



Report: 2016 International Coastal Cleanup by VESS



In this the 31st year of the ICC, VESS again joined in the global effort to rid our oceans of debris. Following on from Vanuatu's first events in 2015, VESS volunteers were out in force to clean up our sea and beaches this year.



The ICC events were organised by VESS with the support of a Critical Ecosystem Partnership Fund Grant. The T-shirts and Eco-bags, which were given to participants, were sponsored by the Secretariat of the Pacific Regional Environment Programme.



2016
INTERNATIONAL
COASTAL
Cleanup

Ocean Conservancy



We couldn't have done it without all of our fabulous volunteers

The effort started on Friday 9th September when Hawkins Construction employees, who are working on the seafront beautification project, downed tools early to spend an hour cleaning up the areas around their project sites. The 119 workers collected 97kg of rubbish from the wharf area, the Seafront and Fatumara Park.

On Saturday 10th September VESS volunteers teamed up with the Vanuatu Yacht Cruising Club (VYCC) and the Port Vila Boat Yard to clean up the beach along Ifira Point. The local businesses and residence has reported that this area is particularly problematic since the temporary barge for the island trading vessels has been located close by. 41 volunteers (26 adults and 15 kids) collected 325kg of rubbish. They were rewarded with drinks and sausages supplied by VYCC.



We also had teams collecting the coastal rubbish in Pango: The Bastian Foundation had a 16 strong team of 9 adults and 7 kids and collected 43kg of rubbish from the beach along the first lagoon.

Tranquility Island resort joined in the effort as well and a team of 4 collected 15kg of rubbish from Moso Island.



V E S S
VANUATU ENVIRONMENTAL
SCIENCE SOCIETY



The Data

The ICC is not just a cleanup, it is also a survey of litter. This citizen science project give valuable information and data about the amount of rubbish entering our seas.

A total of 180 people took part in this year's ICC effort. We collect 11,045 pieces of rubbish weighing 480 kg from 23 km of coastline. These items were recorded from the land cleanup:

172 cigarette butts	2 balloons
1860 food wrappers	18 cigar tips
242 plastic take-out containers	28 cigarette lighters
812 foam take-out containers	142 Tobacco Packaging /Wrap
740 plastic bottle caps	192 pieces of construction material
318 metal bottle caps	18 Appliances
718 plastic lids	14 tires
342 straws / stirrers	38 6-pack holders
276 pieces of cutlery	346 other types of foam or plastic packaging
1592 plastic drink bottles	230 other plastic bottles
370 glass drink bottles	72 strapping bands
1920 drink cans	48 condoms
148 tin cans	128 diapers / nappies
918 plastic shopping bags	10 tampons
2494 other types of plastic bag	63 Shoes and clothes
538 paper bags	18 Fruit juice drink cartons
86 paper cups and plates	6 Spray cans
282 plastic cups and plates	1156 small foam pieces
168 foam cups and plate	802 small glass pieces
28 fishing nets	4374 small plastic pieces
26 pieces of fishing line	6 Metal pieces
98 pieces of rope	2 pieces of cloth
8 Razors	
2 Fly screens	



2016
INTERNATIONAL
COASTAL
Cleanup



Dive Against Debris

Since 2013, Big Blue has been organising clean up dives every 3 months. Volunteer divers pick up litter and rubbish that has made its way into the ocean. Big Blue joined the ICC effort this year by holding a clean up dive at Ifira point at the same place as the beach clean up. The dives are survey dives as well as rubbish collecting dives. All the debris is collected and then sorted and counted. The results are uploaded to the Project Aware global database.



The Data

7 divers and 3 volunteers on the boat and on land participated in the clean up dive. 279 kg of rubbish was collected comprising the following:

118 plastic bags	3 glass jars	2 towels/rags
111 plastic bottles	82 pieces of glass	10 cloth fragments
92 caps and lids	2 spray cans	2 pieces of cardboard
1 fast food container	230 drinks cans	2 books/ magazines
9 nappies	38 tin cans	1 paper fragment
376 food wrappers	1 car part	8 items of clothing
1 latex glove	1 metal plate	4 pieces of cloth rope
1 mesh bag	1 piece of cutlery	6 shoes
2 pieces of rope	1 rebar	1 toy
1 scuba equipment	1 piece of wire	2 cassette tapes
8 strapping bands	2 metal fragments	1 measuring tape
1 syringe	1 rubber band	1 mirror
6 tobacco packaging	2 tyres	1 piece of fiberglass
181 plastic fragments	5 rubber fragments	1 paintbrush
117 glass bottles	8 burlap bags	1 coat hanger
1 ceramic plate / cup	3 cloth gloves	1 metal bracelet



A total of 1473 pieces of rubbish were collected, 909 of which were made of plastic. That is 62% of all rubbish collected.



V E S S
VANUATU ENVIRONMENTAL
SCIENCE SOCIETY

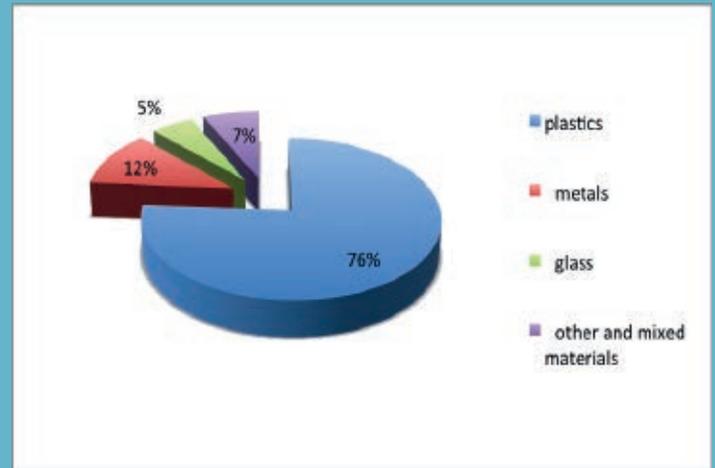
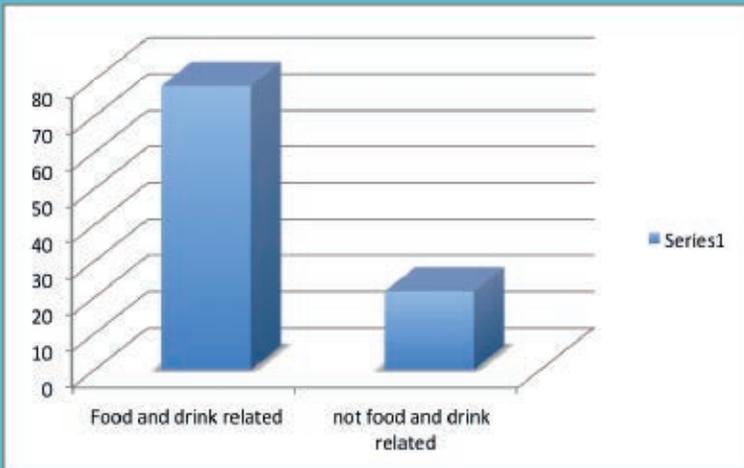


What the data tells us



The fact that 12,518 pieces of rubbish were picked up from our shores in the space of a few short hours shows that Port Vila has a problem with marine debris.

This year, as was the case last year, food and drink packaging was the biggest problem. 78% of the items collected on land and 71% collected from the water were food and drink related. Plastics made up 76% of the rubbish on land and 62% of the rubbish from the water. The difference between the percentage of plastics in the ocean and on the land is likely because many plastics float and will be carried away from the coast by wind, tides and currents.



The global problem

Many scientific studies have been performed to try to quantify the amount of rubbish entering our seas and the impact it is making on aquatic organisms. It has been estimated that there are 5.25 trillion pieces of plastic floating in the world's oceans (1) and that 8 million tonnes of plastics are entering the seas every year (2). Just last month Ocean Cleanup, an organisation that aims to clean the ocean of plastics, conducted an aerial survey of the great Pacific garbage patch and saw the density of garbage was much higher than expected.

It is well known that marine debris is having serious negative effects on marine life. At least 690 different marine species have been impacted by marine debris and 92% of reported encounters are with plastics (3). 200 different species of marine animals have been entangled in marine debris (4). 52% of all sea turtles (5) and 90% of all seabirds (6) examined in recent studies had eaten plastic.

Plastics and other debris smother coral and seagrass as well as entangling whales and turtles. They are unsightly and are bad for tourism. Plastics can also accumulate toxins on their surface and these can then be passed onto any animal that ingests the plastic. The biggest issue with plastics is that they don't degrade. They will break up into smaller and smaller pieces but they don't get broken down. Any plastics that get into the oceans will remain there for a very long time.

References:

- 1) Eriksen, Marcus, et al. "Plastic pollution in the world's oceans: more than 5 trillion plastic pieces weighing over 250,000 tons afloat at sea." *PloS one* 9.12 (2014): e111913.
- 2) Jambeck, Jenna R., et al. "Plastic waste inputs from land into the ocean." *Science* 347.6223 (2015): 768-771.
- 3) Gall, S. C., and R. C. Thompson. "The impact of debris on marine life." *Marine pollution bulletin* 92.1 (2015): 170-179.
- 4) National Oceanic and Atmospheric Administration Marine Debris Program. 2014 Report on the Entanglement of Marine Species in Marine Debris with an Emphasis on Species in the United States. Silver Spring, MD. 28 pp
- 5) Schuyler, Qamar A., et al. "Risk analysis reveals global hotspots for marine debris ingestion by sea turtles." *Global Change Biology* 22.2 (2016): 567-576.
- 6) Wilcox, Chris, Erik Van Sebille, and Britta Denise Hardesty. "Threat of plastic pollution to seabirds is global, pervasive, and increasing." *Proceedings of the National Academy of Sciences* 112.38 (2015): 11899-11904.



Conclusion

Vanuatu is not immune to the problem of marine debris. Plastics are polluting our oceans and coastlines.

Picking up rubbish once a year will never solve the problems associated with marine debris. The only solution is to ensure our waste, particularly plastic waste, does not enter the sea in the first instance. Everyone can play a part: dispose of all rubbish responsibly.

Government can also take responsibility and instigate measures to reduce the problem such as banning or taxing single use plastics.

