

# REPORT TO THE MINISTER ON THE “CAPE TO CAPE BEACH CLEAN UP 2006”

Heidi Taylor – Tangaroa Blue Ocean Care Society



We would like to thank our supporters:  
Department of Environment & Conservation  
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WINNER

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**OVERVIEW:**

With global populations continuously expanding, the environmental impacts from the amount of refuse that the human race produces will continue to grow. Enormous amounts of this refuse ends up in the litter stream worldwide with a huge percentage eventually ending up in our waterways and oceans. It is vital for Australia and Western Australia to take early and proactive steps to counter the debris which is a threat to our oceans and marine life, protecting this fragile and important ecosystem for future generations.

The 2006 Cape to Cape Beach Clean Up was organised following a hugely successful event in 2005. Members of the community, industry and authorities were invited to participate in an event which addresses the marine debris problem with the goal of finding practical ways to reduce the amount of marine debris on the Western Australian coastline.

The data collected from the clean up provides important information on the types of marine debris found on our shores and will be used to identify and monitor pollution trends.

**1. BACKGROUND**

Marine debris is an enormous and growing problem. Marine Debris is one of the top five marine pollutants around the world. Every year 1 million seabirds and over 100,000 marine mammals and turtles are killed by marine debris worldwide. In every square kilometre of ocean, there are more than 18,000 pieces of plastic. These are a danger to 20 Australian threatened species including the Southern Right and Blue Whales, Loggerhead Turtle and Tristan Albatross.

The issue of marine debris was highlighted through the volunteer work of Heidi and Richard Taylor from Tangaroa Blue, who since 2004 have conducted 216 clean ups and collected some 53,400 pieces of marine debris from beaches along the Cape to Cape coastline in the southwest of Western Australia.

The goals of the community beach clean up are to:

1. Raise public awareness about marine debris and its impacts on the marine environment;
2. Clean up the beaches and coastline;
3. Take a ‘snapshot’ of the types of marine debris that washes up by counting and cataloguing it
4. Engage the broader community in a workshop to determine the origins of the waste and; develop some strategies or recommendations for its abatement

On October 14<sup>th</sup> & 15<sup>th</sup>, 2006, over 191 people from 30 community and environmental groups, industry and government agencies were involved in the Cape to Cape Beach Clean Up. The coastline between Cape Naturaliste, Cape Leeuwin and the Dunsborough and Busselton foreshore was targeted and more than 43 different coastal sites cleaned up.

## **REPORT ON THE CAPE TO CAPE BEACH CLEAN UP 2006**

Twenty people attended the workshop held on 3<sup>rd</sup> November. The workshop group comprised representatives from local environmental groups, clean up volunteers, representatives of the Department of Environment & Conservation, Keep Australia Beautiful Council, local Shire, and other interested parties.

### **2. CLEAN UP RESULTS**

Below are the major findings of the 2006 Cape to Cape Clean Up and post-event workshop.

#### **2.1 Marine Debris Items Found**

Marine debris was collected from along more than 43 beaches between Cape Naturaliste and Cape Leeuwin, as well as along the Busselton and Dunsborough foreshores.

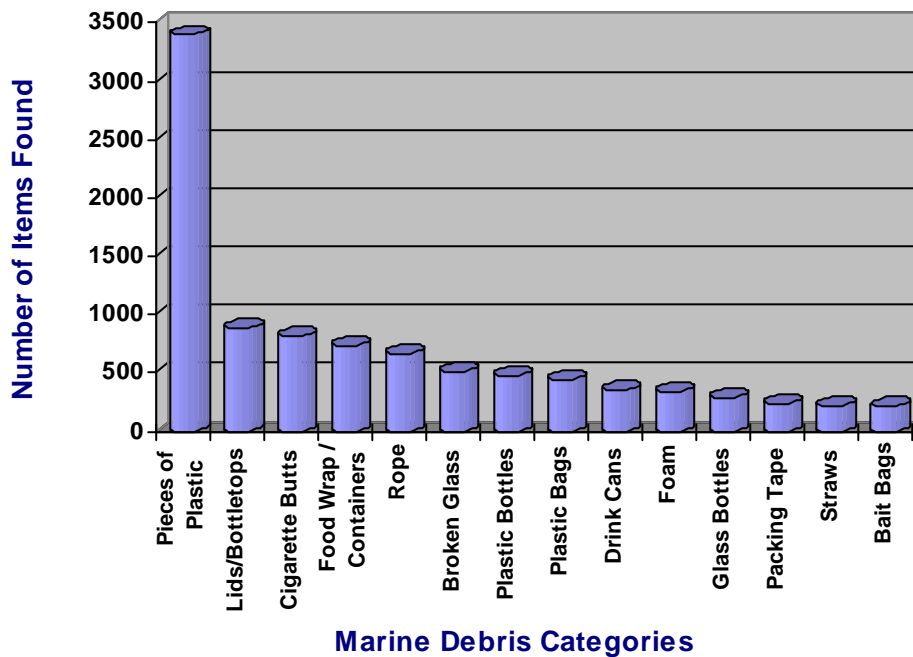
A summary of some of the findings/results are given below:

- More than 11,566 individual pieces of marine debris were collected – Appendix Fig 2
- Weighing over 1739 kilograms,
- Over 210 bags filled with many other items too large and heavy to be placed in bags,
- Dead birds, fish and land mammal remains were also found.
- Plastic was the predominant source of debris collected. In fact, it comprised 86.5% of the total items collected.



**Dunsborough Probus Association Members at Meelup Beach**

**Table 1: Major Debris Items Found During Cape To Cape Beach Clean Up 2006**



**2.2 Debris sources**

During the clean up, the participants not only removed the debris but recorded and catalogued what they collected. After the clean up, a workshop was organised to analyse the source of origin of the marine debris. The workshop aimed to: a) identify the most commonly found items, b) determine their source and uses and c) finally to identify possible changes in the design or use of those items, relevant policy, legislation and community education campaigns to prevent these items from becoming marine debris. A series of recommendations (see section 3) were then developed.

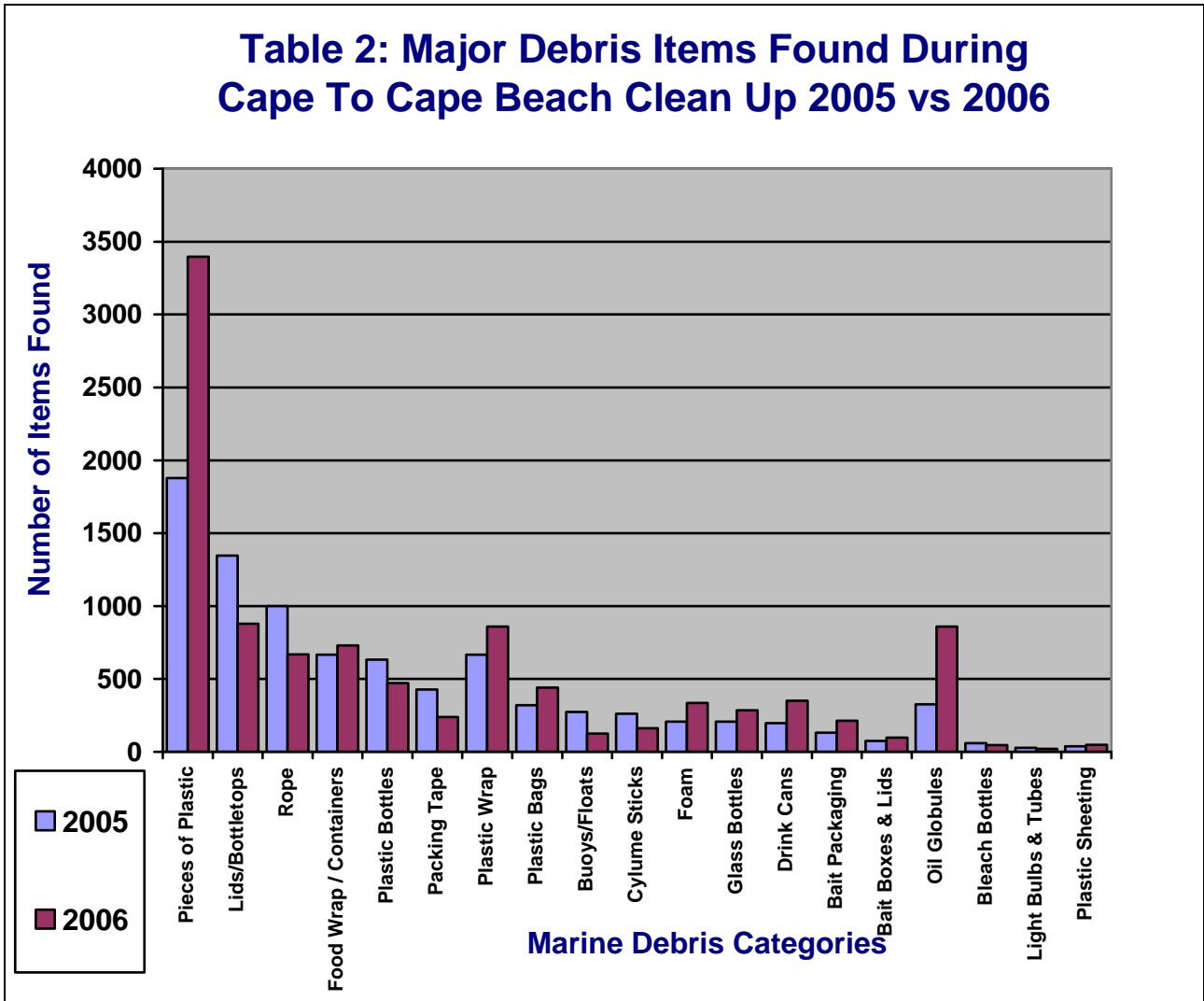
The majority of the marine debris found during the Cape to Cape Beach Clean Up was found to have originated from six main categories:

1. Commercial Fishing Industry
2. Recreational Fishing Industry
3. Shipping Industry
4. Recreational Beach Users
5. Stormwater Runoff
6. Illegal Dumping



Debris collected by WAFIC from Sugarloaf Rock and Other Side of the Moon

**Table 2: Major Debris Items Found During Cape To Cape Beach Clean Up 2005 vs 2006**



**2.3 Comparison of Data Collected During 2005 & 2006 Cape to Cape Beach Clean Up**

- **Clean Up Sites**  
 2006 = 191  
 2005 = 30
- **Volunteers** 2006 = 43  
 2005 = 100
- **Items Collected**  
 2006 = 11,566  
 2005 = 9,244
- **Percentage of Plastic**  
 2006 = 85.6%  
 2005 = 90%
- **Kilograms Collected**  
 2006 = 1739kg  
 2005 = 1044kg
- **Weather**  
 2006 = light winds, medium swell  
 2005 = 7m swell, 40kt onshore Westerly winds
- **Continued clean ups between two main events** – The clean up in 2005 would have collected items from beaches which potentially could have been there for years. The clean up in 2006 covered many beaches which have been cleaned regularly during and since the 2005 event.

**3. RECOMMENDATIONS & UPDATES**

Below is a summary of the recommendations from the community groups as well as updates on actions created at last year's workshop.

**3.1 Commercial Fishing Industry**

- A high percentage of marine debris found in the Cape's region is being contributed by the commercial fishing industry. This debris has been proved to be a threat to marine life such as sharks, seals and sea lions, whales and seabirds. It is vital for the commercial fishing industry to be proactive in implementing environmentally friendly products, equipment and practices to protect the very ecosystem which supports their livelihood. Three times as much rubbish is dumped into the world's oceans annually as the weight of fish caught (Australian Marine Conservation Society)
- **Producer responsibility:** It is important to ensure that producers of environmentally unsafe forms of packaging are required to amend their products. At last year's workshop the plastic packing tape which secures bait boxes was identified as a threat. During last year's clean up 427 pieces of packing tape were collected. At this year's clean up 240 bait packing tapes were collected, and during the 142 clean ups which were conducted in between the two major clean up events 504 bait packing tapes were collected. This brings a total of 1569 bait packing tapes collected since 2004. A number of these pieces of tape were still intact creating a circle of death for sharks and seals to become entangled in. The recommendation from last year's workshop was to lobby the West Australian Fishing Industry Council (WAFIC) to stop using packing tape in preference for the cardboard self locking boxes used in South Australian & Tasmanian fisheries. WAFIC is in the process of a feasibility study into alternatives to the packing tape. We urge the Minister of Fisheries to ensure that this issue be addressed as soon as possible. Packing tape is a known threat to marine life and other alternative products exist to take its place.
- **Mandatory Codes of Conduct** should be implemented. Fishing vessels should be "severely" fined and/or punished and reprehended (MARPOL Convention) if caught polluting and/or dumping items into the sea.
- **Identification of waste:** Vessels should have all plastics brought onboard stamped with their vessel's description as a way of making the identification of any item traceable.
- **Better policing:** Such a serious issue deserves better resources to catch polluters.
- **Revenues:** Revenues from commercial fishing activities should be used to clean up the refuse resulting from this industry and for having an impact on other industries such as tourism and local communities.



Debris found sourced from the commercial fishing industry

### **3.2 Recreational Fishing Industry**

- The Cape's Region is well-known for its recreational fishing; however the recreational fishers also contribute a high percentage of marine debris found. Local clean ups at fishing hotspots during fishing seasons, have found an enormous increase in marine debris compared with other times of the year. This year Busselton Shire provided garbage bins at Point Piquet (a salmon fishing hotspot) during the salmon season, however plastic bait bags, fishing line, cans, glass bottles, plastic bags, cigarette butts and food wrappers were still found amongst the rocks in large numbers. The Department of Fisheries and local Shires need to target these fishing hotspots during peak periods focusing on education and enforcement of litter prevention.
- **Recreational Skipper's Licence:** With the introduction of this mandatory licence in Western Australia, comes a great opportunity to educate boat users on marine debris and its effects on the marine ecosystem. Either as part of this course or as educational material, this issue should be addressed in licensing paperwork.



Debris sourced from the recreational fishing industry

### **3.3 Shipping Industry**

- The Australian Maritime Safety Authority (AMSA) has the responsibility for the implementation and enforcement of Annex V of MARPOL 73/78 (Regulations for the Prevention of Pollution by Garbage from Ships). [www.amsa.gov.au](http://www.amsa.gov.au) Australian laws can be applied to vessels within Commonwealth jurisdiction. Australian representatives at the International Maritime Organization (IMO) are currently involved in deliberations and updates related to MARPOL 73/78 Convention including the tighter control on the disposal of garbage under Annex V. As large amounts of debris originating from foreign vessels is being found on Australian beaches, we need Australian representatives to the IMO have a strong voice in targeting this marine debris. AMSA will circulate a draft Threat Abatement Plan for public comment by the end of 2006 to address the problem of injury and fatality to vertebrate marine life caused by ingestion of, or entanglement in, harmful debris. AMSA will investigate items of debris which can be positively traced back to a specific vessel. Volunteers who find debris with any type of vessel identification marks or writing on them are requested to keep the item and send a photograph of the debris and email with a description of where and when it was found to [heidi@tangaroablue.com](mailto:heidi@tangaroablue.com).
- Oil globules have been washing up on the Capes coast for some years. Since last year's clean up the Department of Planning & Infrastructure (DPI) through Geotech has analysed oil globule samples that volunteers have sent to them, to establish their origins. The results of this analysis has shown that all tarball samples collected

from South West beaches during October 2005, February, March & May 2006 were determined to be oil from a natural seep and not processed in anyway. They were not extensively weathered or altered by biodegradation processes suggesting that the oil was relatively “fresh” and most likely aged in the Late Cretaceous period or earlier. It is likely that the tarballs that washed up were the result of oil seeping out of natural seeps in the Indonesian Archipelago and transported down the Western Australian coast by the Leeuwin Current. The DPI are keen to receive samples from incidences that are out of the ordinary and believe that by keeping a record of naturally occurring events it may be easier to determine what is more likely to be a pollution event. Please ensure that samples are wrapped in paper and sent in cardboard boxes to avoid any contamination with plastics and include a note on where and when the samples were found. Samples can be sent to: Mandy Dearden, Environment Officer, DPI, PO Box 402, Fremantle, WA 6959



L: Oil Globules  
R: Debris sourced from  
international shipping industry



### **3.4 Recreational Beach Users**

- **Education** was once again high on the agenda to reduce marine debris from beach users. During the past year, Tangaroa Blue was invited to talk at schools, community groups and government agencies in the southwest region, presenting them with information on marine debris and its affect on marine life. Ideas from the workshop were to install a signage system at local beaches describing how much rubbish had been collected from that particular beach during clean ups and the impact it has on marine life, asking visitors to take their rubbish away with them.
- **Dog Poo Bags.** During clean ups, both full and unused dog poo bags have been found on local beaches. Requests to the local Shires to ensure bags are positioned in areas protected from the wind will reduce the chance of bags to be blown out of holders. These bags should also be replaced with biodegradable option, and finally enforcement by local rangers stepped up at hotspot beaches such as Bunker Bay, Yallingup, Smiths Beach, Augusta and Margaret River.
- **Plastic bag laws:** Since plastic bags comprise a significant amount of the debris found and cause the death of many different marine animals, compulsory laws pertaining to plastic bags and supermarkets need to be passed. The government wants to phase out plastic bags by 2008.
- **The Tourism Industry needs to get involved:** The industry should be actively promoting environmental awareness and initiatives that educate visitors on the impacts of their activities and behaviours on the coast and marine environment in the best interest of the resource they use as well as for the long term future of the tourism industry. Codes of Conduct need to be implemented and enforced.



- **Adequate Facilities:** Local Shire and Government agencies as well as the Department of Conservation and Land Management should provide rubbish bins (with large and well signed lids) which are emptied regularly.
- **Enforcement:** The Department of Environment (DoE) has a Litter Reporter Scheme where registered people can report people they see littering. This needs to be workable and actively promoted as a disincentive to littering.



Debris sourced from beach users

### **3.5 Stormwater Runoff**

- **Stormwater management:** Local councils advise that it is currently too expensive to fit Gross Pollutant Traps (GPTs) into already existing subdivisions. We recommend research and development into a cost effective filtering system to be designed which can be used in this circumstance. Funding should be provided to local authorities to ensure that both new and old areas have ways of preventing litter from streets etc does not end up in the ocean/coastline.
- **Community education:** A campaign to engage the community in the issue and the effects of poor stormwater management. This has already been developed on the East Coast.

### **3.6 Illegal Dumping**

- **Greater enforcement of fines:** Catching people out and advertising the fact. Community members are a powerful tool to reduce this problem as they are the “eyes on the street”. We recommend a well advertised campaign so community members know who to contact should they witness illegal dumping. Fines need to be great enough to be a true deterrent. Current fines of a \$200 infringement notice or \$1000 if the case is taken to court is way too lenient as the cost just to remove many of these illegally dumped items would take well in excess of this amount.



Debris sourced from illegal dumping



**APPENDIX**

**TABLE 2 - DEBRIS FOUND DURING THE CAPE TO CAPE BEACH CLEAN UP**

**SHORELINE AND RECREATIONAL ACTIVITIES**

Total	Item	Total	Item	Total	Item
441	Plastic Bags	57	Cups, Plates, Cutlery	8	Pens & Pencils
40	Plastic Bag Remnants	3	Glass Jars	2	Bubble wrap
17	Balloons	730	Food Wrappers & Containers	36	Toys
472	Plastic Drink Bottles	76	Paper/Cardboard/Newspaper	1	Tins
286	Glass Drink Bottles	62	Plastic Containers	3397	Pieces of Plastic
509	Broken Glass Pieces	1	Wood Paddle Pop Sticks	129	Plastic Wrap
351	Aluminium Cans	4	Shotgun Shells/Wadding	75	Pull Tabs
878	Lids, Bottle Tops	220	Straws/Stirrers	4	Aerosol Can
115	Clothing/Cloth	2	Yellow Council Dog Poo Bags	335	Foam
83	Shoes	9	Binding Thread/String	5	Hessian Bag
2	Surf Wax	2	Candle		

**OCEAN/WATERWAY ACTIVITIES**

Total	Item	Total	Item	Total	Item
98	Bait Containers/Lids	21	Light Bulbs / Tubes	46	Bleach/Cleaner Bottles
214	Bait Bags/Packaging	8	Oil / Lube Bottles	10	Fishing Nets
125	Buoys/Floats	7	Pallets	5	Fishing Lures
69	Crab/Lobster/Fish Traps	7	20 litre Drums	48	Plastic Sheeting/Tarps
28	Crates	669m	Rope	5	Boat Pieces
177m	Fishing Line	240	Strapping Bands	3	Fishing Rod/Hand Reels
163	Cylume Sticks	5	Buckets	4	Cable Tie
28	Fishing Floats	34	Rubber	3	Sinker
1	Broom & Scrubbing Brush	33	Oil Globules	1	Gauges

**SMOKING-RELATED ACTIVITIES      DUMPING ACTIVITIES**

Total	Item	Total	Item	Total	Item
812	Cigarettes and Filters	1	Stoves/Fridges	81	Wood
49	Cigarette Lighters	1	Electrical Wiring	15	Metal
46	Tobacco Packaging	71	Building Materials	4	Tyres
1	Bong	10	Cars/Car Parts	2	40-Gal. Drums

**MEDICAL/PERSONAL HYGINE      OTHERS**

Total	Item	Total	Item	Total	Item
4	Condoms	17	Toothbrushes	2	Dummy
20	Nappies	6	Brushes/Combs	8	Ear Plug
3	Syringes	5	Bandaid	1	False Teeth
3	Tampons + Applicators	1	Sanitary Napkin		

**TOTALS**

Number of Sites Cleaned Up: 43

Total Items: 11,567

Total Bags: 217

Total Distance Covered: 106km

Number of Volunteers: 191

Total Kilograms: 1739kg

Total Hours:493

**THANK YOU!!!**

I would like to make a special thanks to the following people for their continued support to the Cape to Cape Beach Clean Up and Tangaroa Blue's marine debris projects. With their dedication, thousands of pieces of debris are being removed from south west beaches every year, protecting our precious marine life. You are making a difference!!

**Wally Smith  
Renee Mouritz  
Alison Dorn  
Steve Hooyberg & Family  
Kirrily White  
Gavin & Jonene Coakley**

To the following groups, thank you for participating in the Cape to Cape Beach Clean Up and helping us protect our oceans, we look forward to your support again next year!

**Augusta Regional Environment Centre  
Dunsborough Probus Association  
Dunsborough CALC  
Dunsborough District Progress Association  
Friends of Cape to Cape Track  
Busselton Dunsborough Environment Centre  
Bunbury High School  
Busselton Jetty Staff  
Western Australia Fishing Industry Council  
South West Catchment Council  
Dept of Environment & Conservation – Busselton Office  
Dept of Fisheries – Busselton Office  
Prevelly Penguins  
Cape to Cape Catchments Group  
West Whales  
Geocatch  
Dunsborough Bay Yacht Club**

To all the individual volunteers, we appreciate your time and efforts in helping us clean up our coastline during the Cape to Cape Beach Clean Up, we hope to have you back again next year!! And thank you for the support from the following organisations and agencies that supported this project through funding, insurance, materials, time & effort and lots of encouragement. I look forward to working with you again next year!

**South West Catchments Council  
Dept of Environment & Conservation  
Keep Australia Beautiful Council, WA  
Clean Up Australia Organisation  
Shire of Busselton  
Augusta Margaret River Shire  
Project Aware**

**A DATE FOR YOUR DIARIES!!!  
CAPE TO CAPE BEACH CLEAN UP 2007 – 13<sup>TH</sup> & 14<sup>TH</sup> OCTOBER 2007**