice of feeding undersize fish to these birds likely ‘trains’ the birds that an easy meal can be had by waiting close-by a recreational fisher and striking when the fisher is inattentive.

Table 2: Percentage of rescued birds by species as a function of a) body part affected and b) level of rehabilitation required – where Level 1 is a short rehabilitation process (less than 2 weeks), Level 2 is released after an extended rehabilitation process (up to 8 weeks) and Level 3 is death of the individual as a result of the injury sustained – for birds rehabilitated at Twinnies Pelican and Seabird Rescue in 2012.

(a) body part affected				Species (number in care in 2012)	(b) level of care required		
Beak	Feet	Internal	Wing		Level 1	Level 2	Level 3
13	16	11	60	Pelicans (420)	65	34	1
21	9	7	63	Ibis (135)	59	39	2
27	10	19	44	White Faced Heron (91)	51	44	5
33	1	42	24	Pied Cormorant (76)	14	78	8
16	34	13	37	Wood Duck (70)	64	36	0
32	16	14	38	Silver Gull (66)	54	41	5
43	21	18	18	Black Swan (44)	48	52	0
17	10	54	19	Little Black Cormorant (41)	7	85	8
39	45	9	7	Pacific Black Duck (33)	55	45	0
53	3	38	6	Black Cormorant (32)	6	91	3
8	13	58	21	Australasian Gannet (24)	0	92	8
8	15	0	77	Tawny Frog Mouth (13)	85	15	0
10	40	40	10	Masked Booby (10)	0	90	10
50	0	50	0	Giant Egret (8)	13	75	12

Both the masked booby and the Australasian gannet are large predatory seabirds that dive into the water and feed on baitfish. Both of these species are regularly encountered off Bribie Island and the Sunshine Coast feeding around the schools of tuna that frequent the area, particularly in the winter months. At this time, these birds dive at lures being retrieved at speed or at baits being fished close to the surface for both tuna and tailor. This would account for the high incidence of internal tackle injuries in these species.

There is conflicting advice as to what recreational fishers should do in the event of hooking a bird during active fishing. Some rescuers believe that the animal should be wound-in and an attempt made to remove the hook if it is easy to do so. Obviously if the hook has been swallowed, this is very difficult and, as such, the fisher should call the RSPCA Hotline. Some rescuers advise that the fisher should not attempt to wind the bird in but to cut the line and immediately call the RSPCA, no matter where the hook is located. As such, no advice is given as to what should be done in this situation on any extension material generated throughout the current project.

Those species most affected by wing injuries – such as tawny frogmouths, white-faced herons, ibis's and pelicans – are generally released within two weeks of being rescued. Pelicans, ibis and white-faced herons generally feed close to shore and are regularly observed along the shoreline in groups in the afternoon. As such, errant casts from shore-based recreational anglers can entangle these species. This is particularly the case for occasional anglers who have little skill in casting accurately.

Further, fishing line that is snagged on various hazards such as rocks, powerlines, mangroves, etc, is usually left in place by fishers. Powerlines and mangroves adjacent to any shore based fishing location such as bridges or jetties often support various amounts of discarded fishing line. Unfortunately, such places are also perches for feeding seabirds. This would certainly account for the high number of wing and feet entanglements of birds such cormorants, ducks and silver gulls. Further, lights adjacent to such places will attract insects which, in turn, attract insectivorous birds such as the tawny frogmouth. It is vital that any fishing line be removed from such locations.

Stakeholder Workshop

The stakeholder workshop was held at the Bribie Island Research Centre on 13 February 2013. Minutes from the workshop can be found in Appendix 3 on page 34.

In summary, workshop participants were informed of the objectives of the project. A short PowerPoint slideshow was presented, reviewing some results from the rescue agencies. Lidia Davidovics (NICA) and Debra Henry (Oceanwatch Australia) presented results from their respective fishing line bin programs. The benefits of a fishing line recovery bin program were discussed and a consensus was reached that such a

program would be a good way to highlight the issues of seabird entanglement. The action items from the workshop are highlighted in the minutes in Appendix 3 (page 34).



Figure 9: Some examples of the injuries and entanglements that occur as a result of recreational fishing – (a) hook and sinker in the bill of a pelican; (b) feet entanglement of a pelican (note the feather quills in the tangle); (c) feet entanglement of an ibis; (d) hook caught in the beak of a pied cormorant; (e) lure caught in the beak of a juvenile silver gull; and (f) line tangled around the foot of a white-faced heron. All photos courtesy of Pelican and Seabird Rescue Inc, Capalaba, Queensland.

Responsible removal of discarded fishing tackle

1. Fishing Line Recovery Bins

Fishing Line Recovery Bins (FLRBs) were installed in April 2013 and were serviced weekly for 27 weeks at the time of writing. After 2 weeks, the FLRB at Skirmish Point (Location 12, Figure 5) was removed after it was vandalised for a second time. At this location, there were no council general waste bins present and, as such, the FLRB was full of general waste. During the second week of the program, the FLRB had been removed from its mounting bracket and was found on the ground. It was decided at this point to remove the FLRB.

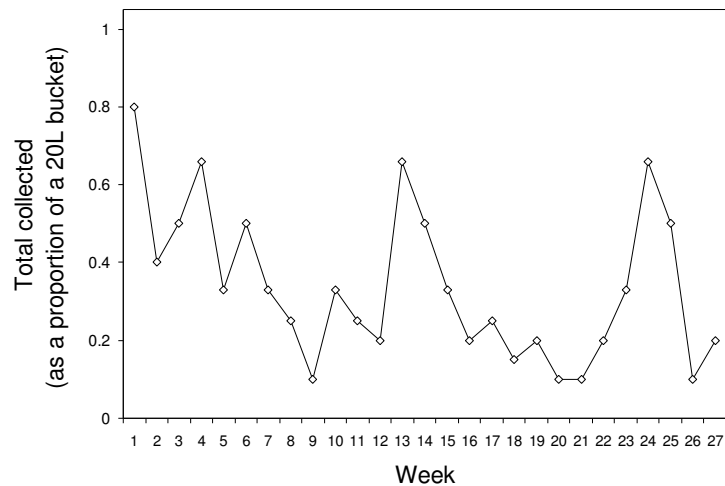


Figure 10: Total discarded fishing waste – fishing line, fishing tackle and bait bags – observed during weekly sampling of bin contents. The amount of fishing waste was calculated as the proportion of a 20L bucket used throughout the project to collect bin contents.

In general, all bins contained a mixture of discarded fishing tackle and general waste with the total amount of fishing tackle collected decreasing over the course of the program. However, significant increases were observed during the school holidays in weeks 13/14 and weeks 23/24 (see Figure 10). This pattern was also evident in the occurrence of fishing line in the bins (Figure 11). FLRBs located at the Bongaree Jetty and the boat ramps at Spinnaker Sound Marina, Beachmere and Donnybrook most likely to contain discarded fishing line. The FLRB at the Bongaree Jetty contained the most line, however on 3 occasions the cap was stolen and the bin emptied. This resulted in the slight decrease in the occurrence of fishing line evident in Figure 11. The FLRBs at the Bongaree boat ramp (Location 2) and the Ted Smout Bridge Fishing Platform (Location 9) had consistently less fishing line than the remaining bins, all of which contained fishing line on about a third of the occasions they were serviced.

The fishing line was mostly (~95%) monofilament nylon, with the FLRBs rarely containing the more expensive braided or gelspun polyethylene. This is likely a function of the fact that the experienced fishers who use these expensive lines are less likely to discard fishing line. Conversely, those fishers more likely to discard fishing line into the environment use the cheaper monofilament lines and fish only occasionally. Further, given the braided and gelspun polyethylene lines are more expensive, fishers are more likely to salvage tangled line rather than discard it as is the case with the cheaper monofilament. The retention of modern polyethylene lines is fortunate as these small diameter and high breaking strain lines result in more severely injured birds, compared to monofilament line (Nat Forrest – Pelican and Seabird Rescue, pers. comm.).

The number of FLRBs containing fishing line has decreased over time (Figure 11). It was evident that, initially, fishing line that had been discarded prior to the installation of the bins was being placed in the bins, most likely by non-fishers. During the early stages of the FLRB program it was possible to collect discarded fishing line adjacent to the FLRBs at most locations. Recently, however, the amount of discarded fishing line and other tackle on the ground has decreased significantly. It is likely that the presence of the FLRBs, in combination with signage, is having a positive effect.

Fishing tackle retrieved from the FLRBs mostly consisted of hooks, although swivels and sinkers were common. Discarded fishing tackle was encountered between 30% and 50% of the time (see Figure 11) that bins were checked, although the FLRBs at Clontarf (Locations 8 and 9) were less likely to have discarded fishing tackle. Further, the bins were likely to contain bait bags only about 10-25% of the time. The bait bags often contained unused bait and, as such, the bins were cleaned on a weekly basis with disinfectant spray and wipes. This practice ensured that people were not deterred from using the bin due to hygiene issues.

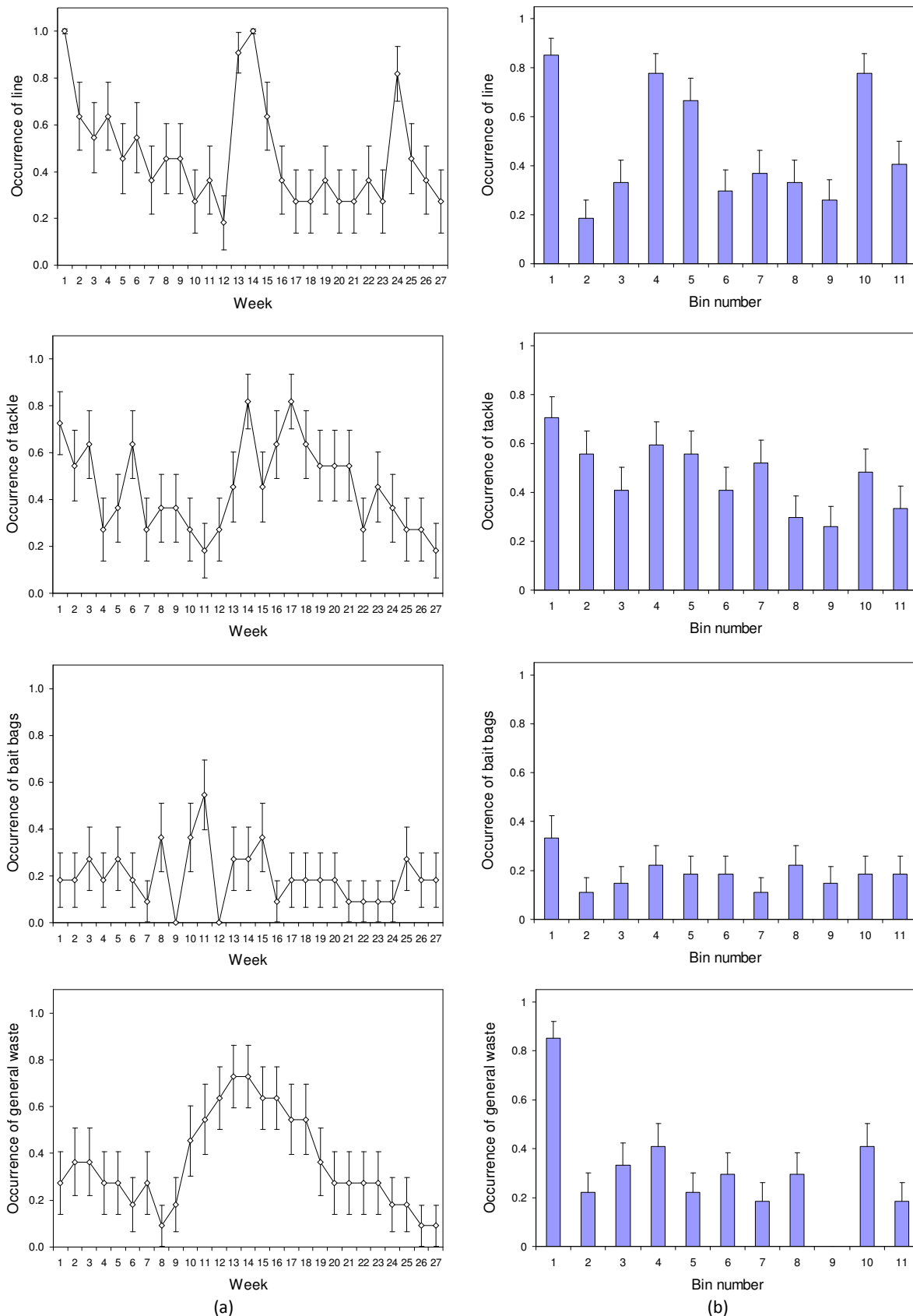


Figure 11: Occurrence of fishing line, fishing tackle (hooks, etc), bait bags and non-fishing waste in bins as a function of (a) sampling week and (b) bin location from Figure 5.

General waste was an issue for most FLRBs during the course of the program. This was more likely to be an issue if the council-maintained waste bins adjacent to the FLRBs were full. For example, a triathlon was held at Pelican Park where the Clontarf FLRB (Location 8) is located. Consequently, all of the council bins were full as was the FLRB. Similarly, the FLRB located at Skirmish Point represented the only waste receptacle at

that location, resulting in that bin being full of general waste, including used nappies. General waste was least likely in the FLRBs located at the Scarborough boat ramps (Locations 6 and 7) and at the Ted Smout Bridge Fishing Platform (Location 9). Bongaree Jetty (location 1) and Donnybrook boat ramp (Location 10) were the most likely to contain general waste when inspected.

There was a noticeable reduction in the amount of general waste observed in the FLRBs after the installation of the signs during weeks 21 and 22. Given that most of the FLRBs were in very close proximity to the signs, it appears the signs had a positive effect, informing both fishers and non-fishers as to the purpose of the FLRBs. Although the stickers located on the FLRBs gave some indication as to the purpose of the bin, the signs reinforced the message. For example, during the FLRB servicing during week 23 no general waste was found in the FLRB at the Beachmere boat ramp (Location 5) despite the council bins overflowing with general waste.

Overall, the FLRB program was successful in removing discarded fishing tackle from the environment. However, secondarily – and, arguably, more importantly – the FLRB program also made people aware of the issue of seabird entanglements. The installation of the signs at these locations provided further information and, since the signs were installed, the FLRBs have contained significantly less general waste. As such, environmental groups, particularly the Bribie Island Environmental Protection Association (BIEPA) and Twinnies Pelican and Seabird Rescue, were very supportive of the program. As stated earlier, hundreds of birds are affected by discarded fishing tackle annually. This program will likely contribute to reductions in the number of birds affected.

Some bins were more effective than others, with the Bongaree Jetty bin providing the most discarded fishing tackle despite this bin having its cap removed on several occasions. This bin was also the subject of significant vandalism, second only to the bin located at, and subsequently removed from, Skirmish Point. The Bongaree Jetty was the most frequented fishing location in the study area and hosted recreational fishers every day and night over the course of the FLRB program. This location is also popular with non-fishers who use the jetty to observe wildlife such as dolphins and turtles or for swimming. To these users, discarded fishing hooks present a hazard, particularly for children with bare feet. This, along with the decrease in the aesthetic experience due to the discarded fishing line and fish and weed from cast-netting, reflects poorly on recreational anglers. Such issues should be addressed to ensure the continued use of the jetty for recreational fishing.

In order to ensure the continued use of the FLRB at the Bongaree Jetty, the bin was modified with a padlock. This modification involved cutting a slot immediately above the cap along with a hole through both the cap and threaded section of the end section (see Figure 12). It was initially thought that such a modification would encourage vandals to severely damage the bin if they were unable to remove just the cap and discard it, thereby satisfying any vandalistic urge with only a minimum of damage. However, after the third cap was removed, it was decided to make the modification. At the time of writing, the FLRB is still in place.

However, as the temperature has increased through spring, people have been using the FLRB as a step to gain access the roof of the jetty from which to jump into the water. This has resulted in some damage to the attachment brackets which were replaced in week 28.

It is likely that non-fishers deposited a high proportion of the fishing line found in the FLRBs. For example, whilst cleaning one of the Scarborough boat ramp bins, I spoke with two people who specifically walked around picking up fishing line and placing it into the FLRB. Further, responsible recreational anglers also remove discarded fishing tackle to FLRBs. For example, a recreational angler at the Bongaree Jetty gathered all of the discarded fishing line from the entire jetty and deposited it into the FLRB before the regular collection on Mondays. Further, one group of non-fishers meet at the Bongaree Jetty every morning to socialise. This group usually picks up a few items of discarded fishing tackle and place it in the FLRB.

Given the amount of fishing line observed in the FLRBs has decreased, it appears fishers are less likely to discard fishing line and other tackle now that the bins and signs have been installed. Fishers are now using the FLRBs to dispose of unwanted fishing tackle rather than non-fishers using the bins to dispose of fishing line that had been discarded incorrectly by recreational fishers. This is a significant, positive effect of the project.

This program provides some evidence that Dr. Barry Pollock was correct when he said that the issue of discarded fishing tackle is likely due to a minority of fishers. Discussions with hundreds of recreational anglers have revealed that most do the right thing and dispose of unwanted tackle responsibly. Recreational fishers are a reflection of society – people from all sections of the community fish recreationally – and there will always be a small proportion of the community who will discard fishing tackle irresponsibly, no matter what is done to highlight the consequences of this practice.

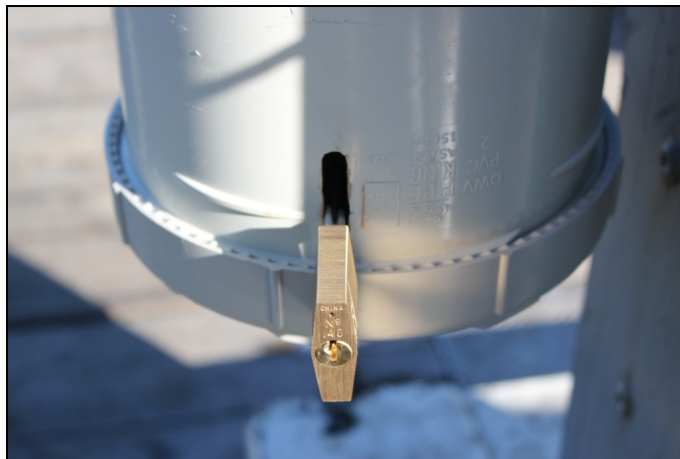


Figure 12: Modification made to the Bongaree Jetty FLRB to deter vandals.

2. Signage

Below is the sign installed at popular fishing locations in northern Moreton Bay.



Figure 13: Design of the 12 signs installed at the locations described in Figure 5. The signs were designed by DAFF Communications staff after input from project workshop participants. This particular sign is located at Spinnaker Sound Marina. The Bribie Island Bridge can be seen in the background at lower right.

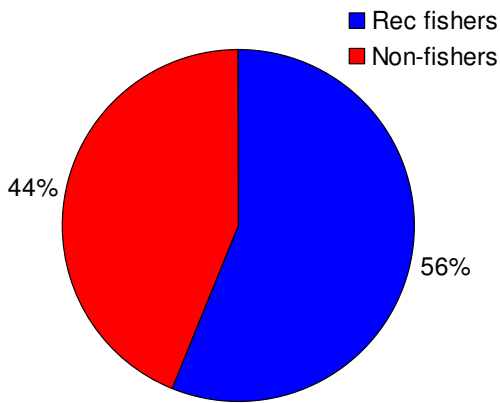
2. Radio Interview

The Principal Investigator was interviewed by Dave “Nugget” Downey during the popular 4BC radio program, Outback and Bay, on Sunday 12 May, 2013. A transcript of the interview can be found in Appendix 4 on page 35.

3. Opportunistic Survey

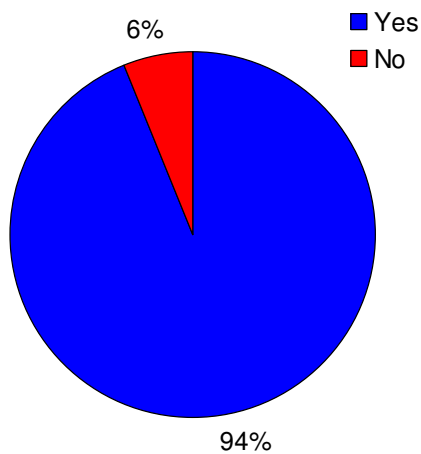
A total of 173 people were interviewed over the course of the FLRB program. Below is an analysis of the results of the survey.

1. Are you a recreational fisher?



As expected, the survey participants were a mixture of recreational anglers and non-fishers. Most surveys were conducted during business hours through the week which likely resulted in the high proportion of non-fishers surveyed, particularly on the Bongaree Jetty. At night, the proportion of non-fishers would have been significantly lower. Most non-fishers at boat ramps were there to launch non-fishing vessels such as jetskis and yachts, while non-fishers at the Bongaree Jetty and the Ted Smout Bridge were sightseers hoping to see animals such as birds, turtles and dugongs.

2. Did you notice the FLRB?

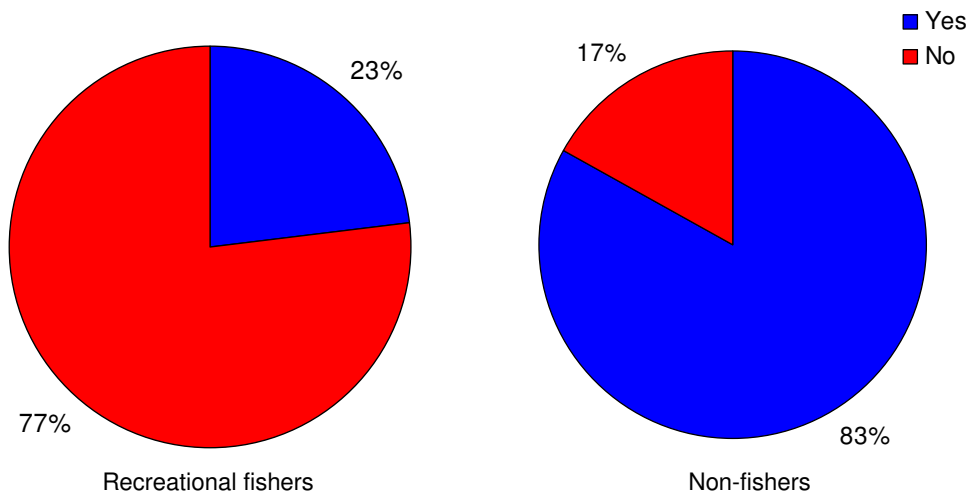


It was encouraging that most of the people that were in close proximity to the FLRBs had seen the devices. Of the people that had seen them, most (~80%) had read the sticker to ascertain the purpose of the FLRBs.

The location of the devices, close to general waste bins, proved to be prudent, with some people noticing the FLRBs when depositing general waste in the council waste bins.

Quite a few recreational fishers made the point that regular fishers do not use general waste bins and secure rubbish for disposal at either their homes or at car/boat wash facilities on their way home.

3. Do you think the FLRB is a good way of highlighting the issue of discarded fishing tackle?

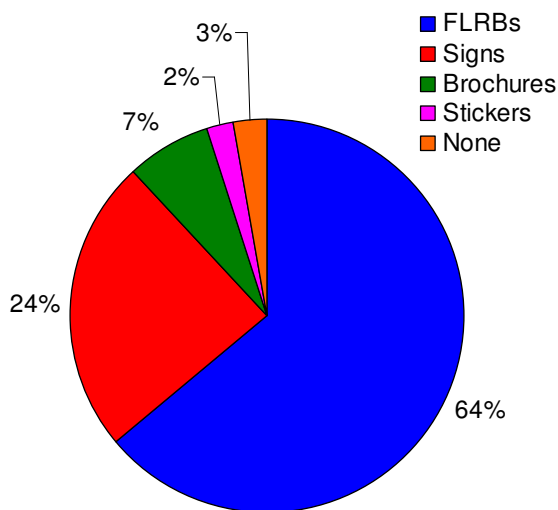


Most people surveyed were interested in the design of the FLRBs and asked if they were being used correctly. Most recreational fishers surveyed thought that the FLRBs were not a good idea, with numerous recreational fishers stating that they were “a typical waste of taxpayers’ money!”. Most negative comments regarding the FLRBs came from shore-based anglers, particularly from the Bongaree Jetty. Several of these anglers were adamant that the FLRB on the jetty was a bad idea as they feared the bin would be vandalised. This turned out to be the case, with the Bongaree Jetty FLRB being the most vandalised bin in the program. However, this bin also provided the most discarded fishing tackle of any bin.

The positive feedback from recreational anglers came primarily from experienced anglers. This reinforces the adage of keen recreational anglers being “stewards of the sea”. This also reinforced the perception that “most” recreational anglers dispose of their fishing tackle responsibly, while a small percentage of

recreational fishers carelessly discard their fishing tackle in the environment. The latter group are most likely occasional fishers. Non-fishers were much more likely to report that the FLRBs were a good idea and were happy something was being done to mitigate the issues surrounding the discarding of fishing tackle.

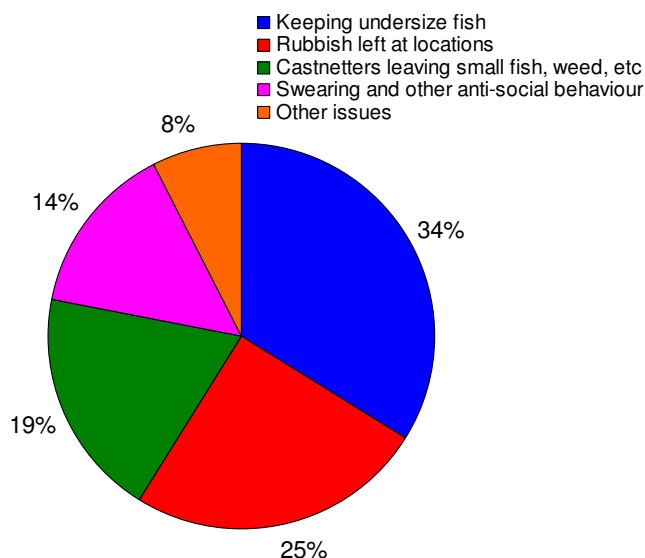
4. What method would be best for highlighting the issue?



Of those people surveyed, 64% thought that the FLRBs were the best method to highlight the issue of discarded fishing tackle and its effect on the environment. Most of the recreational anglers surveyed near a boat ramp noted that they hadn't seen any of the existing signs (that will be replaced as part of the current project) despite signs being present nearby. However, most of the non-fishers surveyed in these areas had seen the existing signs. As such, 24% of survey respondents thought that relevant signage was the best method to highlight the issue. Further, most respondents that did see the existing signs noted that the pelican pictured on the signs was a species not found in the study area – an Eastern brown pelican (*Pelecanus occidentalis*) found in the south-east of the United States.

Brochures and stickers were considered to be of least use in highlighting the issue of discarded fishing tackle. This reinforces the need to maintain the current FLRB program in northern Moreton Bay as a method of educating recreational anglers as to the consequences of carelessly discarding fishing tackle.

5. What other issues do you feel should be addressed regarding recreational fishing and the environment?



Most recreational fishers surveyed reported that keeping undersize fish is an issue that needed attention. This was particularly an issue on the Bongaree Jetty. Further, for a high proportion of undersize fish released, most recreational anglers surveyed felt that very few would survive long-term due to poor handling practices. The two species most often mentioned in relation to this issue was the yellowfin bream (*Acanthopagrus australis*) and mullet (*Argyrosomus hololepidotus*). In recent years, juvenile mullet numbers have increased dramatically as a result of an increase in the minimum legal size from 45cm TL to 75cm.

As such, occasional recreational anglers are capturing fish around 65cm and, to uninformed fishers, a large 65cm fish is a prize despite the fact that it is illegal to keep mullet at this size. Many recreational anglers surveyed felt a sign displaying the common fish targeted along with bag and size limits was a good idea.

A quarter of all survey respondents felt that rubbish, mostly in the form of empty bottles and/or food wrappers, is an important issue. Recreational anglers surveyed felt that this reflected poorly on all recreational fishers despite a small minority being responsible. Non-fishers surveyed also thought that this was an issue.

Recreational anglers and non-fishers highlighted the unwanted bycatch from castnetting being left on Bongaree Jetty and on the Bribie Bridge (see Figure 14, Figure 16 and Figure 16). From personal

observation, the bycatch is mostly small toads (*Torquigener* spp.) left on the jetty and also on the Bribie Island Bridge. Further, large amounts of eel grass are common on the jetty and the bridge as a result of cast-netting for bait in the form of mullet and prawns. Once again, recreational anglers felt that this reflected poorly on all fishers, while non-fishers often made the point that it was “unsightly and smelly.”

Figure 14, Figure 15 and Figure 16 show the result of a night’s cast-netting on the Bribie Island Bridge. The bridge walkway is frequented by non-fishers and is the only way to access Bribie Island from the mainland. As the bridge is lit, it is a popular location for castnetters at night, despite the fact that fishing is illegal from the bridge. The walkway on the bridge is narrow and is often littered with the discards from castnetting activities that are undertaken at night (Figure 15, Figure 16). These discards are made up of rubble and small fish (see Figure 15), which is often the subject of complaint by cyclists who worry about rubble causing flat tyres. Further, such litter has been the subject of numerous “Letters to the Editor” in local papers, complaining about the fact that fishers fish on the bridge despite signs saying it is illegal to do so. Further, given the walkway is very narrow, cyclists have difficulty in manoeuvring around fishers. Similarly, the roadway is often strewn with rubble, discarded from castnets (Figure 15 and Figure 16).

Another issue raised by survey participants, particularly non-fishers, was swearing and other anti-social behaviour. Parents with children reported that fishers were often heard swearing in proximity to non-fishers walking on Bongaree Jetty, for example. Further, Moreton Bay Regional Council observed several fist fights involving recreational anglers on Bongaree Jetty via the closed circuit television (CCTV) system installed on the jetty. Many anglers are present on the jetty on Friday and Saturday nights and most of the vandalism inflicted on the Bongaree Jetty FLRB occurred on the weekend, late at night. It should be made clear at this point that the vandalism of the FLRB was likely perpetrated by non-fishers. CCTV footage revealed that the cap of the Bongaree Jetty FLRB was removed and discarded by two men on bicycles at 3:30am on Thursday 12/7/13. Further, at 12:30am on the 27/6/13, a youth (approximately 16 years old) kicked the bin off its mounts. On both occasions, these people were not fishing at the time and only appeared on the jetty for a short period. Both of these incidents were reported to police, as were a few others where the cap from the Bongaree Jetty was removed.

Most survey participants who nominated keeping undersize fish as being an issue felt that signage displaying the legal size and bag limits for the species likely to be encountered in the area was worthwhile combined with a higher presence of fisheries patrol officers to educate occasional recreational fishers about bag and size limits. Further, non-fishers felt that a high police presence on the weekends was appropriate, especially at night while nearby restaurants were operating.

Other issues that were nominated by survey participants included 1) the lack of appropriate lighting on vessels at night; 2) boats travelling close to turtles, dugongs and dolphins; and 3) fishers not giving way to boats on jetties and boat ramp pontoons (particularly at Beachmere).

The practice of discarding bycatch fish and other unwanted material, such as weed, from cast-netting activities, fishers leaving unwanted bait at their fishing location and the feeding of undersize/unwanted fish to birds all attract birds to fishing locations. These practices are likely to teach birds that an easy meal can be attained by waiting near recreational fishers. Obviously, should a baited line be left unattended, birds are likely to attempt to consume the bait and ingest hooks or become tangled in fishing line. This phenomenon can be observed at any cleaning table adjacent to boat ramps, where pelicans linger waiting for an easy meal. This also occurs at the Bongaree Jetty, where fishers are regularly observed offering undersize fish to waiting pelicans.

These practices are likely to contribute to the issue of seabird entanglement and should be discouraged.



Figure 14: The Bribie Island Bridge is a popular recreational fishing venue despite the fact that fishing is not allowed on the bridge. The photo at left depicts a large toad (*Lagocephalus* spp.) discarded on the bridge adjacent to the platform from which fishing occurs. On this day, there were also two flat-tail mullet (*Liza argentea*, below) on the road, along with discarded bottles and fishing line (below left). These pictures reinforce the issues highlighted by survey participants regarding recreational fishing and its impact on the environment.



Figure 15: Discarded rubble and a small toadfish (*Torquigener* sp.) from cast-netting activities undertaken on the Bribie Island Bridge.



Figure 16: The western side of the Bribie Island Bridge showing the discarded rubble and weed from cast-netting activities left on the roadside and on the walkway.

4. *Media articles*

The media release developed as part of the project was widely disseminated. Figure 21 shows the media release as it was posted on the recreational fishing website Ausfish⁶. The media release also appeared on the website of the recreational fishing magazine Fishing World (Figure 17). Further, the media release also appeared in the following publications:

- The Gympie Times (10 May 2013, p 26);
- The Bribie Weekly (10 May 2013, p 9);
- The Ayr Advocate (17 May 2013, p 10);
- The Herbert River Express (15 May 2013, p 4);
- Whitsunday Guardian (15 May 2013, p 33);
- The Sunday Mail (9 June 2013, p 78);
- Bush and Beach (June 2013, p 8); and
- Queensland Fishing Monthly (August 2013, p 46);

The media release also appeared on the Fishing Monthly Facebook page (<https://www.facebook.com/FishingMonthlyGroup>), the Fishing and Boating Tasmania webpage (<http://www.fishingboatingtasmania.com.au/forum/index.php?topic=5266.0>) and the Marine Queensland webpage (<http://www.marineqld.com.au/MQ-News/dispose-of-fishing-gear-in-bins-to-protect-seabirds>).

During May 2013, an article appeared on the website of the Redcliffe and Bayside Herald (Figure 18) reporting the story of a couple who had found a small green turtle tangled in fishing line. The journalist was contacted by project staff in order to highlight the objectives of the current project. Subsequently, project staff were asked for further information and a small article was published on the website and also in the May 29 2013 edition on page 11 (Figure 19).

⁶ <http://www.ausfish.com.au/vforum/showthread.php?192301-Dispose-of-fishing-gear-in-bins-to-protect-seabirds>

home > news > Latest News

Fishos urged to use line disposal bins

09 May 2013

REC fishers are being encouraged to responsibly dispose of unwanted fishing gear to protect seabirds from serious injury.

Fisheries biologist with the Department of Agriculture, Fisheries and Forestry (DAFF) Matthew Campbell is leading a research and extension project that is trialling fishing line recovery bins at popular jetties and boat ramps across northern Moreton Bay in south-east Queensland.

"Wildlife rescue agencies are reporting an increasing number of rescued seabirds being found entangled in discarded recreational fishing gear," Mr Campbell said.

"Seabirds can suffer terrible injuries when fishing lines are caught on limbs and wings or when hooks and other tackle are swallowed.

"The majority of entanglements involve seagulls, pelicans, terns, cormorants and darters although other species such as ibis and magpies have also been affected.

"While most fishers do the right thing by disposing of unwanted fishing gear in a responsible manner, those that dump it in the water or on shore are putting seabirds at risk."

Mr Campbell said the bins were being installed by DAFF with the support of peak recreational fishing body Sunfish Queensland and funding from the Fisheries Research and Development Corporation.

"The bins can be found at popular shore-based fishing sites including Redcliffe, Woody Point and Bongaree jetties, Ted Smout Bridge and a number of local boat ramps," he said.

"Fishers can dispose of fishing line, hooks and plastic bait bags in the bins.

"The bin contents are then secured in sturdy canvas bags for disposal at council waste facilities to prevent scavenging birds such as ibis from being affected by bin contents.

"Hooks and sinkers are recycled where appropriate."

Mr Campbell said the research component of the project would look into the species and number of birds being entangled and other methods to reduce or prevent the incidence of injuries from occurring.

Reports about injured birds should be made to the RSPCA hotline on 1300 264 625, who will alert a seabird rescue agency.

For more tips on responsible fishing visit www.fisheries.qld.gov.au or follow www.facebook.com/Fisheries Queensland or www.twitter.com/fisheriesQLD.



A fishing line recovery bin. Image: Department of Agriculture, Fisheries and Forestry

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Wade Macdonald on Opinion: Conservation...
- 11:02AM "Thx Martin great message and love the passion. I'm in your camp - I agree with the proposed bag/length amendme..."
Shane on Opinion: Conservation shouldn't...
- 10:05AM "A great article Martin, The general level of debate, with exceptions from rec fishos and their 'lobbyists' (wh..."
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practical >>

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- > Spinning softies off the stones
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Figure 17: Project media release on the Fishing World website.

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COMMUNITY NEWSPAPERS
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MORETON NEWS Caboolture Herald North Lakes Times Northern Times Pine Rivers Press Redcliffe & Bayside Herald

Silent killer strikes turtles and other marine life in Moreton Bay ADVERTISEMENT

JAMIE-LEIGH MASON, REDCLIFFE & BAYSIDE HERALD • QUEST NEWSPAPERS • MAY 20, 2013 12:00AM 14

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A man and a pregnant woman tried to rescue a turtle from a fishing net at Woody Point. *Source:* Quest Newspapers

The death of a turtle in Moreton Bay has highlighted the danger fishing line can pose for marine life and birds.

Figures from the Department of Environment and Heritage Protection show fisheries-related activities and foreign materials as one of the main causes for turtle deaths in Moreton Bay.

The most recent death came on Monday, May 13 when a turtle missing one flipper was found wrapped in fishing line near the jetty at Woody Point, on the Redcliffe Peninsula, north of Brisbane.

The turtle was taken to Australia Zoo Wildlife Hospital for treatment but his injuries were too severe, meaning there was no hope of successful rehabilitation or release.

Dr Claude Lacasse from the Australia Zoo Wildlife Hospital said the turtle was missing its left hind flipper and one of the front flippers had become necrotic as a result of being tangled in a fishing line.

"While we've had success in the past rehabilitating turtles with only three flippers, in this case the necrotic front flipper would also have needed to be amputated," Dr Lacasse said.

"Unfortunately the turtle would not have been able to survive in the wild with only two flippers, and euthanasia was our only option."

Dr Lacasse said a large number of sea turtles were admitted to the Australia Zoo Wildlife Hospital after coming into conflict with fishing tackle and equipment, and therefore urged people to be responsible and clean up around local waterways.

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1. Grief for locals just trying to sleep
2. Injury doesn't stop this Tate of Origin
3. T2 lane move useless, says expert
4. Origin stoush spills on to the road
5. Maori Wardens arrive in Brisbane

WHAT'S ON

Harry's Trivia
Norman Park Sports Club, 43 Norman Avenue, Norman Park 4170
17/07 | 7:30pm

Musical Landscapes of Lihir
Anthropology Museum, Level 1 Michie Building, Chancellors Place, University of QLD, St Lucia
17/07 | 11am

Tapas, Paella & Sangria Cooking Class at Spring
Spring restaurant, 26 Felix St, Brisbane
17/07 | 6:30pm


Visit Brisbane's home to the stars
Sir Thomas Brisbane Planetarium, Mt Coot-tha Road, Toowong
17/07 | 11am

Walking For Pleasure Walk Circuits
Various Locations and times - see website.
17/07 | 8am
Spring restaurant, 26 Felix St, Brisbane
17/07 | 6:30pm

Visit Brisbane's home to the stars
Sir Thomas Brisbane Planetarium, Mt Coot-tha Road, Toowong
17/07 | 11am

Walking For Pleasure Walk Circuits
Various Locations and times - see website.
17/07 | 8am

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Figure 18: An article that appeared on the website of the Redcliffe and Bayside Herald on 20 May 2013.

Tangled lines a death trap for wildlife in bay

THE death of a turtle caught in fishing line at Woody Point has prompted biologist Matthew Campbell to make a desperate plea with recreational fishers to help protect wildlife.

The turtle found near the jetty on Monday, May 13 was missing its left hind flipper as a result of being tangled in a fishing line. Fishing line was also tangled around one of the front flippers, which had become necrotic.

Australia Zoo Wildlife Hospital manager Dr. Claude Lacasse said the turtle had to be euthanased due to the extent of the injuries and was only one of many sea turtles admitted to Australia Zoo Wildlife Hospital because of injuries caused by fishing line.

It is a similar situation with seabirds on the Peninsula.

Fisheries biologist Matthew Campbell with the Department of Agriculture, Fisheries and Forestry said



NYLON MENACE: Fisheries biologist Matthew Campbell is campaigning against fishing line killing turtles and seabirds.

something had to be done to reverse fishing line injuries and deaths.

Mr Campbell is leading a research and extension project that is trialling fishing line recovery bins at jetties and boat ramps across the Peninsula and northern Moreton Bay.

"Wildlife rescue agencies are reporting an increasing number of rescued seabirds being found entangled in discarded recreational fishing gear," Mr Campbell said.

"Seabirds can suffer terrible injuries when fishing lines are caught on limbs and wings or when hooks and other tackle are swallowed."


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MORETON NEWS

Colombian Herald North Lakes Times The Sun Press Brisbane Herald

Project to save turtles from silent killer in Moreton Bay

JAMIE LEIGH MASON, REDCLIFFE & BAYSIDE HERALD • MAY 27, 2013 12:00AM



A biologist is leading a research project to trial fishing line recovery bins at jetties and boat ramps in a bid to reduce the number of turtles, birds and other marine life killed by fishing line.

The death of a turtle caught in fishing line at Woody Point has prompted biologist Matthew Campbell to make a desperate plea with recreational fishers to help protect wildlife.

The turtle found near the jetty on Monday, May 13 was missing its left hind flipper as a result of being tangled in a fishing line. Fishing line was also tangled around one of the front flippers, which had become necrotic.

MOST READ

1. Speedy cyclists told 'take chill pill'
2. Little boy Blue beats all odds
3. All aboard train to Redcliffe
4. Hey sailor, throw us a boomerang
5. Lost a treasure? This guy found it

WHAT'S ON

- Camp Quality Dine at Mine**
Your Home! 2:00P
- Musical Landscapes of Lihir**
Anthropology Museum, Level 1 Michie Building, Chancellors Place, University of QLD, St Lucia 2:00P-3:30P
- Toohay Forest Evening Walk Circuit - Walking For Pleasure**
Meet QES Hospital car park, USD Map 200 H 11 2:00P-3:30P
- Visit Brisbane's home to the stars**
Sir Thomas Brisbane Planetarium, Mt Cootiba Road, Toombul 2:00P-3:30P
- Walking For Pleasure Walk Circuits**
Various locations around Brisbane (see website) 2:00P-3:30P

See all »

SPONSORED LINKS

Figure 19: Newspaper article that appeared in the Redcliffe and Bayside Herald on 29 May 2013 and the corresponding web-based article published in response to the article regarding a sea turtle injured as a result of fishing line entanglement (see Figure 18).

5. Project Webpage

A screen shot of the Webpage developed specifically for the project in cooperation with DAFF Communications staff, Sacha Kitson can be found in Appendix 5 on page 38. The webpage was uploaded to the DAFF website on 13 March 2013 and can be found here:-

<http://www.daff.qld.gov.au/fisheries/research/research-projects/responsible-disposal-of-fishing-gear>.

Conclusion

Objective 1: Quantify the extent of seabird entanglement in northern Moreton Bay

In 2012, in excess of 1,000 birds were rehabilitated as a consequence of interactions with recreational fishing tackle. Rescue agencies suggest that unwanted fishing tackle that has been discarded into the environment in an irresponsible manner is the primary cause of these interactions. The Australian pelican (*Pelecanus conspicillatus*) was the most common species requiring rescue and rehabilitation, although significant numbers (>50 individuals) of ibis (*Threskiornis molucca*), white-faced herons (*Egretta novaehollandiae*), pied cormorants (*Phalacrocorax varius*), wood ducks (*Chenonetta jubata*) and silver gulls (*Chroicocephalus novaehollandiae*) were rescued in 2012 as a result of interactions with recreational fishing tackle.

Fortunately, only approximately 3% of the birds affected by discarded recreational fishing tackle die as a result of their injuries. Injuries from ingested tackle resulted in the highest mortality rates compared to wing, feet and beak injuries. Birds presenting with wing and feet injuries were likely to be released within two weeks of rescue, while birds presenting with beak or internal injuries required more care and, if they lived, were released after up to 8 weeks of rehabilitation.

These figures are from one rescue and rehabilitation agency and, as such, many more birds are likely to be affected by discarded recreational fishing tackle than those reported here. Further, Twinnies Pelican and Seabird Rescue have reported only those birds taken into care by the agency with these figures neither including birds which are found dead as a result of interaction with discarded fishing tackle, nor those which are not reported. Further, given the high number of cormorants that are reported with internal tackle injuries, it is likely that deaths occur when individuals ingest baits that have been discarded on the bottom due to snagging (i.e. the line is “snapped-off”) and drown. This suggests that the number of birds affected by recreational fishing tackle could be significantly higher than the numbers given here.

Objective 2: Convene a workshop involving relevant stakeholders in order to establish methods for mitigating seabird entanglements

Although signs and brochures were to be the methods used for educating recreational anglers about the consequences of discarding fishing tackle into the environment, discussions with other organisations addressing this issue and with participants at a dedicated project workshop led to the implementation of a Fishing Line Recovery Bin (FLRB) program. Such programs are underway in adjacent regions, with bins in place at various locations from Coolangatta to Noosa. As such it was thought that such a program would be beneficial in the northern Moreton Bay region. The FLRB program negated the need for brochures and stickers. This strategy was confirmed by the opportunistic survey which revealed that most people believed that the FLRBs and the signs installed as part of the project were the best methods of highlighting the issues associated with the irresponsible discarding of unwanted fishing tackle.

At this point, it appears the FLRBs are succeeding in reducing the amount of discarded fishing tackle entering the environment and thus adversely affecting coastal seabirds in northern Moreton Bay. The combination of the signage and FLRBs at the locations within the northern Moreton Bay region has seen the amount of discarded fishing tackle decrease significantly over the course of the project. As such, this project has achieved its objective of promoting the responsible removal of discarded fishing tackle to a large number of recreational anglers and, hopefully, this will translate into a reduction in the number of birds rescued in the northern Moreton Bay region. Rescue agencies will be contacted in order to gauge the effect of the program into the future.

Objective 3: Promote the responsible removal of discarded fishing tackle from popular fishing locations in northern Moreton Bay

The FLRB program had a twofold purpose. Firstly, their presence at fishing locations and boat ramps encouraged recreational anglers to think about the consequences of discarding fishing tackle irresponsibly. Secondly, they provided a receptacle for recreational anglers to deposit any unwanted fishing gear so that it could be disposed of in a way that would completely remove the likelihood of it affecting seabirds unlike general waste bins, the contents of which can affect ibis and other scavenging species at waste transfer stations.

Although the bins were found to contain general waste, they were mostly used for the purpose for which they were designed, with most bins containing fishing line, fishing tackle and bait bags. At the time of writing, approximately 250 litres of fishing line and tackle have been recovered as part of the program. The Bongaree Jetty FLRB was the most effective bin, accounting for the majority of the unwanted fishing tackle collected. However, this bin was also the subject of vandalism with the cap being removed on five occasions and the bin being completely removed from its mountings once.

Both the Redcliffe and Woody Point jetties have very little discarded fishing tackle present and, as such, no FLRBs were installed at these locations despite initial intentions to do so. On speaking with council staff responsible for the CCTV footage across the Moreton Bay Regional Council area, it was found that these jetties are serviced by high definition CCTV cameras. Such a system would be beneficial at the Bongaree Jetty to aid in identifying vandals.

Apart from the FLRB program, signage, a media release and a radio interview were used to educate recreational fishers of the consequences of discarding fishing tackle carelessly. However, although difficult to prove, the most effective extension method was the FLRBs themselves. Their presence, in combination with the signage installed, prompted people to think about issue of discarded fishing tackle. Conversations with recreational fishers at places like the Bongaree Jetty revealed that they had no idea so many birds are affected by the discarded tackle and most fishers said they would be more responsible when discarding unwanted tackle. The addition of the signs at these locations partway through the FLRB program had a positive effect, with far less general waste being placed in the bins once the signs were installed.

Media releases in fishing magazines or the radio interview conducted as part of the current project likely “preach to the converted” and only reach fishers who are the least likely to carelessly discard fishing tackle.

Feeding undersize or unwanted fish to birds and discarding unwanted catch from cast-netting activities are examples of fisher behaviour and active fishing practices that likely attract birds to fishing locations. These practices teach birds that recreational fishers are a source of food and encourage birds to wait for an opportunity to grab unattended food items. Unfortunately, some of these food items are baits used by fishers, resulting in birds being injured by fishing tackle.

Overall, it is obvious that recreational anglers are having an impact on the environment, despite the protestations of some recreational fishers who believe projects such as this are “a waste of the Governments’ money” or that the problem “will go away when the money dries up”. However, given the number of seabirds rescued as a result of interactions with discarded recreational fishing tackle and the amount of unwanted fishing tackle that was collected as part of the FLRB program, these statements are plainly inaccurate.

It is likely that the irresponsible discarding of unwanted fishing tackle is limited to occasional fishers, with most experienced anglers falling into the “stewards of the sea” category and, consequently, are unlikely to discard fishing tackle carelessly into the environment. As such, the education program designed as part of this project was directed at fishers at shore-based locations within the study area or at boat ramps.

Implications

Given the significant number of birds rescued as a result of interactions with recreational fishing tackle, it is essential that recreational fishers seek to reduce the amount of unwanted fishing tackle in the environment. In recent years, recreational anglers have come under considerable scrutiny from conservation and community groups regarding their impacts on the environment. For example, in 2009, recreational anglers, along with commercial fishers, were locked out of approximately 16% of Moreton Bay through the establishment of the Moreton Bay Marine Park and its associated Green Zones. Although the reasons for the removal of recreational fishers from these areas are the subject of much debate among stakeholders, the fact remains that there are issues that provide environmental and/or anti-fishing organisations with incentive to promote the removal of recreational fishers from certain locations. The entanglement of a significant number of seabirds in discarded recreational fishing tackle, combined with other issues discussed including the retention of undersize fish and the discarding of rubbish at fishing locations, present areas of conflict (which are largely avoidable) with these groups.

Moreton Bay Regional Council provides amenities and infrastructure at places like the Bongaree Jetty and the Ted Smout Bridge fishing platform specifically for the convenience of recreational anglers. The removal of recreational fishers from these areas as a result of issues such as those raised during the current project is a possibility if adverse behaviour is not altered.

Peak representational body, Sunfish Queensland, through their Scientific Officer, Dr. Barry Pollock, has tried to address the issue of seabird injuries caused by entanglement in discarded fishing tackle. Such leadership is required into the future to ensure that the small percentage of anglers who continue to discard fishing tackle in an irresponsible manner do not focus the attention of anti-fishing and conservation groups on a sport/recreation which sees participation in the hundreds of thousands of Queenslanders annually, most of whom are environmentally aware.

Future funding of such programs is an issue that needs to be addressed. The Noosa Integrated Catchment Association (NICA) and Oceanwatch Australia are both not-for-profit organisations that rely on sponsorship and donations for funding. Clearly, any program to reduce the impact of recreational fishing on the environment should be funded solely by recreational fishers. Current budgetary restraints preclude Fisheries Queensland from funding a FLRB program in Queensland as the Recreational Use Fee (RUF), collected as part of vessel registrations, is allocated elsewhere. However, the RUF is generated by all recreational vessels, including jet skis and ski boats, which do not contribute to the prevalence of fishing tackle in the environment and is, therefore, inequitable. As such, given the results reported here, using funds generated from a Recreational Fishing Licence (RFL) would be a much more equitable way of funding such a program. This ensures that those responsible for the problem contribute to the cost of mitigation, rather than imposing the cost of mitigation on those not responsible.

Recommendations

The only recommendation from the current project is that the Fishing Line Recovery Bin program continues and expands to include other areas. This program is effective in highlighting the issue of discarded fishing tackle and its effect on the environment. Currently, the Sunshine Coast Council has installed stainless steel FLRBs which are welded to infrastructure such as the Boardwalk in Caloundra. This would negate any vandalism and ensure the longevity of the bins.

At present, community groups are being canvassed regarding their participation in the FLRB program. It is envisaged that these groups would be responsible for maintaining the bins into the future. However, recreational anglers should also be involved in the maintenance of the FLRBs. Sunfish Queensland are currently responsible for maintaining bins installed as part of Oceanwatch Australia's Tangler Bin program and, hopefully, some of their members are willing to service the bins installed as part of this project.

It is apparent that a lack of funding for such programs will require the bins to be maintained purely on a voluntary basis. As Dave Downey commented in the radio interview conducted during the project, such programs are only as good as the people that maintain the bins. However, purchasing materials for replacement bins becomes an issue. At present, the Queensland Government collect a Recreational Use Fee from boat registration, some of which could be used to maintain the FLRB program although a Recreational Fishing Licence would be a fairer model for funding this and other recreational fishing programs.

Extraneous to the issue of seabird entanglements, other issues relating to the behaviour of recreational fishers (Schedule 3 of the project agreement) were canvassed. From this, it is recommended that signs displaying recreational bag and size limits be installed at Bongaree Jetty, Woody Point Jetty, Redcliffe Jetty and the fishing platforms associated with the Ted Smout Bridge. Further, these areas should be subject to increased presence of Queensland Boating and Fisheries Patrol officers in order to police the bag and size limits.

Extension and Adoption

Given that this project is primarily an extension project, the reader is directed to the Results/Discussion section on page 7 for an outline on how the project was extended and communicated to recreational fishers and the broader community.

In summary, the Fishing Line Recovery Bins are both a receptacle for unwanted recreational fishing tackle and an education tool informing people of the consequences of discarding fishing tackle in an irresponsible manner. The bins, combined with the signage installed, are very effective extension tools in this instance. These items will continue to communicate the issue of fishing line entanglements to recreational fishers and the broader community.

Media articles appeared in various fishing publications and local newspapers. Further, the PI was interviewed on a fishing-related radio show, *Outback and Bay*, by popular southeast Queensland fishing identity, Dave “Nugget” Downey.

As evidence of how project outputs have been adopted, the most recent sampling of the Bongaree Jetty FLRB accounted for a significant amount of discarded fishing tackle (approximately one-tenth of a 20 litre bucket, see Figure 20). Further, the amount of non-fishing related waste has decreased in the FLRBs generally, suggesting that recreational anglers and the broader community have embraced the concept of the bins. This is also evidenced by the fact that a regular Bongaree Jetty fisher, who said that the FLRB program was a “waste of the Governments’ money” and was very critical of this project in general, now collects fishing line from the jetty and places it in the FLRB. Word-of-mouth among fishers and peer pressure has seen the amount of fishing line being discarded on the Bongaree Jetty decrease, with most unwanted tackle being removed to the FLRB.



Figure 20: Unwanted fishing tackle discarded to the Bongaree Jetty Fishing Line Recovery Bin during the week ending 21/10/2013.

Project coverage

Following are reproductions of relevant articles generated during the current project.

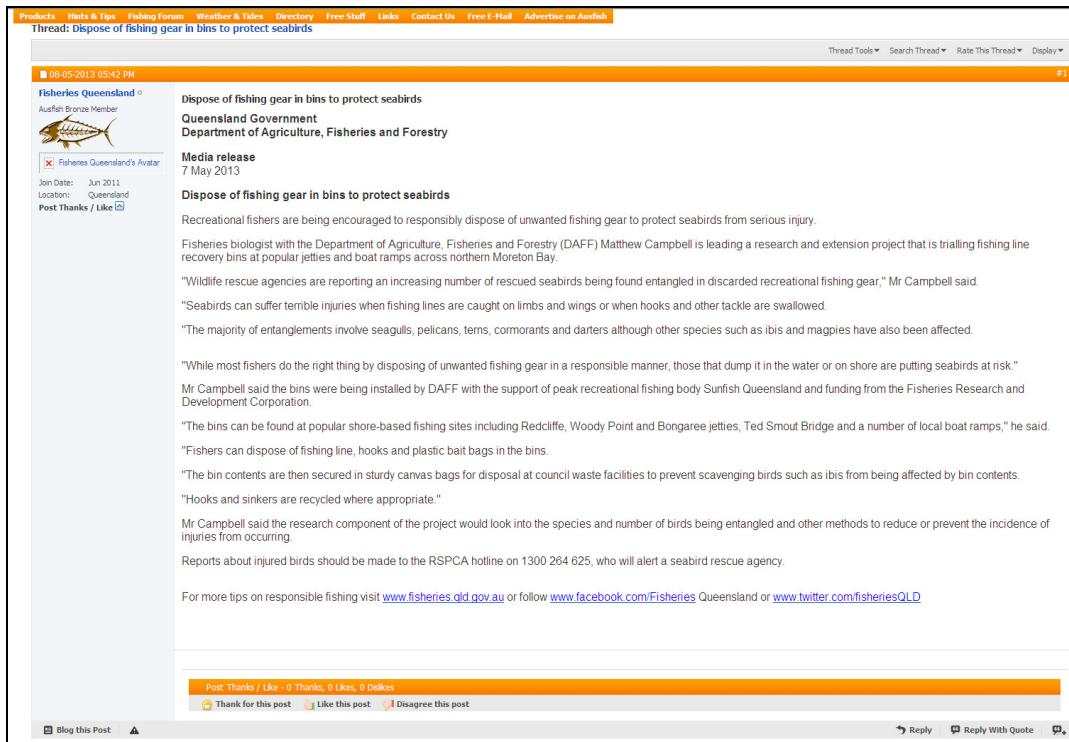


Figure 21: Project media release as it appeared on the recreational angling website Ausfish Australian Angling Forums. This post had been viewed on 1,124 occasions at the time of writing.



Figure 22: Article that appeared in the Gympie Times on 10 May 2013, page 26.

RACQ fuel report shows regional motorists pay more to fill up their petrol tanks

REGIONAL motorists paid up to 15 cents more at the bowser than their metropolitan counterparts last month despite a drop in oil prices.

The state's peak motoring body, RACQ, said the fuel

retailers are to blame.

RACQ's Monthly Fuel Report showed Brisbane's unleaded petrol price dropped 7.4 cents per litre to an average of 141.1 cents per litre last month.

In comparison, the average ULP in Cairns was 155.6 cents per litre.

In Mackay it was 151.8 cents per litre.

RACQ spokesman Joe Fitzgerald said while the

Sunshine Coast offered the cheapest ULP in the state at an average of 138.1 cents, other traditionally cheap regional centres weren't so lucky.

"Fuel retailers took advantage of falling oil prices

in April to fatten their wallets at the expense of regional motorists," Mr Fitzgerald said.

"Motorists outside of the south-east have every reason to feel aggrieved at this kind of opportunistic treatment."

NEWS

Trial disposal areas introduced to help save wildlife from getting tangled

Fishing line bins to be tried

RECREATIONAL fishers are being encouraged to responsibly dispose of unwanted fishing gear to protect seabirds from serious injury.

Fisheries biologist with the Department of Agriculture, Fisheries and Forestry Matthew Campbell is leading a research and extension project that is trialling fishing line recovery bins at popular jetties and boat ramps across northern Moreton Bay.

"Wildlife rescue agencies are reporting an increasing number of rescued seabirds being found entangled in discarded recreational fishing gear," Mr Campbell said.

"Seabirds can suffer terrible injuries when fishing lines are caught on limbs and wings or when hooks and other tackle are swallowed.

"The majority of entanglements involve seagulls, pelicans, terns, cormorants and darters although other species such as ibis and magpies have also been affected.

"While most fishers do the right

thing by disposing of unwanted fishing gear in a responsible manner, those that dump it in the water or on shore are putting seabirds at risk."

Mr Campbell said the bins were being installed by the department with the support of peak recreational fishing body Sunfish Queensland and funding from the Fisheries Research and Development Corporation.

"The bins can be found at popular shore-based fishing sites including Redcliffe, Woody Point and Bongaree jetties, Ted Smout Bridge and a number of local boat ramps," he said.

"Fishers can dispose of fishing line, hooks and plastic bait bags in the bins.

"The bin contents are then secured in sturdy canvas bags for disposal at council waste facilities.

"Hooks and sinkers are recycled where appropriate."

Reports about injured birds should be made to the RSPCA hotline on 1300 264 625, who will alert a seabird rescue agency.

For more tips on responsible fishing visit www.fisheries.qld.gov.au.



RESPONSIBLE FISHING: Use recovery bins and help decrease the effects of fishing line on birds.

PHOTO: BARRY LEDDICOAT

Figure 23: Article that appeared in the Bribie Weekly on 10 May 2013, page 9.

Responsibility call for fishing tackle

RECREATIONAL fishers are being encouraged to responsibly dispose of unwanted fishing gear to protect seabirds from serious injury.

Fisheries biologist with the Department of Agriculture, Fisheries and Forestry (DAFF) Matthew Campbell is leading a research and extension project that is trialling fishing line recovery bins at popular jetties and boat ramps across northern Moreton Bay (near Brisbane).

"Wildlife rescue agencies are reporting an increasing number of rescued seabirds being found entangled in discarded recreational fishing gear," Mr Campbell said. "Seabirds can

suffer terrible injuries when fishing lines are caught on limbs and wings or when hooks and other tackle are swallowed.

"The majority of entanglements involve seagulls, pelicans, terns, cormorants and darters although other species such as ibis and magpies have also been affected.

"While most fishers do the right thing by disposing of unwanted fishing gear in a responsible manner, those that dump it in the water or on shore are putting seabirds at risk."

Mr Campbell said the bins were being installed by DAFF, with the support of peak recreational fishing body, Sunfish Queensland and

funding from the Fisheries Research and Development Corporation. "The bins are at popular shore-based fishing sites and a number of local boat ramps (in the south)," he said. "Fishers can dispose of fishing line, hooks and plastic bait bags in the bins.

"The bin contents are then secured in sturdy canvas bags for disposal at council waste facilities to prevent scavenging birds such as ibis from being affected by bin contents.

"Hooks and sinkers are recycled where appropriate."

Reports of injured birds should be made to the RSPCA hotline (1300 264 625), who will alert a seabird rescue agency.

Figure 24: Article that appeared in the Ayr Advocate on 17 May 2013, page 10.

Watch discarded fishing line

RECREATIONAL fishers are being encouraged to responsibly dispose of unwanted fishing gear to protect seabirds from serious injury.

Fisheries biologist with the Department of Agriculture, Fisheries and Forestry, Matthew Campbell is leading a research and extension project that is trialling fishing line recovery bins at popular jetties and boat ramps.

“Wildlife rescue agencies are reporting an

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“Seabirds can suffer terrible injuries when fishing lines are caught on limbs and wings or when hooks and other tackle are swallowed.

“The majority of entanglements involve seagulls, pelicans, terns, cormorants and darters although other species such as ibis and magpies

have also been affected.

“While most fishers do the right thing by disposing of unwanted fishing gear in a responsible manner, those that dump it in the water or on shore are putting seabirds at risk.”

Mr Campbell said the research component of the project would look into the species and number of birds being entangled and other methods to reduce or prevent the incidence of injuries from occurring.

Figure 25: Article that appeared in the Herbert River Express on 15 May 2013, page 4.

Do the right thing with fishing line

Recreational fishers are being encouraged to responsibly dispose of unwanted fishing gear to protect seabirds from serious injury.

Fisheries biologist with the Department of Agriculture, Fisheries and Forestry (DAFF) Matthew Campbell is leading a research and extension project that is trialling fishing line recovery bins at popular

jetties and boat ramps.

“Wildlife rescue agencies are reporting an increasing number of rescued seabirds being found entangled in discarded recreational fishing gear.” Mr Campbell said.

“Seabirds can suffer terrible injuries when fishing lines are caught on limbs and wings or when hooks and other tackle are swallowed.

“The majority of entanglements involve seagulls, pelicans, terns, cormorants and darters although other species such as ibis and magpies have also been affected.

“While most fishers do the right thing by disposing of unwanted fishing gear in a responsible manner, those that dump it in the water or on shore are putting seabirds at risk.”

Mr Campbell said the research component of the project would look into the species and number of birds being entangled and other methods to reduce or prevent the incidence of injuries from occurring.

Reports about injured birds should be made to the RSPCA hotline on 1300 264 625, who will alert a seabird rescue agency.

Figure 26: Article that appeared in the Whitsunday Guardian on 15 May 2013, page 33.

Jobfish with iron jaw

A READER has picked us up on a jobfish photo (right) published in this column late last year. We said it was a rosy jobfish, caught by Sydney-based angler Chris Beldon near Linden Banks off the Cape York Peninsula coast.

However, Jeff Newman of Karumba, said the fish was a small-toothed jobfish or iron jaw as it was commonly known.

"I have caught many of these fish out wide from Townsville and Cairns and am just letting you know that the fish in the photo is not a rosy jobfish," Newman said.

"Although they are similar in shape, the rosy jobfish is a little pink colour and has a smaller mouth. The easiest way to tell them apart is to look in to the open mouth where the iron jaw has a very distinct silver colour inside the mouth and gill area as can be seen in the photo, whereas the rosy does not."

Newman said both fish species could be caught in the same depth of water, usually between 100m to 250m, by jiggling lures or using a baited drop line.

They were both excellent to eat although he preferred the rosy to the iron jaw.

"As I am sure many of your readers will never have heard of or will have the chance to catch one of these fish, I can understand how easy it is to

get them confused," he said. "I hope this clears things up for you and your readers."

BARRAGE IS NO BARRIER

Barramundi heading upstream use floodwaters to bypass barrages on the Fitzroy River, according to information from the State's tagging program.

After the 2011 flood in the river, eight barra were recaptured above the barrage that were tagged in the estuary below the barrage. The fish had used the flood to bypass the barrage.

In 2012 another 516 more fish were tagged above the barrage, mostly in the 700-1000mm size range. Following the 2013 flood, 44 (8.5 per cent) of those were recaptured back down below the barrage. Recaptures have been as far south as Gladstone.

According to the latest bulletin from Suntag, last February a large fish kill happened as the flood receded. In more than 100km of the river at least hundreds of barramundi and tens of thousands of other species died, the report said.

In other tagging details, an 86cm long golden snapper (fingermark) caught by Rockhampton's Kim Martin had carried a tag for 16 years.

Unfortunately the original tag details went missing, but a Suntag spokesman said: "A small number of tags from that batch are missing but at least

we were able to determine it was probably tagged back in 1998 and probably in the Gladstone area about 100km south of where caught."

Martin had caught and kept the fish offshore of Byfield on May 22.

BINS TO SAVE SEABIRDS

Fishing line recovery bins could appear at popular fishing spots in North Queensland if trials in the south prove successful.

The aim of the bins is to encourage recreational anglers to responsibly dispose of unwanted fishing gear to protect seabirds from serious injury.

Fisheries biologist with the Department of Agriculture, Fisheries and Forestry Matthew Campbell is leading a research and extension project that is trialling fishing line recovery bins at popular jetties and boat ramps across northern Moreton Bay.

"Wildlife rescue agencies are reporting an increasing number of rescued seabirds being found entangled in discarded recreational fishing gear," Campbell said this week.

"Seabirds can suffer terrible injuries when fishing lines are caught on limbs and wings or when hooks and other tackle are swallowed.

"The majority of entanglements involve seagulls, peli-

cans, terns, cormorants and darters, although other species such as ibis and magpies have also been affected.

"While most fishers do the right thing by disposing of unwanted fishing gear in a responsible manner, those that dump it in the water or on shore are putting seabirds at risk."

Campbell said the bins were being installed by his department with the support of peak recreational fishing body Sunfish Queensland and funding from the Fisheries Research and Development Corporation.

Anglers can dispose of fishing line, hooks and plastic bait bags in the bins.

"The bin contents are then secured in sturdy canvas bags for disposal at council waste facilities to prevent scavenging birds such as ibis from being affected by bin contents," he said.

"Hooks and sinkers are recycled where appropriate."

Campbell said the research component of the project would look into the species and number of birds being entangled and other methods to reduce or prevent the incidence of injuries from occurring.

Reports about injured birds should be made to the RSPCA hotline on 1300 264 625, which will then alert a seabird rescue agency.

Figure 27: Article that appeared in the Sunday Mail on 9 June 2013, page 78.

Dispose of fishing gear in bins

RECREATION-AL fishers are being encouraged to responsibly dispose of unwanted fishing gear to protect seabirds from serious injury.

Fisheries biologist with the Department of Agriculture, Fisheries and Forestry Matthew Campbell is leading a research and extension project that is trialling fishing line recovery bins at popular jetties and boat ramps across northern Moreton Bay.

"Wildlife rescue agencies are reporting an increasing number of rescued seabirds being found entangled in discarded recreational fishing gear," Mr Campbell said.

"Seabirds can suffer terrible injuries when fishing lines are caught on limbs and wings or when hooks and other tackle are swallowed.

"The majority of entanglements involve seagulls, pelicans, terns,

cormorants and darters although other species such as ibis and magpies have also been affected.

"While most fishers do the right thing by disposing of unwanted fishing gear in a responsible manner, those that dump it in the water or on shore are putting seabirds at risk."

Mr Campbell said the bins were being installed by DAFF with the support of peak recreational fishing body Sunfish Queensland and funding from the Fisheries Research and Development Corporation.

"The bins can be found at popular shore-based fishing sites including Redcliffe, Woody Point and Bongaree jetties, Ted Smout Bridge and a number of local boat ramps," he said.

"Fishers can dispose of fishing line, hooks and plastic bait bags in the bins.

"The bin contents are then secured in sturdy

canvas bags for disposal at council waste facilities to prevent scavenging birds such as ibis from being affected by bin contents.

"Hooks and sinkers are recycled where appropriate."

Mr Campbell said the research component of the project would look into the species and number of birds being entangled and other methods to reduce or

prevent the incidence of injuries from occurring.

Reports about injured birds should be made to the RSPCA hotline on 1300 264 625, who will alert a seabird rescue agency.

For more tips on responsible fishing visit www.fisheries.qld.gov.au or follow www.facebook.com/FisheriesQueensland or www.twitter.com/fisheriesQLD.



www.bnbishing.com.au

Figure 28: Article that appeared in the June 2013 edition of Bush and Beach magazine.



Figure 29: Article that appeared in the August 2013 edition of Queensland Fishing Monthly magazine.

Project materials developed

Project materials developed as part of this project have been discussed in detail throughout this report. In summary, the following materials were developed:

1. Fishing Line Recovery Bins installed at 11 locations in northern Moreton Bay (see Figure 3);
2. Media release distributed to various media outlets (see Figure 21);
3. Signage installed at 12 locations in northern Moreton Bay (see Figure 13);
4. Project webpage (Figure 30 page 38); and
5. Radio Interview with Dave “Nugget” Downey (transcript on page 35).

Appendix 1: Project Staff

1. Mr. Matthew Campbell, Fisheries Biologist, Queensland Department of Agriculture, Fisheries and Forestry.
2. Mr. Mark McLennan, Senior Fisheries Technician, Queensland Department of Agriculture, Fisheries and Forestry

Appendix 2: Intellectual Property

The information generated by this project is for public access and is, therefore, not subject to intellectual property considerations.

Appendix 3: Stakeholder workshop minutes

Tactical Research Fund: Reducing the impact of discarded recreational fishing tackle on coastal seabirds


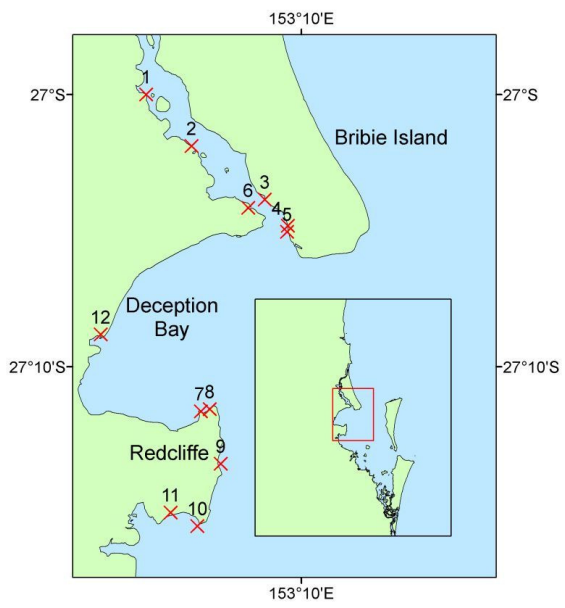
FRDC Project Number 2011/057

Workshop

Gillespie Room, Bribie Island Research Centre

13 February 2013

1. Participants	
Ian Bell (BIEPA)	Debbie Bain (Twinnies)
Diane Oxenford (BIEPA)	Ed Guallo (Oceanwatch)
Chris Bell (BIEPA)	Debra Henry (Oceanwatch)
Richard Proudfoot (BIEPA)	Judy Lynne (Sunfish)
Helen Powers (Twinnies)	Barry Pollock (Sunfish)
Bridgette Powers (Twinnies)	Lidia Davidovics (NICA)
Paula Powers (Twinnies)	Matt Barwick (Recfish Research)
Debbie Bain (Twinnies)	Matthew Campbell (DAFF)
Mishele Blizzard (Twinnies)	Mark McLennan (DAFF)
<i>Apologies</i>	
Natalie Forrest (PASR)	Hammy Forrest (PASR)
Sally Arthur (BDWR)	
2. Issues Raised	
<p>This project was initiated after Sunfish Queensland raised the issue of seabird entanglements in the Moreton Bay region, particularly a brochure produced by Healthy Waterways (http://www.healthywaterways.org/HealthyWaterways/Resources/Posters.aspx). The objectives of this project are:</p> <ul style="list-style-type: none"> • Quantify the extent of seabird entanglement in northern Moreton Bay; • Convene a workshop involving relevant stakeholders in order to establish methods for mitigating seabird entanglements; and • Promote the responsible removal of discarded fishing tackle from popular fishing locations in northern Moreton Bay. <p>Matthew will liaise with rescue agencies in order to quantify the number and location of seabird entanglements, as well as the species affected.</p> <p>Fishing line recovery bins (FLRBs) will be installed at 12 locations in the Moreton Bay Regional Council area. The FLRBs will be similar to those used by Lidia and Debra in their respective programs. The bins will be installed at popular fishing locations such as the Bongaree Jetty and the Woody Point Jetty, as well as at boat ramps. The FLRBs will be cleared by Matthew and Mark. Ian Bell raised the issue of whether FLRBs are current best practice. This will be investigated. Safety issues were also discussed. There was general agreement that there needs to be a protocol developed for the safe removal of refuse from the bins.</p> <p>Relevant signage will also be installed in the same areas as the FLRBs. The signs will be designed to educate recreational fishers of the consequences of discarding unwanted fishing tackle (line, hooks, etc) and bait bags into the environment. The signs will also direct the reader to call the RSPCA should a seabird be hooked or tangled accidentally in fishing equipment.</p> <p>The practice of feeding undersize fish to seabirds was also discussed. On several occasions, Matthew has observed recreational anglers feeding pelicans with undersize fish at the Bongaree Jetty. It was felt that this practice was detrimental in that it encourages pelicans and other seabirds</p>	

to eat discarded bait, etc which may contain hooks.		
Actions	Assigned to	Due by
Design stickers for FLRBs. Liaise with Louise Morgan of Communications at PIB (underway). Distribute to workshop participants.	Matthew	First draft by 28/2/2013
Install FLRBs.	Matthew and Mark	31/3/2013
Design signs in collaboration with workshop participants. Liaise with Louise Morgan of Communications at PIB (underway).	Matthew	First draft by 31/3/2013
Liaise with MBRC regarding installing bins on the Ted Smout Bridge fishing platforms.	Matthew	31/3/2013
Liaise with Sunfish regarding sticker design and distribution	Matthew	31/3/2013
Liaise with rescue agencies regarding number and location of entanglements, as well as species affected	Matthew (and Mishele)	30/4/2013
Supplementary information		
		
NICA fishing line recovery bin installed	Locations of initial bin installations	

Appendix 4: Radio interview transcript

Below is a transcript of the radio interview between the Principal Investigator (MC) and Dave Downey (DD) during his Outback and Bay radio show from Sunday 12 May, 2013

DD: We had a great chat with Matt Campbell yesterday that I pre-recorded about a project he's got going about trying to stop all this leftover fishing line and fishing gear around our waterways. Let's visit that interview now.

DD: G'day Matt.

MC: G'day Dave and thanks for having me on your show.

DD: Pleasure, mate, an absolute pleasure. Tell me about the bin project you're working on.

MC: Yeah okay. The project was initiated after Barry Pollock from Sunfish Queensland approached me with some unflattering stories published in various fishing media about bird entanglements. I first became aware of the issue when I started targeting mullock on some of the fishing platforms in the northern Bay at night and found a lot of discarded fishing tackle, particularly fishing line, lying around. So, with support from Sunfish Queensland, I applied to the Fisheries Research and Development Corporation or FRDC for funding and I was successful in getting a project with the aim of educating recreational fishers about the consequences of the careless discarding of fishing tackle.

Once the project started, I spoke with a number of bird rescue agencies about the issue and found that there was a very high incidence of bird rescues with entangled fishing lines. These bird rescue agencies, including Pelican and Seabird Rescue at Capalaba, the Bribie and District Wildlife Rescue, Australia Zoo and Twinnies Pelican and Seabird Rescue, were reporting several hundred instances of fishing gear-related injuries each year.

At first, I wanted to use signs and brochures as methods of educating rec fishers about discarding fishing tackle responsibly, but I heard Lidia Davidovics on your show mid-way through last year.

DD: Yeah, we did have Lidia on the show, that's right.

MC: Yeah, she ran the Fishing Line Recovery Bin program in the Noosa area and I immediately thought that was a far better way of reducing seabird entanglements in my area. I then found out that similar programs were being run in the Sunshine Coast area, the southern Bay area as well as Hervey Bay. So the northern Bay was the only area that wasn't being serviced by such a program. So last year, I approached Bunnings to supply the material for the bins. Bunnings Morayfield supplied about \$1000 worth of PVC fittings so I could make 15 bins as part of their community program. Earlier this year I held a workshop and invited people from Sunfish, as well as local environmental groups and bird rescue agencies, to discuss placement of the bins around northern Moreton Bay. And, with their direction, I installed bins across the Moreton Bay Regional Council area including Bongaree Jetty, the fishing platform adjacent to the Ted Smout Bridge and boat ramps at Clontarf, Scarborough, Toorbul, Donnybrook and Bribie.

They're [the bins] PVC, Dave, and they look like an inverted snorkel and Lidia was trying to describe that. It's just a piece of PVC. At the bottom there's a threaded cap which I can undo to let the bins' contents fall out and at the top there's a 90° angle through which people are able to put stuff in and I can unscrew the cap and all the bin contents fall out.

DD: Is this your own design, Matt, or is one you've copied? I think I've seen one at the canoe club on the Bayside near Tingalpa Creek.

MC: As I've said, there's been a few of these programs run and they're all based on a very similar design. It actually first got kicked off over in Miami, I think, and then Oceanwatch Australia began a program in New South Wales and it's gradually filtered through to Queensland. And then Lidia up at Noosa got hers running and the Sunshine Coast Council had theirs running as well. So, as I said, northern Moreton Bay is the only region that didn't have a program like this up and running.

DD: So who's going to empty the bins, Matt?

MC: Dave, I do that myself. I empty the contents into a bucket, filter out all the stuff that isn't fishing tackle-related, which is quite often a lot, and then I place the fishing tackle into sturdy bags and the reason why I do that is so that when I eventually take the stuff out to the waste management facilities...

DD: You don't just move the problem out to the tip?

MC: I actually put it [the waste] into sturdy bags so that it doesn't become a danger to ibis and other scavengers at the waste facility. I also try and melt down the fishing line as much as I can and recycle the hooks and sinkers.

DD: Yeah, it's a great concept – I've seen it done in several other areas. Where it's fallen down in the past has been getting people to empty the bins. I applaud you for being the one that's out there doing it.

Personally, I'd like to see it put on the Council's regime to empty the bins as they go round doing the local park clean-ups.

MC: Yeah, well, my plan is to eventually have that happen but at the moment I'm trying to co-ordinate people from local environmental groups to help me out and I'll be co-ordinating people to do it if I can't. But I empty them every Monday and this has been going for a month or so now. I've collected probably three 20-litre buckets full of fishing line and hooks and sinkers.

DD: It's good that people are using it.

MC: Absolutely, Dave. I'm surprised myself at how well they're being used.

DD: That's fantastic. It always worries me, like you, I'm sure, if you're out on the rocks fishing and see a line tangled up I always go to great lengths to try and get as much of it up as I can. It's just a trap waiting to happen for some poor bird.

MC: Absolutely and not only that. Places like the Bongaree Jetty where, at night, there's only fishers around, fishers discard their hooks, etc, but the next morning when the families are going out to have a look at the passage and walking on the jetty those hooks become a problem for little kids.

DD: For sure. Well done, Matt. Hats off to you for all your hard work, Barry Pollock for bringing it to your attention and also Sunfish and also Bunnings – I think you said – for putting up the money for the gear.

MC: Yeah, that's right, Dave and also to FRDC for funding the program.

DD: Fantastic work. Good on you, Matt appreciate all your hard work.


Appendix 5: Project webpage

responsible disposal of fishing gear

Department of Agriculture, Fisheries and Forestry

[Home](#) > [Fisheries](#) > [Fisheries and aquaculture research](#) > [Fisheries and aquaculture research projects](#) > Responsible disposal of fishing gear

Responsible disposal of fishing gear



Radiograph showing a hook and sinker swallowed by a cormorant. Photo courtesy of Pelican and Seabird Rescue

Discarded fishing gear can injure animals, including sea birds.

An increasing number of rescued seabirds are found entangled in recreational fishing gear, which can cause serious injuries including fatalities.

Injury occurs when fishing lines are caught on limbs and wings, or when hooks are swallowed. Braided and gelspun fishing lines can cause severe injuries due to their strength and small diameter.

What's being done?

In conjunction with the Fisheries Research and Development Corporation (FRDC), we are funding a project to promote responsible removal of discarded fishing gear at popular fishing locations in northern Moreton Bay.

We are recording the species and number of birds being entangled, and where it occurs, to help understand and prevent it in the future.

So far, we have found the majority of entanglements involve seabirds such as seagulls, terns, pelicans, cormorants and darters. Other species such as magpies and ibis are also affected.

What can you do?

Be a responsible fisher by disposing of your unwanted fishing gear in Fishing Line Recovery Bins or other suitable bins.

The bins can take fishing gear such as lines and hooks, as well as bait bags.

The bins have been placed at popular fishing spots in northern Moreton Bay, including the Bongaree Jetty, the Woody Point Jetty, the fishing platforms on the Ted Smout Bridge, and local boat ramps.

The rubbish from the bins is transported to waste facilities in sturdy bags so that ibis and other scavengers aren't affected by the bin contents at waste transfer stations. Hooks and sinkers are recycled where appropriate.

Who do you call if a bird is injured?

Report injured birds to the RSPCA Queensland emergency hotline on 1300 264 625. The RSPCA will then alert a seabird rescue agency.

Special thanks go to the agencies supporting and involved in the project:

- [Fisheries Research and Development Corporation \(FRDC\)](#)
- [Twinities Pelican and Seabird Rescue](#)
- [Australia Zoo](#)
- [Pelican and Seabird Rescue](#)
- [Bribie and District Wildlife Rescue](#), phone 0400 836 592
- [Bribie Island Environmental Protection Association](#)
- [Sunfish Queensland](#)
- [Moreton Bay Regional Council](#)
- [Oceanwatch](#)
- [RSPCA](#)

Further information

For further information on this project, [contact us](#).

Related information:

- [Responsible crabbing](#)

Figure 30: Screen shot of the webpage built by DAFF Communications staff for the project.

Department of Agriculture, Fisheries and Forestry
13 25 23
www.daff.qld.gov.au