COMMITTING TO

SUSTAINABLE WASTE ACTIONS IN THE PACIFIC

(SWAP)

SWAP MARINE LITTER WORKSHOP

ACTIVITY REPORT

APRIL 2022

Contents

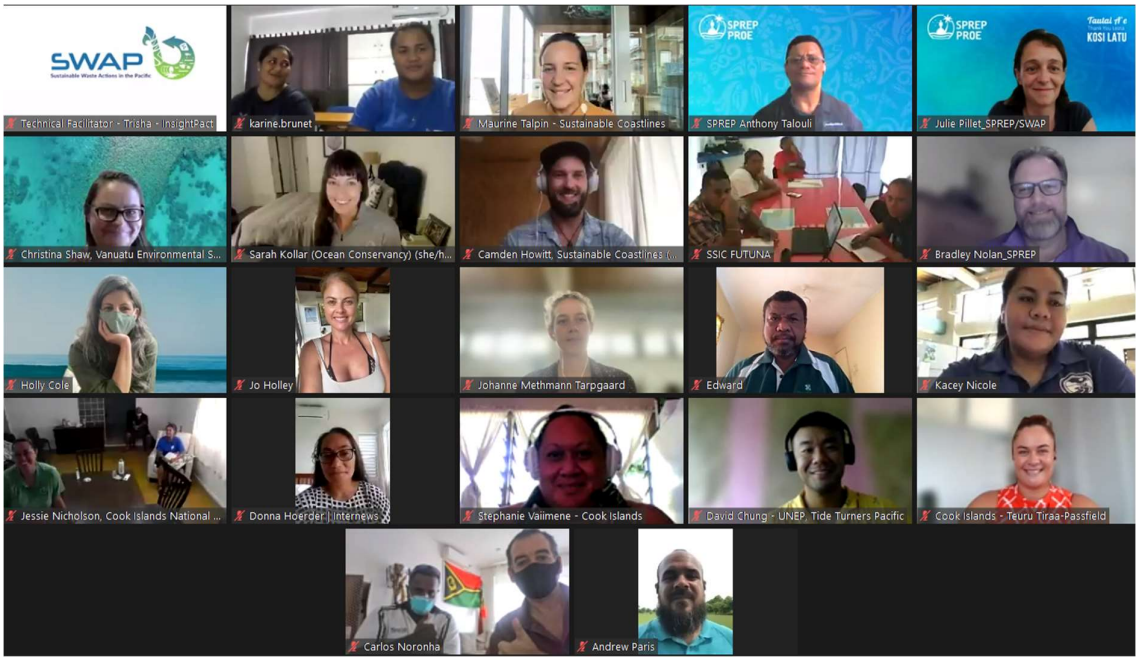
I. INTRODUCTION

Marine pollution is the result of harmful chemicals entering the ocean, polluted wastewaters, industrial, agricultural and residential waste, garbage from ships, and the spread of invasive organisms. A major source of marine pollution is related to plastics intentionally thrown from shore or boats, or are unintentionally carried by winds or streams.

A report by the Ellen MacArthur Foundation has revealed that there are now over 150 million tonnes of plastics in the oceans. That's about one tonne of plastics for every three tonnes of fish. If the trend continues, plastics will outweigh fish in the oceans by 2050.

Pacific islands are particularly vulnerable to the impacts of marine litter, due to the particular value and sensitivity of their coastal environments.

To discuss this issue and the tools that can be used in the struggle against this marine litter problem (awareness, clean-ups, audits, etc.), SPREP, through the SWAP project, delivered a two-hour virtual meeting on April 6, 2022.



The delivery of this workshop is part of Component 3 of SWAP – Establishment of a Community of Practice. This was also the opportunity to share and promote the actions carried out by the ten associations funded by SWAP to conduct clean-up activities and produce awareness videos during the International Coastal Clean-up Day 2021.

II. Concept Note

1.1. Objectives

The workshop was designed for the participants to:

- Understand the origins and the impacts of marine litter in order to implement and develop tools to raise awareness to address this problem;

- Get practical information on how to prepare and conduct a clean-up campaign based on shared experiences;
- Be informed about the value of conducting a statistically sound waste survey and audit.

1.2. Content

This online workshop involved four parts:

- The first part aimed to provide an **overview of the marine litter problem**: origins and sources of production of marine litter, potential impacts (financial revenues, human health, aquatic life, etc.) and how to raise awareness to address this issue;
- The second part focused on the preparation and organization of a coastal clean-up campaign with the sharing of experience from an association that has been conducting clean-ups for several years;
- The third part aimed to inform participants about the value of conducting a statistically reliable waste survey and audit during a beach clean-up using the United Nations Methodology. The objective of this session was to make the audience aware of the value of conducting this type of waste audit as a common tool for public awareness and decision making by authorities; and
- The workshop ended with a A/Q session.

1.3. Speakers

The speakers was:

- Overview of the marine litter issue (sources, environmental impacts, data, etc.): Ms. Julie Pillet, Technical Waste Project Coordinator, SWAP;
- Awareness-raising tools: Mr. Camden Howitt, Co-Founder and Programmes Director of Sustainable Coastlines;
- Preparation and organisation of a clean-up campaign and sharing experience: Ms. Sarah Kollar, Outreach Manager, International Coastal Cleanup (ICC) - Trash Free Seas® Program - Ocean Conservancy and Ms. Christina Shaw, CEO of The Vanuatu Environmental Science Society;
- Conduction of a statistically sound waste survey and audit: Mr. Camden Howitt, Co-Founder and Programmes Director of Sustainable Coastlines.

1.4. Audience

Any organisation (Ministries, NGOs, Associations, Communities, etc.) concerned with the problem of Marine Litter in the Pacific Region or beyond.

III. Virtual Marine Litter Workshop Organisation

1.1. Logistics and interpretation services

Since SWAP is a bilingual project involving French Territories and English-speaking countries, the workshop was delivered in English and interpretation was provided to French-speaking participants by OnCall, the SPREP contractor.

To assist the SWAP Project Management Unit, SWAP hired an experience and qualified consultant to handle the logistics of the workshop. Through a Request for Quote, InsightPact was recruited to provide digital services, including:

- Management of livestreaming event sessions in both English and French; and
- General support related to the management of the event.

1.2. Information to participants

Different ways were used to inform participants of the holding of the SPREP/SWAP Marine Litter Workshop:

- A flyer was drafted in French and English for dissemination on social media (Facebook, LinkedIn, etc) – Appendix 1;
- A circular was circulated to all SPREP Focal Points in French and English – Appendix 2;
- Feature articles were published on SPREP Website:
    - In English: https://www.sprep.org/news/pacific-countries-push-back-against-frightening-marine-litter-statistics /
    - In French: https://www.sprep.org/news/grace-aux-pays-du-pacifique-les-statistiques-alarmantes-sur-les-dechets-marins-sameliorent
- A post was published on the Green Forum: https://thegreenforum.org/event/tackling-marine-litter-coastal-clean-decision-making

1.3. Agenda

SPREP/SWAP Online workshop on Marine Litter Management		
2:00pm – 2:04pm	Introduction to the logistical arrangements for the meeting	InsightPact
2:04pm – 2:07pm	Welcome	Mr Anthony Talouli WMPC, Acting Director
2:07pm – 2:10pm	Overview of the workshop (SWAP)	Mrs Julie Pillet WMPC, SWAP Project Coordinator
2:10pm – 2:15pm	Video of the International Coastal Clean-up Day	VESS video
2:15pm – 2:20pm	Photo	InsightPact
2:20pm – 2:35pm	Overview of the marine litter problem: origin, effects, etc.	Mrs Susana Telakau WMPC, Solid Waste Management Adviser
2:35pm – 2:45pm	How to raise awareness to address this problem and reduce the production of marine litter	Mr Camden Howitt Co-Founder and Programmes Director of Sustainable Coastlines

2:45pm – 3:05pm	Organisation of coastlines and beaches clean-ups	Mrs Sarah Kollar Outreach Manager, International Coastal Cleanup (ICC) Trash Free Seas® Program Ocean Conservancy
3:05pm – 3:15pm	Sharing of experience in organising beach clean-ups	Mrs Christina Shaw CEO of The Vanuatu Environmental Science Society
3:15pm – 3:35pm	Waste audit	Mr Camden Howitt Co-Founder and Programmes Director of Sustainable Coastlines
3:35pm – 4:00pm	Discussion	Mrs Julie Pillet WMPC, SWAP Project Coordinator
4:00pm – 4:05pm	Workshop Assessment	InsightPact
4:05pm – 4:10pm	Session Close	Mr. Anthony Talouli WMPC, Acting Director
4:10pm – 4:15pm	Video of the International Coastal Clean-up Day	Video "Foyer socio-educatif Wallis"

1.4. Participants

According to the Post-Event Report (Appendix 5) provided by InsightPact as part of the logistics service, registration for the Workshop gathered a total of 55 responses. The contact details of the registered persons are provided in Appendix 3.

Out of the 55 registered participants, 32 (58%) were females and 23 (42%) were males, with a majority coming from Samoa, with 14 (25%) of the total registered participants. There was also a strong presence from the Cook Islands (15%), Fiji (11%), and Vanuatu (9%). The registered participants varied from being project managers and directors to journalists and researchers of civil society organizations, media networks, or government offices.

During the live virtual delivery, 45 participants joined the Workshop. And to date, the online recording of the workshop has registered 52 views.

1.5. Workshop Notes

1.5.1. Overview of the Marine Litter Problem

The overview of the Marine Litter Problem Session was based on a global assessment of marine litter and plastic pollution conducted by UNEP in 2021[1].

Marine Pollution Sources:

The presentation started on how Marine Pollution can be generated. The main sources are:

[1] Report, "From Pollution to Solution": https://www.unep.org/resources/pollution-solution-global-assessment-marine-litter-and-plastic-pollution

- Human behaviour when waste is disposed of in the environment or discarded on the ground or directly on the sea;
- Leachates from landfill sites;
- Sludge from wastewater treatment systems;
- Run-off from agriculture;
- Shipbreaking;
- Accidental cargo losses at sea;
- Nurdles: these are a major source of microplastic pollution;
- Extreme events such as floods, storms and tsunamis.

The major source of marine pollution is related to plastics. The UNEP report states that plastics in the oceans represent between 75 to 199 million tons. The amount of plastic waste entering aquatic ecosystems could nearly triple from 9 million tons per year in 2016 to a projected 23 million tons per year by 2040. And unfortunately, the Covid-19 pandemic increased this situation since large amounts of plastic waste from personal protective equipment and additional packaging were discarded in the Environment.

Marine Pollution Impacts:

Marine Pollution generates different impacts on:

- Marine life, such as:
  - Lethal effects in whales, seals, turtles, birds and fish as well as corals;
  - Entanglement, starvation, drowning, laceration of internal tissues, smothering and deprivation of oxygen and light and toxicological harm;
- Climate by altering the global carbon cycle through its effect on plankton and marine ecosystems, such as mangroves, seagrasses, corals, etc. And it may also reduce the adaptation and resilience of these ecosystems to climate change;
- Revenues when communities depend on polluted areas (fisheries, tourism, etc.);
- Human health: As plastics break down in the marine environment, they transfer microplastics, chemicals, metals, and micropollutants into waters, sediments, and ultimately into marine food chains. When microplastics are ingested, they can cause changes in gene and protein expression, inflammation, disruption of feeding behaviour, decreases in growth, changes in brain development, and reduced filtration and respiration rates.

1.5.2. Awareness and actions

For Sustainable Coastlines, the main action toward awareness and behaviour changes is to involve communities in clean-ups and data collection in a long-term process to allow them to understand what the problem is and inspire better decision-making, based on their insights and knowledge of their own environment. The principle is based on the idea that *People protect what they love*.

Thus, Sustainable Coastlines developed different programmes:

- The Litter Intelligence App to collect and share data. It was developed based on the UNEP/IOC Guidelines on Survey and Monitoring of Marine Litter;
- Citizen Scientist: educational program to inspire and form decision-making by getting people involved in environment protection building connections and links between Science and Communities.

Sharing success stories is also a good way to inspire others by highlighting the positive aspects of actions undertaken. This can also be a tool to inspire new actions and replicate them from the local to the international level.

Also, networking at a regional or international level is also a good way for sharing ideas and addressing challenges together.

1.5.3. Data collection for Decision-making for action

Like Sustainable Coastlines, Ocean Conservancy stresses empowering communities and citizen scientists to identify and track the problem of marine litter in their own environment. This includes Coastal clean-up campaigns. However, since they are involved in shoreline clean-up activities, Ocean Conservancy emphasizes the importance of incorporating the collection and sharing of data collected. This is primarily a tool to monitor how effective the conducted activities are but also a means of decision-making.

To do this, Sustainable Coastlines has developed a standardized data collection and sharing process to ensure the relevance of the data and to get confidence of the authorities to use the results for decision-making. To ensure the data quality, the process followed by Sustainable Coastlines is as follows:

- Preparation of Citizen Scientists for the clean-up activity:
  - Training virtually or on the ground;
  - Provision of equipment required for the survey.
- Conducting the waste survey and audit:
  - The entire beach clean-up area is not involved. The survey and audit focus on a specific area. The goal is to conduct the survey 4 times per year, as the repeatability of the activity is part of the process;
  - The survey includes removing of waste and conducting the audit in a safe place where the items can be analysed in detail;
- Then fill out the data on the online application. Once the data is recorded, Sustainable Coastlines reviews it for validity using photos and an artificial intelligence tool that can help recount items to ensure the information is relevant.

Through data collection and sharing, both Ocean Conservancy and Sustainable coastlines have shared successful results to highlight how data collected during coastal clean-ups have informed and inspired policies to prevent ocean litter, such as:

- Country-wide bans on importation of certain types of plastic and/or certain plastic products;
- Municipal laws against smoking-related litter
- Laws prohibiting mass balloon releases;
- Bans/fees on single-use plastic bags;
- Laws prohibiting the use of polystyrene (foam);
- Passage of the Microbead-Free Waters Act of 2015 (U.S.);
- Adoption of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78 Annex V) (U.S.);
- New-Zeeland Single-used Plastic Ban Policy;

And note that data collection is also a way to track how the single-use plastic ban policies impact the pollution plastic when they are in place.

1.5.4. Experience sharing

The main purpose of Vanuatu Environmental Science Society (VESS) is to engage with communities on environmental issues and advocate for a healthy environment. To this end, one of the activities carried out by VESS is coastal clean-up, as it is an activity that anyone can easily get involved in, without the need for specific skills or scientific background, and it is not a too time-consuming task.

For Vess, as for Sustainable Coastlines and Ocean Conservancy, data collection is the mail focus because conducting even repeated clean-up campaigns without analysis of the collected waste is not the solution. For a clean-up activity to be relevant, it needs to understand the sources and how waste is generated.

One of the major successes of VESS is that the coastal clean-up activities and the sharing of the data collected with local authorities led to the implementation of a National Policy to ban single-use plastic bags, plastic straws, and polystyrene take-away containers. Initially, this policy targeted only single-use plastic bags, but data showed the importance of banning other items such as straws and containers, which were therefore added not the scope of the regulation. Data collection during the campaigns that followed this single-use plastic ban policy highlighted the positive impact of this policy on plastic pollution, including reduction of plastic bags.

Thus, based on its experience sharing, VESS stressed:

- that it is best to carry out actions by integrating a local, regional or international network in order to benefit from support to organize and carry out activities, and to use existing tools for data collection and awareness raising;
- Even small clean-ups with messy data are important and can make a difference;
- Clean-ups without data collection are not a solution, especially in a long-term process;
- It is important to ensure that the collected waste is properly disposed of after the activity. But covering the cost may be a problem for communities. In general, funding support may be needed to cover costs (e.g., purchase of gloves, garbage bags) when the clean-ups is conducted by small communities.

1.6. Materials

1.6.1. Presentations

The five presentations are provided in Appendices 4:

- Overview of the marine litter issue (sources, environmental impacts, data, etc.): Appendix 4a;
- Awareness-raising tools: Appendix 4b;
- Preparation and organisation of a clean-up campaign and sharing experience:
    - Ocean Conservancy: Appendix 4c;
    - Vanuatu Environmental Science Society: : Appendix 4d;
- Conduction of a statistically sound waste survey and audit: : Appendix 4e.

The recording of the workshop is available on SPREP YouTube Channel/SWAP Playlist at: https://www.youtube.com/watch?v=JZ9QoZtJmw4&list=PLHKcA8pmzZqux_aQEgAEZfpTc7oGh_63C&index=13&t=3129s.

1.6.2. Additional materials

Different additional materials were provided by the speakers during the workshop:

- Report, "From Pollution to Solution": https://www.unep.org/resources/pollution-solution-global-assessment-marine-litter-and-plastic-pollution
- Resources from the Ocean Conservancy:
  - Cleanup Guides: https://oceanconservancy.org/trash-free-seas/international-coastal-cleanup/start-a-cleanup/
  - Supporting Materials: https://oceanconservancy.org/icc-outreach/
  - Data collection resources: Paper card (15+ languages): https://oceanconservancy.org/icc-outreach/
  - Cleanup Data for All: https://www.coastalcleanupdata.org/
  - Education & Outreach Materials:
    - materials/lessons for youth: https://oceanconservancy.org/trash-free-seas/outreach-education/
    - "Skip the Straw": https://oceanconservancy.org/trash-free-seas/outreach-education/skip-the-straw/
    - Materials for recreational boaters and marinas: https://oceanconservancy.org/trash-free-seas/boating-community/boating/
    - International Trash Trap Network: https://oceanconservancy.org/trash-free-seas/international-coastal-cleanup/trash-trap-network/
- Resources from Sustainable Cities / Litter Intelligence:
  - Explore data and insights: https://insights.litterintelligence.org/
  - Read more inspiring stories of community and business action: https://litterintelligence.org/action/
  - Find out more about Beach litter data collection methodology: https://litterintelligence.org/about/beach-monitoring/
  - See media and publications featuring Litter Intelligence: https://litterintelligence.org/about/media-publications/

IV. Survey

Before the closing remarks, the attendees were requested to file an online survey to assess the SPREP/SWAP Marine Litter Workshop including format, length, content, presentations, logistics, etc. The survey was in French and English.

The questions were as follows, and the participants were given the opportunity to add comments to detail their thoughts:

- Question 1: In general, are you satisfied with the SPREP/SWAP Marine Litter Workshop?
- Question 2: Was the length of the workshop appropriate?
- Question 3: Did the agenda and content of the SPREP/SWAP Marine Litter Workshop meet your expectations?
- Question 4: Were the topics covered in sufficient detail?
- Question 5: Was the quality of the interventions satisfactory?
- Question 6: Have you encountered any difficulties in using the "translation" mode offered by the virtual workshop platform?
- Question 7: Apart from any technical issues, was the interpretation service satisfactory?
- Question 8: What improvements could be made at the next workshop (length, content, format, etc.)?

- Question 9: Would you consider participating in the upcoming training on how to conduct a coastal clean-up campaign and a statistical marine litter audit?
- Question 10: if so, what would be your expectations and needs regarding the training?

Responses were anonymized to facilitate participation in the survey. 15 participants filed the survey. Their responses are provided in Appendix 6.

In summarize, all of the participants who sent in their assessments were satisfied with the workshop. Some were left wanting in terms of the depth of the presentations, but 80% of them were very appreciative of the time allocations for each speaker. The invited speakers were very insightful and inspiring, having shared impactful work on the topic of marine litter, community organizing and data sharing. They were very mindful of their time limits and have maximized their time well in sharing as many stories as they could, while answering any lingering questions on the chat asynchronously. One area of improvement could have been to give participants more time to reflect on the sessions, share their insights or questions, and interact with speakers or each other. Indeed, the singular discussion period proved to be too short given the variety of topics covered in about 2 hours. Inclusion of breakouts, question and answer periods, and discussion sessions would improve future workshops, making them more engaging and interactive. Some participants also suggested that a longer workshop would have been better to cover all the topics in more depth and to include these discussion sessions.

Appendices

- Appendix 1 – Flyer
- Appendix 2 – Circular
- Appendix 3 – Contact details of registered persons
- Appendix 4
    - Appendix 4a – Overview of the marine litter issue (sources, environmental impacts, data, etc.)
    - Appendix 4b – Awareness-raising tools
    - Appendix 4c – Preparation and organisation of a clean-up campaign
    - Appendix 4d – Experience sharing
    - Appendix 4d – Conduction of a statistically sound waste survey and audit
- Appendix 5 – Post-Event report
- Appendix 5 – Survey responses

Appendix 1: Flyer

ONLINE WORKSHOP

Tackling marine litter:

From coastal clean-up to decision making

Wednesday 6 April 2022 2–4PM (SAMOA TIME)

A report by the Ellen MacArthur Foundation has revealed that there are now **over 150 million tonnes of plastics in the oceans**. That's about **one tonne of plastics for every three tonnes of fish.**

Pacific islands are particularly vulnerable to the impacts of marine litter, due to the particular value and sensitivity of their coastal environments.

If you are willing to discuss this issue and the tools that can be used to address this problem, please join us and our speakers for this two-hour virtual Marine Litter workshop.

For more information, please visit: **www.sprep.org/sprepswap-marine-litter-workshop**

PLEASE REGISTER HERE → https://form.jotform.com/insightpact/marine-litter-workshop

You will receive a Zoom link to join the workshop in the confirmation email.

AFD AGENCE FRANÇAISE DE DÉVELOPPEMENT

SPREP Secretariat of the Pacific Regional Environment Programme

SWAP Sustainable Waste Actions in the Pacific

Appendix 2: Circular

SPREP
Secretariat of the Pacific Regional Environment Programme

CIRCULAR

FILE: AP_6/15 **TO:** SPREP National Focal Points

DATE: 1 April 2022

CIRCULAR: 22/26

SUBJECT: **Invitation to attend the virtual Marine Litter Workshop "Tackling marine litter: From coastal clean-up to decision making", hosted by the Secretariat of the Pacific Regional Environment Programme as part of the SWAP Project**

6 April 2022 – Virtual (via Zoom) - 2.00 pm – 4.15 pm Samoa Standard Time

Dear Members,

Plastic pollution particularly marine pollution is the result of harmful chemicals entering the ocean, polluted wastewaters, industrial, agricultural and residential waste, garbage from ships, and the spread of invasive organisms. A major source of marine pollution is related to plastics intentionally thrown from shore or boats, or are unintentionally carried by winds or streams.

A report by the Ellen MacArthur Foundation has revealed that there are now over 150 million tonnes of plastics in the oceans. That's about one tonne of plastics for every three tonnes of fish. If the trend continues, plastics will outweigh fish in the oceans by 2050.

Pacific islands are particularly vulnerable to the impacts of marine litter, due to the particular value and sensitivity of their coastal environments.

To discuss this issue and the tools that can be used in the struggle against this marine litter problem (awareness, clean-ups, audits, etc.), SPREP, through the AFD-Funded SWAP (*Committing to Sustainable Waste Actions in the Pacific*) Project is pleased to invite you to attend a two-hour virtual workshop "Tackling marine litter: From coastal clean-up to decision making" to be held on **Wednesday 6th April 2022 at 2pm Samoa Standard time**.

We sincerely hope that you will be able to join us on this special occasion. Should you require any further information please visit the dedicated webpage: https://www.sprep.org/sprepswap-marine-litter-workshop

Or do not hesitate to contact Mrs Julie Pillet at juliep@sprep.org, SWAP Project Coordinator.

Please confirm your participation via the online Registration Form: https://form.jotform.com/insightpact/marine-litter-workshop.

Yours sincerely,

Kosi Latu
Director General

JP/NW

Appendix 3 – Contact details of registered persons

First Name / Prénom	Last Name / Nom	Gender / Sex	Nationality / Nationalité	Organization / Entreprise	Title - Position in your organization / Fonction dans votre entreprise*	Country / Pays
Keni	Lesa	Male / Homme	Samoan	SPREP	Comms	Samoa
Margaret	Daniel	Female / Femme	Ni Vanuatu	University of the South Pacific	Student	Vanuatu
Johanne	Tarpgaard	Female / Femme	Danish	Aarhus University, Denmark	PhD researcher	Fiji
Wendy	Beti	Female / Femme	Solomon Islander	Ministry of Environment	Senior Environment Officer	Solomon Islands
PHILIP	RIOGANO	Male / Homme	SOLOMON ISLANDER	ENVIRONMENT AND CONSERVATION DIVISION	SENIOR ENVIRONMENT OFFICER	Somaliland
Pauline	FAYE	Female / Femme	Française	Agence française de développement	Chargée de mission	New Caledonia
Ajebe Nnoko Ngaaje	Harrison	Male / Homme	Cameroon	AJEMALEBU SELF HELP (AJESH)	AJEMALEBU SELF HELP (AJESH)	Cameroon
nicolas	casenobas	Male / Homme	française	Calédonie bureau d'études	gérant	New Caledonia
Andrew	Paris	Male / Homme	Fijian	USP	Researcher	Fiji
Kwame	Appiah Kubi	Male / Homme	Ghanaian	Earth Care Ghana	Founder & Executive Director	Ghana
Sanjeshni	Kumar	Female / Femme	Fijian	Pacific Islands News Association	Multimedia Journalist	Fiji
Julia	Koerner	Female / Femme	German	GIZ	advisor	Germany
Ateliana	MAUGATEAU	Female / Femme	Française	Service Territorial de l'Environnement	Adjointe au Chef de service	Wallis and Futuna
Aruna	Gohil	Female / Femme	Indian	Argo Environ.Solutions	Propreitor	Samoa
Aruna	Gohil	Female / Femme	Indian	Argo Environ.Solutions	Proprietor	Samoa
TUFELE	Pelenatita	Female / Femme	française	Service Environnement Futuna	animatrice biodiversité	Wallis and Futuna
Ionie	Bolenga	Female / Femme	Vanuatu	Department of Environmental Protection & Conserv	Principal Officer: Waste Management & Pollution Control	Samoa
Hisashi	ENDO	Male / Homme	Japan	Overseas Fishery Cooperation Foundation of Japan	Senior Vice-President	Japan
Muneharu	Tokimura	Male / Homme	Japan	Overseas Fishery Cooperation Foundation of Japan	Technical Advisor	Japan
Shigeto	Sakata	Male / Homme	Japanese	Overeseas Fishery Cooperation Foundation of Japa	General Affairs Division	Japan
Hayley	Weeks	Female / Femme	British	National Environment Service	Manager	Cook Islands
Edwin	Koveke	Male / Homme	Solomon Islands	Solomon Islands Rural Development Program	Senior Environment and Social Safeguard Officer	Solomon Islands
Mandus	Boselalu	Male / Homme	Solomon Islander	Solomon Islands Community Conservation Partners	Program Coordinator	Solomon Islands
Sefano	Katz	Male / Homme	Fiji	Pacific Blue Foundation	Program Director	Fiji
Carlos	Noronha	Male / Homme	Portuguese	Save the Erakor Lagoons	Adviser	Vanuatu
Lorenzo	Raplili	Male / Homme	Vanuatu	Vanuatu Youth for Human Rights and Democracy	Coordinator	Vanuatu
Therese	L	Female / Femme	Samoan	N/A	N/A	Samoa
Hana	Gauta Keti	Female / Femme	Samoan	Atoa Law Firm	Associate	Samoa
T	L	Female / Femme	Samoa	IWSA	Copy editor	Samoa
Karen	Stone	Female / Femme	British	Vava'u Environmental Protection Association	Director	Tonga
Marina	Keil	Female / Femme	Samoa	Srwma	President	Samoa
Bradley	Nolan	Male / Homme	Australian	SPREP	Programme Manager PacWastePlus	Samoa
Donna	Hoerder	Female / Femme	Fijian	Internews (Earth Journalism Network)	Pacific Partnership coordinator	Fiji
Lice	Movono	Female / Femme	Fijian	Today Media Fiji	Journalist	Fiji
Joan	Yang	Female / Femme	US	Pew	Senior officer	United States
Alanna	Smith	Female / Femme	New Zealand	Te Ipukarea Society	Deputy Director	Cook Islands
Siana	Whatarau	Female / Femme	New Zealand	National Environment Services	Environmental Partnerships Coordinator (Intern)	Cook Islands
Jessie	Nicholson	Female / Femme	New Zealand	National Environment Service	Senior Environment Officer - Projects	Cook Islands
Nanette	Woonton	Female / Femme	Cook Islander	SPREP	Comms	Samoa
Brenton	Ellis	Male / Homme	Australian	Jotta Green Waste	Project Manager	Samoa
Patrick	Waoute	Male / Homme	Vanuatu	Erakor Council of Chiefs	Chief of the Sea	Vanuatu
Kacey	Iloilo	Female / Femme	Samoan	AS-EPA	Solid Waste Enforcement Officer	American Samoa

First Name / Prénom	Last Name / Nom	Gender / Sex	Nationality / Nationalité	Organization / Entreprise	Title - Position in your organization / Fonction dans votre entreprise*	Country / Pays
Edward	Nicholas	Male / Homme	Papua New Guinea	SPREP	Project Manager, ISLANDS Pacific Child Project, WMPC	Samoa
Dave	Chung	Male / Homme	USA	UNEP	Youth and Comms / Tide Turners	Samoa
Gary	Vasconcellos	Male / Homme	Portuguese	SXC	Principal	Vanuatu
Anthony	Talouli	Male / Homme	Fijian	SPREP	Director, WMPC Programme	Samoa
Jo	Holley	Female / Femme	New Zealand	Jo Holley	.	Cook Islands
Tierney	Anne	Female / Femme	Cook Islands NZ	MURI ENVIRONMENT CARE	Project Manager	Cook Islands
Teuru	Passfield	Female / Femme	Cook Islands Maori	Cook Islands Ministry of Foreign Affairs	Foreign Service Officer - Oceans Governance	Cook Islands
RIHO	HAMADA	Female / Femme	JAPAN	OFCF	Stuff	Japan
Stephanie	Vaiimene	Female / Femme	Cool Islands	MFEM	Training Specialist	Cook Islands
Siliako	Letueti	Male / Homme	Tuvalu	Department of waste management	Waste Education and Awareness Officer	Tuvalu
Reuben	Kausea	Male / Homme	Tuvaluan	Government of Tuvalu	Information & Knowledge management Officer	Tuvalu
Immaculata	Sewell	Female / Femme	Micronesia Chuuk	Chuuk Environmental Protection Agency	Manager	Micronesia
Emelipelesa Sam	Panapa	Female / Femme	Tuvalu	Department of Environment	Chemical Management Officer	Tuvalu

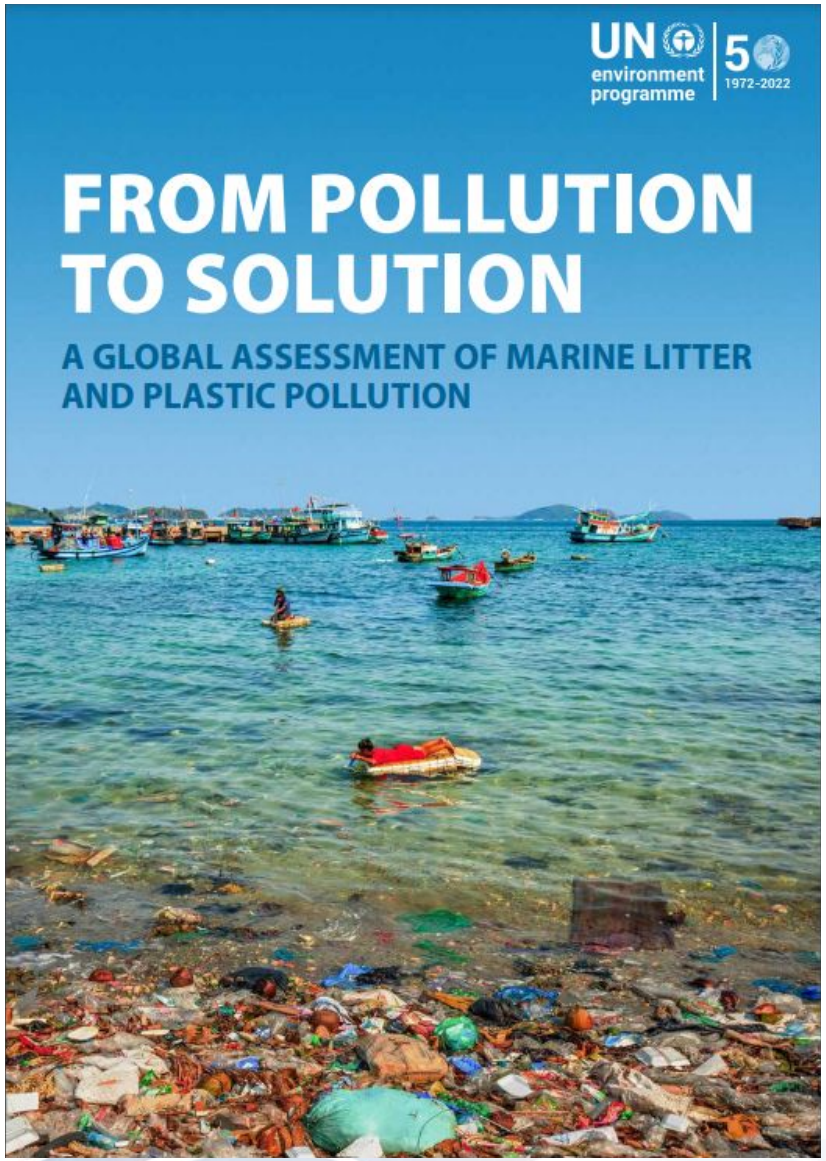
Appendix 4a – Overview of the marine litter issue (sources, environmental impacts, data, etc.)

Marine Litter

Overview of the problem

6 April 2022

Data used


UN environment programme
5 1972-2022
FROM POLLUTION TO SOLUTION
A GLOBAL ASSESSMENT OF MARINE LITTER AND PLASTIC POLLUTION

Marine Litter Sources

- Waste disposed of in the environment or discarded on the ground or directly on the sea
- Leachates from landfill sites
- Sludge from wastewater treatment systems
- Run-off from agriculture
- Shipbreaking
- Accidental cargo losses at sea
- Nurdles
- Extreme events such as floods, storms and tsunamis

Current situation

- PLASTICS:
  - Amount of plastics in the oceans: 75-199 million tons
  - Amount of plastic waste entering aquatic ecosystems: 9-14 million tons/year

- COVID-19
  - Large amounts of plastic waste from personal protective equipment and additional packaging

=> Emissions of plastic waste into aquatic ecosystems are projected to nearly triple by 2040 without meaningful action

Current situation

- OCEAN GYRES
  - A gyre is a natural large systems of rotating ocean currents
  - Accumulation of floating plastics in specific area including the Great Pacific Garbage Patch

Impacts

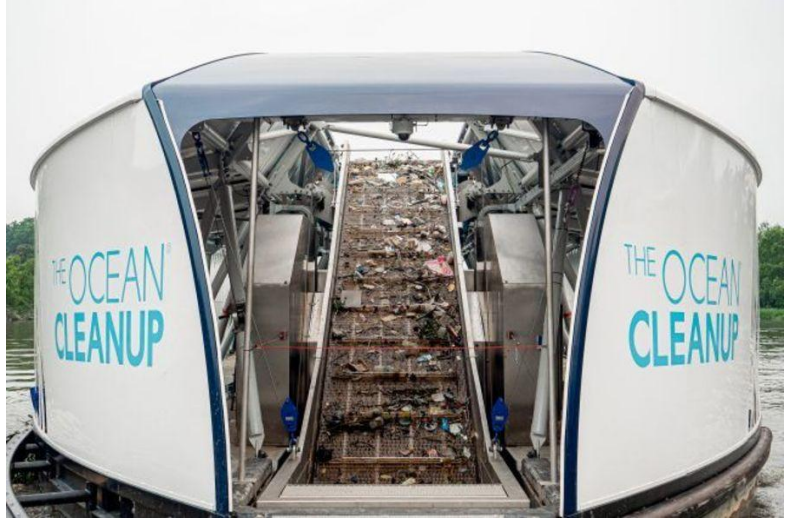
- MARINE LIFE:
  - Lethal effects in whales, seals, turtles, birds and fish as well as corals
  - Entanglement, starvation, drowning, laceration of internal tissues, smothering and deprivation of oxygen and light and toxicological harm

- CLIMATE
  - Global carbon cycle alteration

Impacts

- ECONOMY:
  - Tourism
  - Fishery: resource and quality
  - Cost of clean-up campaigns

=> It is projected that by 2040 plastic leakage into the oceans could represent a US$ 100 billion annual financial risk for businesses



Impacts

- HUMAN HEALTH:
  - Transfer of microplastics, chemicals, metals and micropollutants into waters, sediments and marine food chains
  - Microplastics act as vectors for pathogenic organisms
  - Human uptake of microplastics via seafood

=> A study conducted in the Netherlands and published on March 25 in the Environnement International journalrevealed the presence of macroplastics in the blood of 17 out of 22 people tested

Thank you for your attention

SWAP
Sustainable Waste Actions in the Pacific

juliep@sprep.org

AFD
AGENCE FRANÇAISE
DE DÉVELOPPEMENT

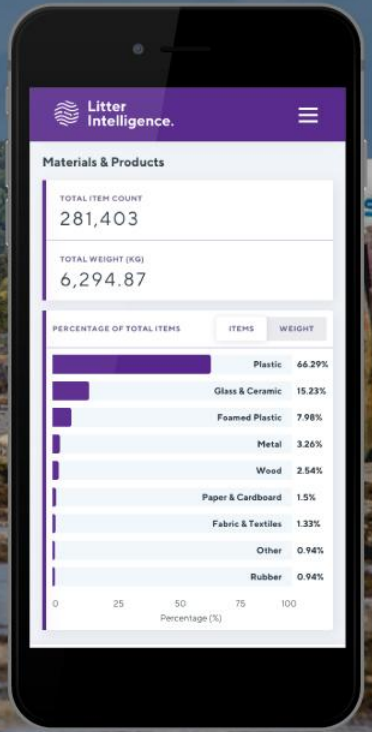
SPREP
Secretariat of the Pacific Regional
Environment Programme

SWAP
Sustainable Waste Actions in the Pacific

Appendix 4b – Awareness-raising tools

Citizen science that inspires litter action.

sustainable coastlines | Litter Intelligence.



Camden Howitt • camden@sustainablecoastlines.org • **litterintelligence.org**

CHARITY MISSION

Support communities to prevent litter and restore waterways.

RESULTS

1.7 million
LITRES OF LITTER CLEANED UP

1,586
CLEAN-UP EVENTS

11
COUNTRIES PACIFIC-WIDE


sustainable coastlines
Litter Intelligence.
Data. Insights. Action.
PROGRAMME PURPOSE
Inspire and inform better decisions for a world without litter.

sustainable coastlines | Litter Intelligence.

Data.

Citizen Science programme collecting long-term scientifically rigorous litter data.

Insights.

Interactive technology for data entry, trends, comparisons and insights. Raw data for in-depth analysis.

Action.

Inquiry-based **schools education programme** and library of inspiring community actions.

Collaborators

sustainable coastlines | Litter Intelligence.

UN environment

Ministry for the Environment
Manatū Mō Te Taiao

Stats NZ
Tatauranga Aotearoa

Department of Conservation
Te Papa Atawhai

GPML
Global Partnership on Marine Litter

Microsoft

NIWA
Taihoro Nukurangi

Auckland Council
Te Kaunihera o Tāmaki Makaurau

PALMY's PLASTIC POLLUTION challenge

SPREP
Secretariat of the Pacific Regional Environment Programme

Stormwater360
BETWEEN SKY AND SEA

enlighten designs
CREATIVE TECHNICAL AGENCY

The Travel Corporation
DRIVEN BY SERVICE

RUSH

SC Johnson
A FAMILY COMPANY

Collaborators

sustainable coastlines | Litter Intelligence.

Monitoring Group

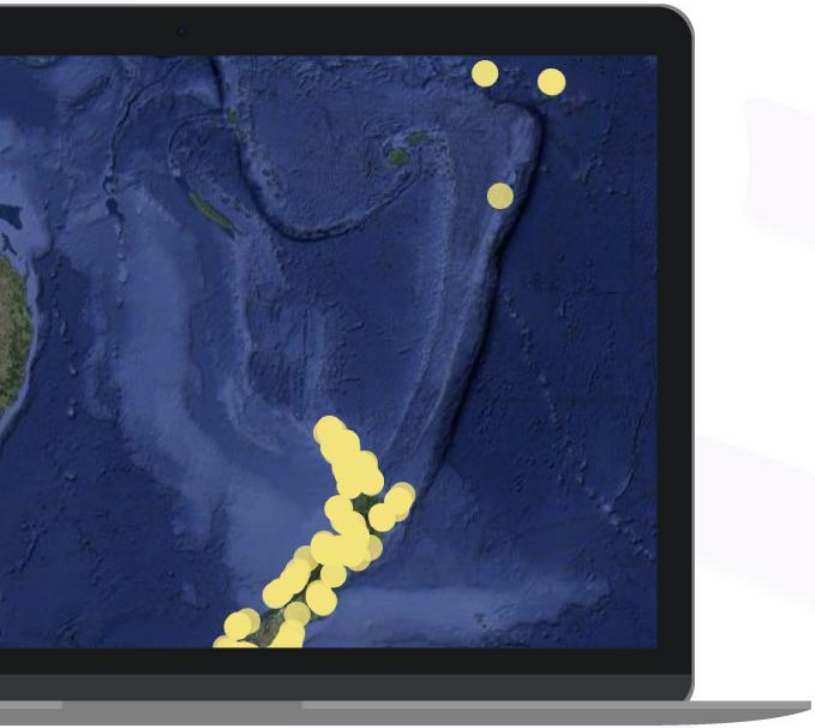
#	GROUP	SURVEY AREAS	SURVEYS COMPLETED	CITIZEN SCIENTISTS	VOLUNTEER HOURS
1	Sustainable Coastlines	46	66	628	759
2	Northland Regional Council	17	26	110	180
3	NZ Marine Studies Centre	8	21	285	193
4	Awhitu Beachcare	3	20	264	443
5	Guardians of Kāpiti Marine Reserve	4	15	103	157
6	Waikanae Estuary Care Group	2	15	41	28
7	Friends of Mana Island	4	14	91	156
8	Royal Albatross Centre	1	13	199	246
9	Southern Institute of Technology	7	12	78	59
10	Oreti Beach Litter Monitoring Group	2	10	81	58

1 - 10 of 197

Progress to date

2 APRIL 2022 **insights.litterintelligence.org**

sustainable coastlines | Litter Intelligence.



Beach

Stormwater

Freshwater

369
MONITORED SITES

15,200
VOLUNTEER HOURS

1,229
SURVEYS COMPLETED

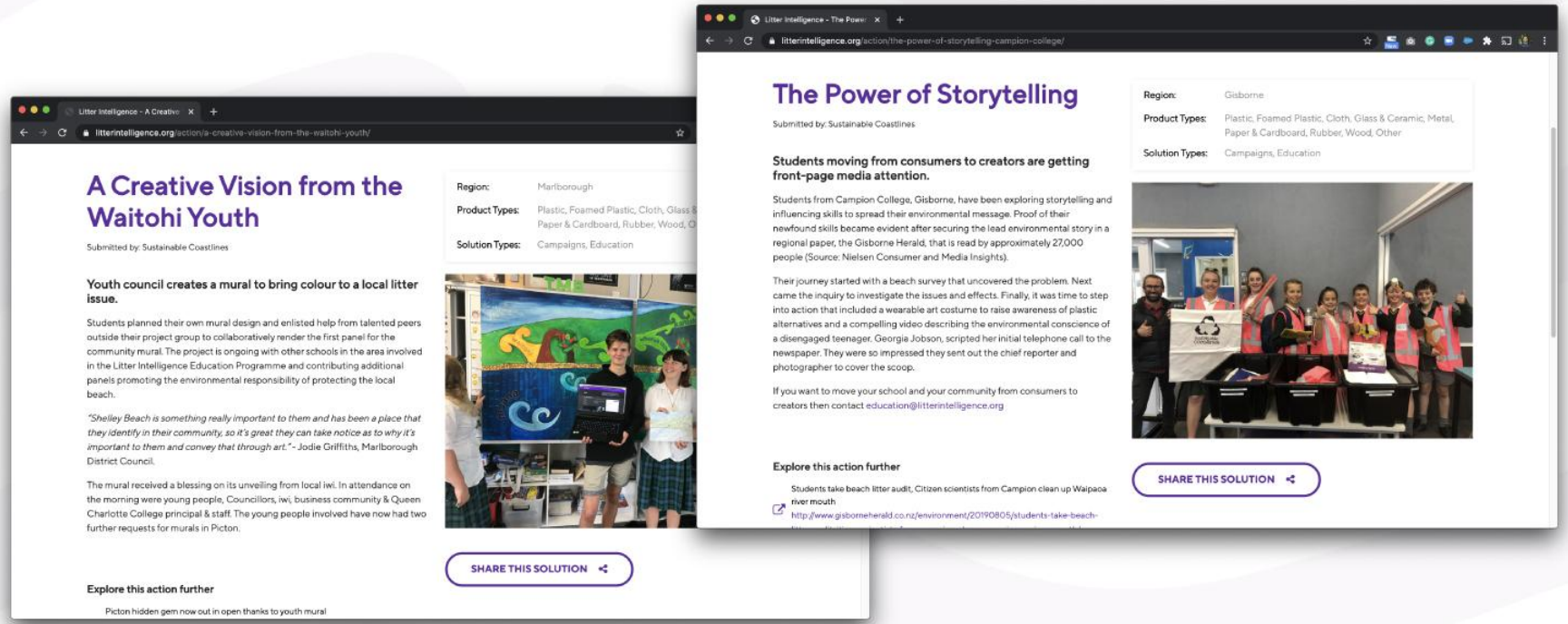
81
SCHOOLS IN EDUCATION PROGRAMME


PEOPLE PROTECT
WHAT THEY LOVE
JACQUES COUSTEAU

Success stories

COMMUNITY / NON-PROFIT

sustainable coastlines | Litter Intelligence.



A Creative Vision from the Waitohi Youth

Submitted by: Sustainable Coastlines

Region: Marlborough

Product Types: Plastic, Foamed Plastic, Cloth, Glass & Ceramic, Metal, Paper & Cardboard, Rubber, Wood, Other

Solution Types: Campaigns, Education

Youth council creates a mural to bring colour to a local litter issue.

Students planned their own mural design and enlisted help from talented peers outside their project group to collaboratively render the first panel for the community mural. The project is ongoing with other schools in the area involved in the Litter Intelligence Education Programme and contributing additional panels promoting the environmental responsibility of protecting the local beach.

"Shelley Beach is something really important to them and has been a place that they identify in their community, so it's great they can take notice as to why it's important to them and convey that through art." - Jodie Griffiths, Marlborough District Council.

The mural received a blessing on its unveiling from local iwi. In attendance on the morning were young people, Councillors, iwi, business community & Queen Charlotte College principal & staff. The young people involved have now had two further requests for murals in Picton.

SHARE THIS SOLUTION

Explore this action further

Picton hidden gem now out in open thanks to youth mural

The Power of Storytelling

Submitted by: Sustainable Coastlines

Region: Gisborne

Product Types: Plastic, Foamed Plastic, Cloth, Glass & Ceramic, Metal, Paper & Cardboard, Rubber, Wood, Other

Solution Types: Campaigns, Education

Students moving from consumers to creators are getting front-page media attention.

Students from Campion College, Gisborne, have been exploring storytelling and influencing skills to spread their environmental message. Proof of their newfound skills became evident after securing the lead environmental story in a regional paper, the Gisborne Herald, that is read by approximately 27,000 people (Source: Nielsen Consumer and Media Insights).

Their journey started with a beach survey that uncovered the problem. Next came the inquiry to investigate the issues and effects. Finally, it was time to step into action that included a wearable art costume to raise awareness of plastic alternatives and a compelling video describing the environmental conscience of a disengaged teenager. Georgia Jobson, scripted her initial telephone call to the newspaper. They were so impressed they sent out the chief reporter and photographer to cover the scoop.

If you want to move your school and your community from consumers to creators then contact education@litterintelligence.org

SHARE THIS SOLUTION

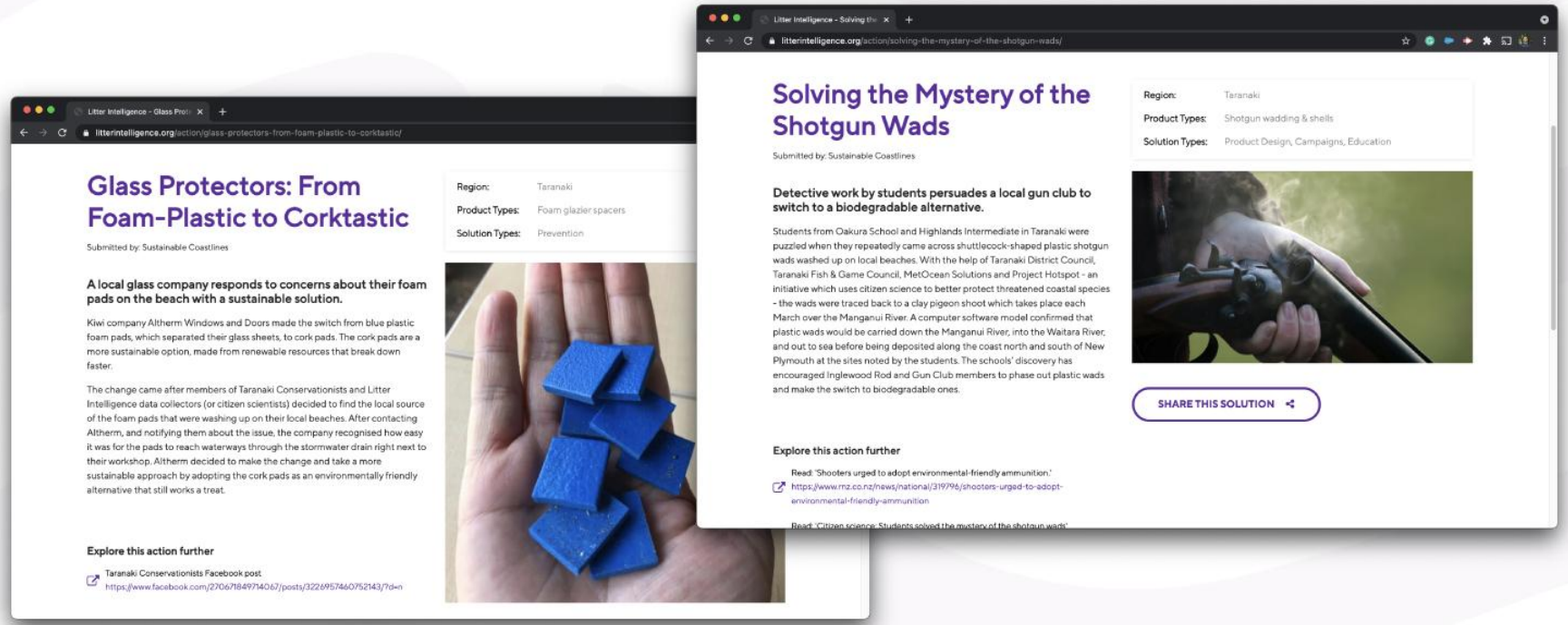
Explore this action further

Students take beach litter audit, Citizen scientists from Campion clean up Waipaoa river mouth
http://www.gisborneherald.co.nz/environment/20190805/students-take-beach-

Success stories

BUSINESS

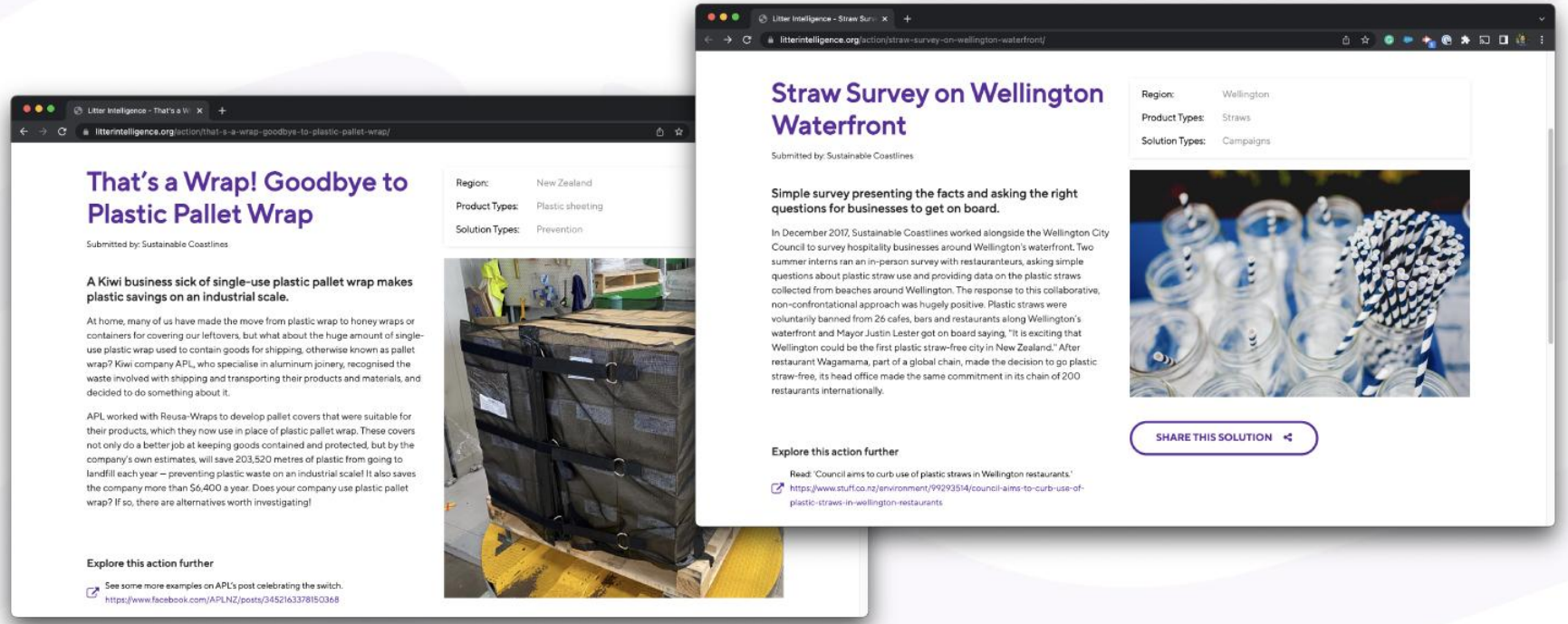
sustainable coastlines | Litter Intelligence.



Success stories

BUSINESS

sustainable coastlines | Litter Intelligence.



Media coverage

sustainable coastlines | Litter Intelligence.

120 million +

POTENTIAL REACH FROM NEWS OUTLETS & SOCIAL MEDIA (FYE 31 MARCH 2021 MELTWATER REPORT)

Forbes

Microsoft

nzherald.co.nz

Newshub.

RNZ

1news

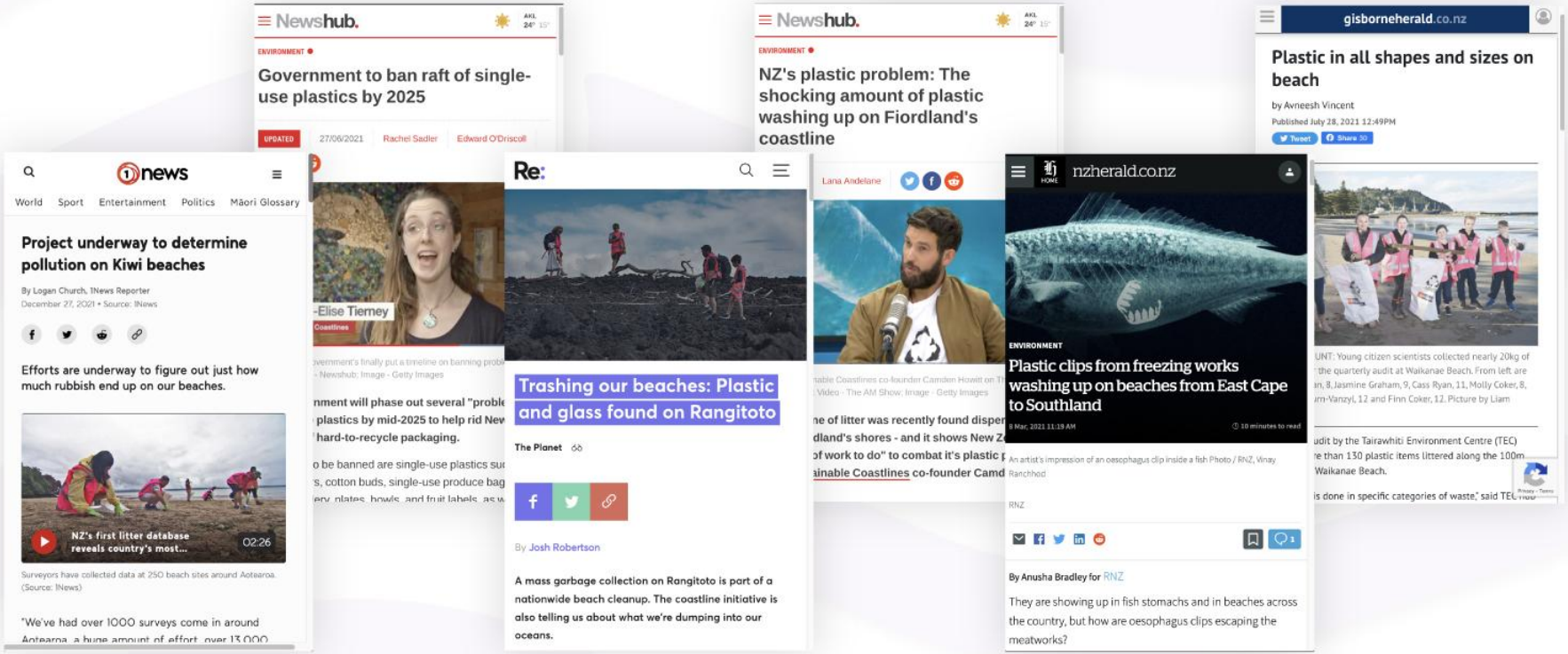
AIR NEW ZEALAND INFLIGHT MAGAZINE Kia Ora

MĀORI TELEVISION

stuff

Media coverage

sustainable coastlines | Litter Intelligence.



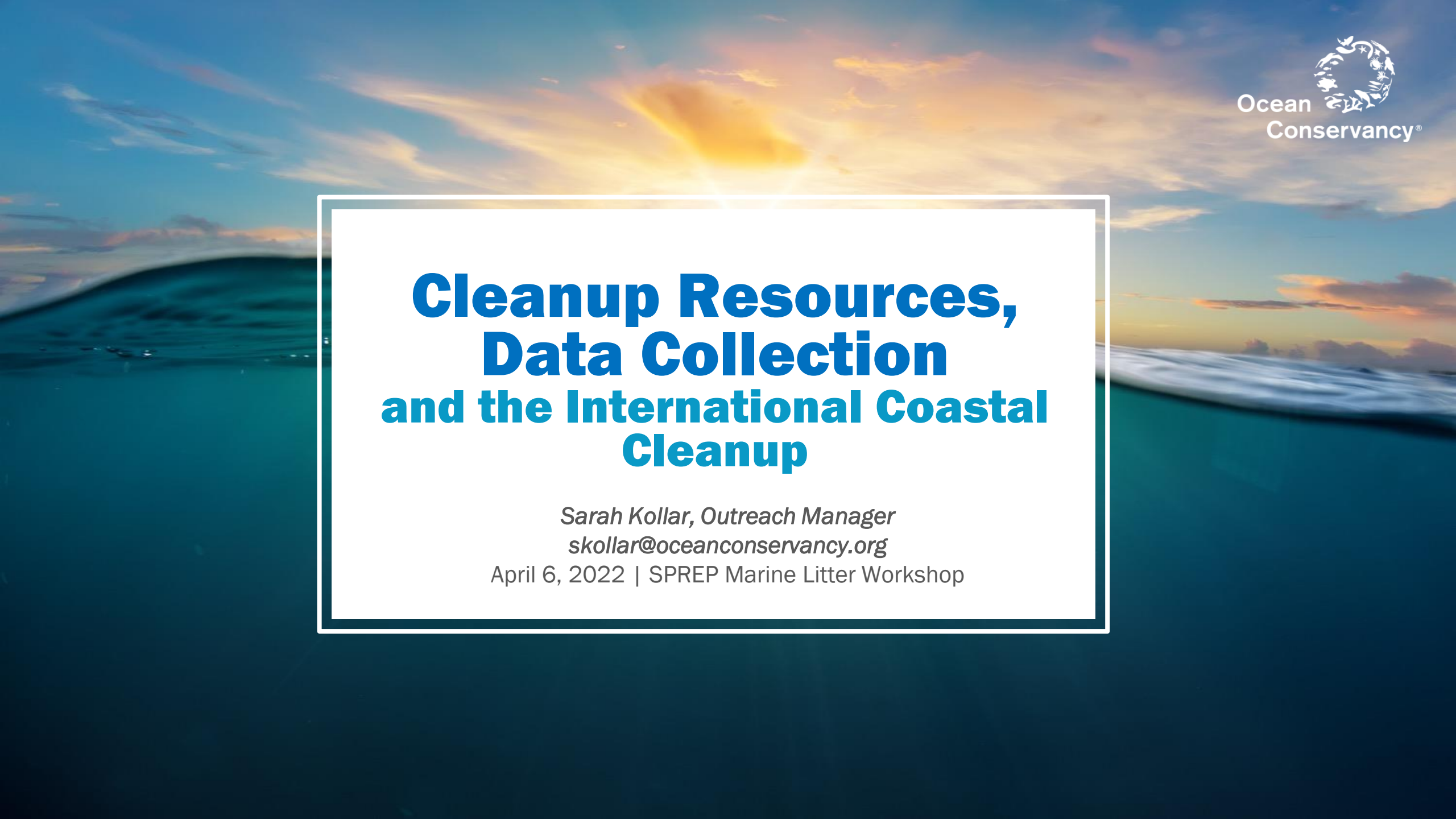
Kia ora
Thank you

Camden Howitt
Co-Founder & Programmes Director
Sustainable Coastlines
camden@sustainablecoastlines.org

Find out more and explore data at
litterintelligence.org

sustainable coastlines | Litter Intelligence.

Appendix 4c – Preparation and organisation of a clean-up campaign



Ocean Conservancy®

Cleanup Resources, Data Collection

and the International Coastal Cleanup

Sarah Kollar, Outreach Manager
skollar@oceanconservancy.org

April 6, 2022 | SPREP Marine Litter Workshop

Ocean Conservancy

Confronting Ocean Acidification

We're working at the intersection of science, policy and communication to protect local communities and wildlife from the impacts of ocean acidification.

Ocean Climate

Our Ocean Futures Initiative is working to understand the interactive effects of stressors like climate change and acidification on our ocean.

Sustainable Fisheries

Our fish team is working to reduce overfishing, rebuild vulnerable fish populations and preserve fish populations.

Protecting The Arctic

We're dedicated to working with indigenous communities, legislators, scientists and people like you to advocate for science-based solutions to protect this fragile ecosystem.

Restoring the Gulf of Mexico

We're ensuring both a successful restoration and the opportunity to create a more resilient Gulf than ever before for the wildlife and coastal communities that call the Gulf of Mexico home.

Smart Ocean Planning

Smart ocean planning helps coastal communities to develop strong, sustainable local economies that can live alongside healthy ocean ecosystems and wildlife.

Ocean Conservancy

TRASH FREE SEAS ®

Empower community science and action, catalyze new research, drive international policy and harness industry leadership and commitment

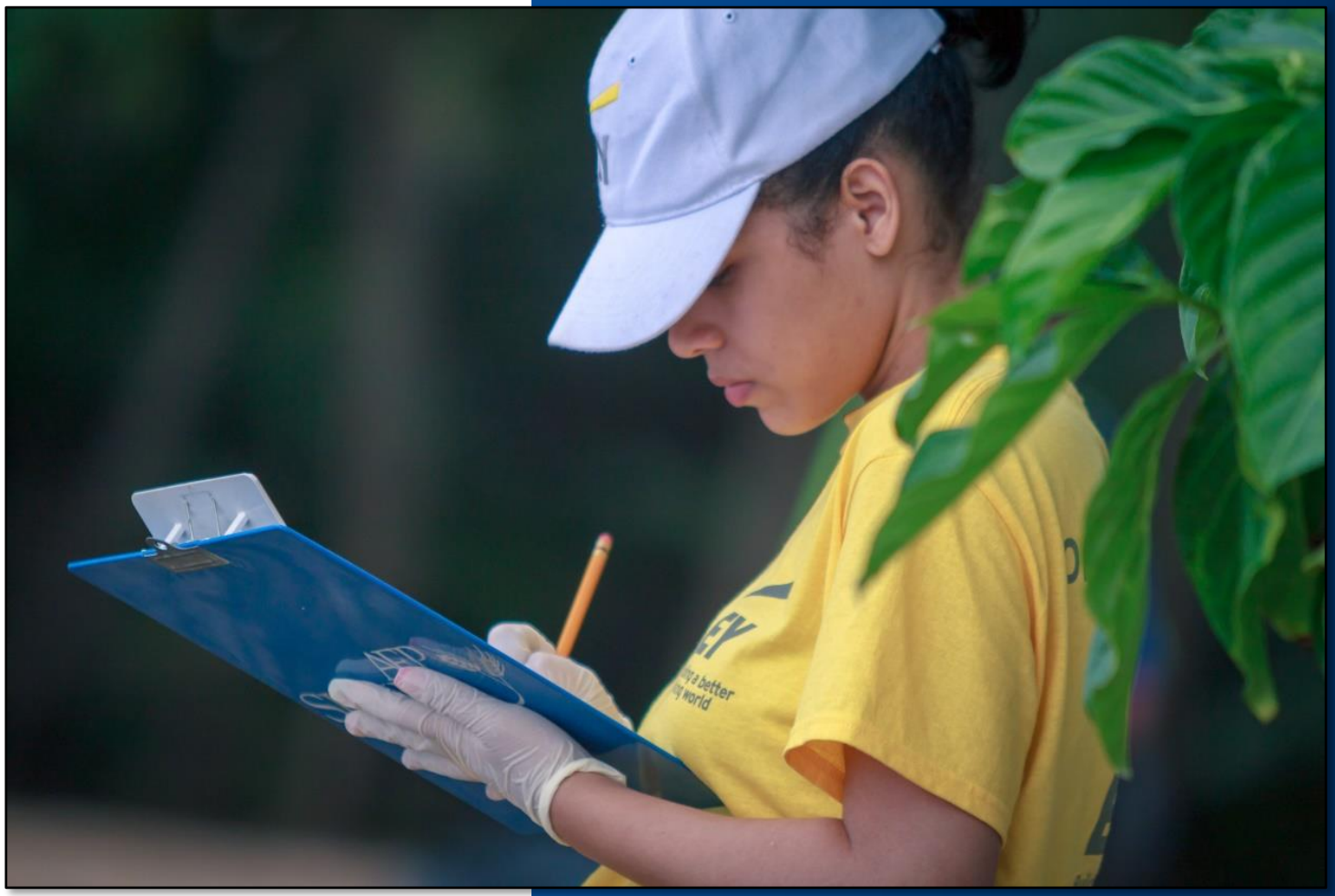
The International Coastal Cleanup

- Also known as the “ICC”
- Started by Ocean Conservancy in 1986
- 17M+ volunteers
- 348M+ pounds of trash
- 155 countries

Ocean Conservancy®

ICC & Data Collection

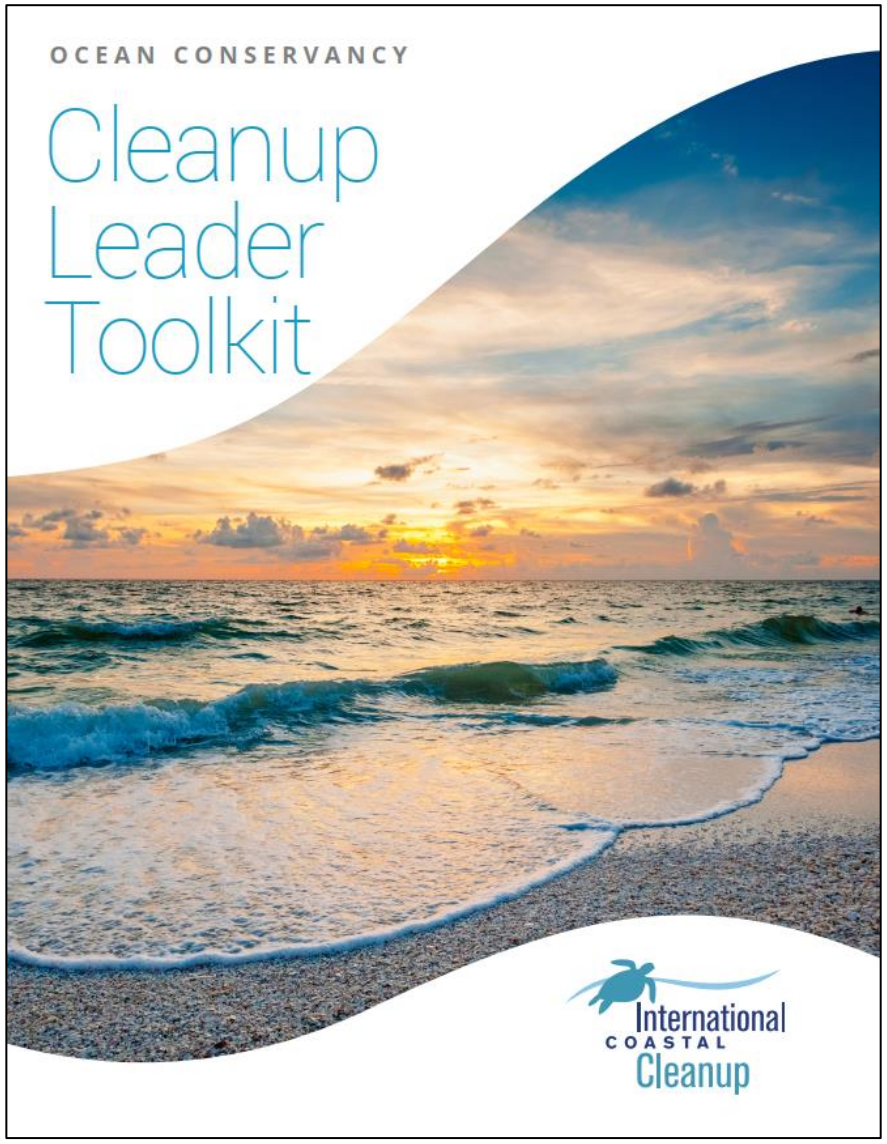
- Volunteers log cleanup finds using paper data cards or the Clean Swell App
- Data feed into Ocean Conservancy's *Trash Information and Data for Education and Solutions* (TIDES) database
- Single largest unified dataset on marine debris. Trends help inform policy, inspire education initiatives, used in research



Ocean Conservancy®

Cleanup Guides

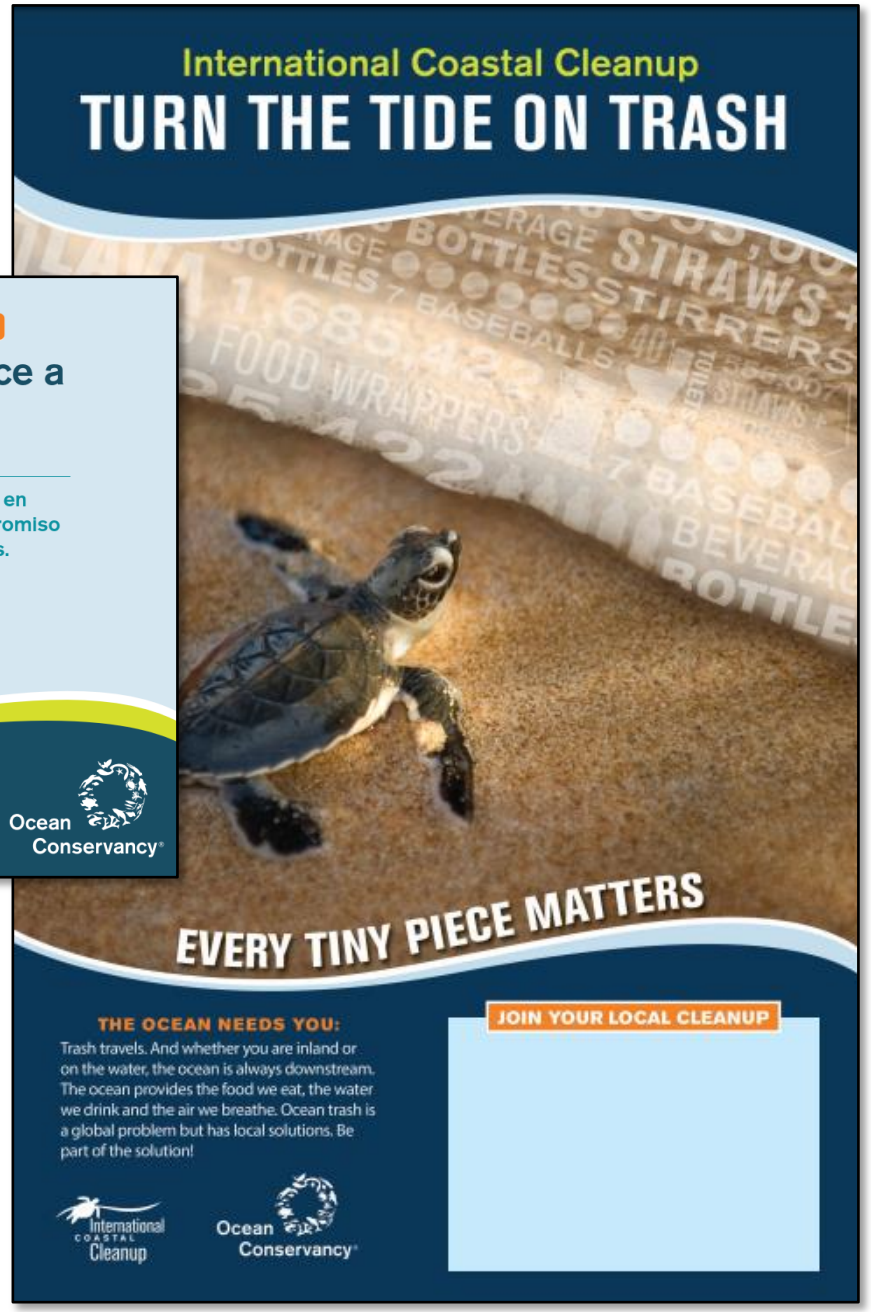
https://oceanconservancy.org/trash-free-seas/international-coastal-cleanup/start-a-cleanup/



www.SignupToCleanup.org

Supporting Materials

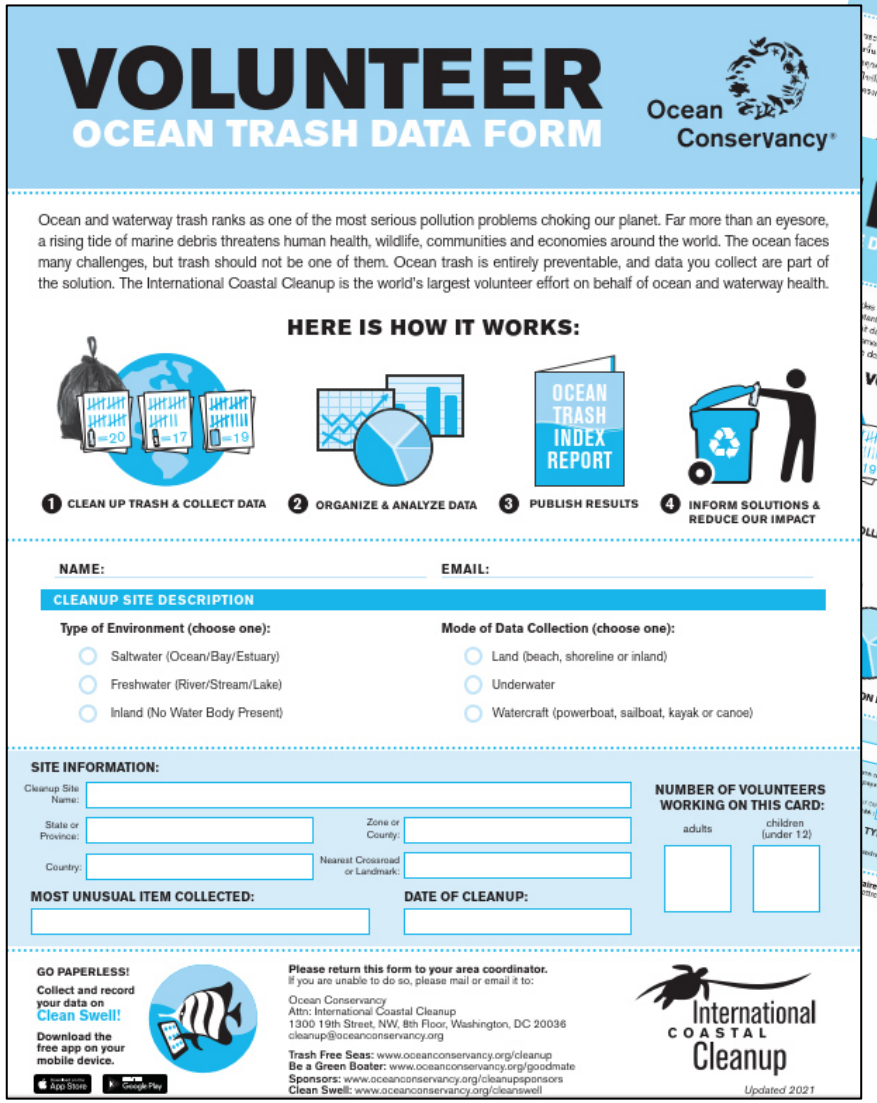
https://oceanconservancy.org/icc-outreach/



Ocean Conservancy®

Data Collection Resources : Paper Card

- Volunteers log basic information on the front:
  - Cleanup location
  - Type of environment (saltwater, freshwater, inland)
  - Number of people in group
  - Date
  - Mode of collection (foot, watercraft, underwater)
- More detailed tally of trash categories on backside of card
- 15+ languages available at https://oceanconservancy.org/icc-outreach/

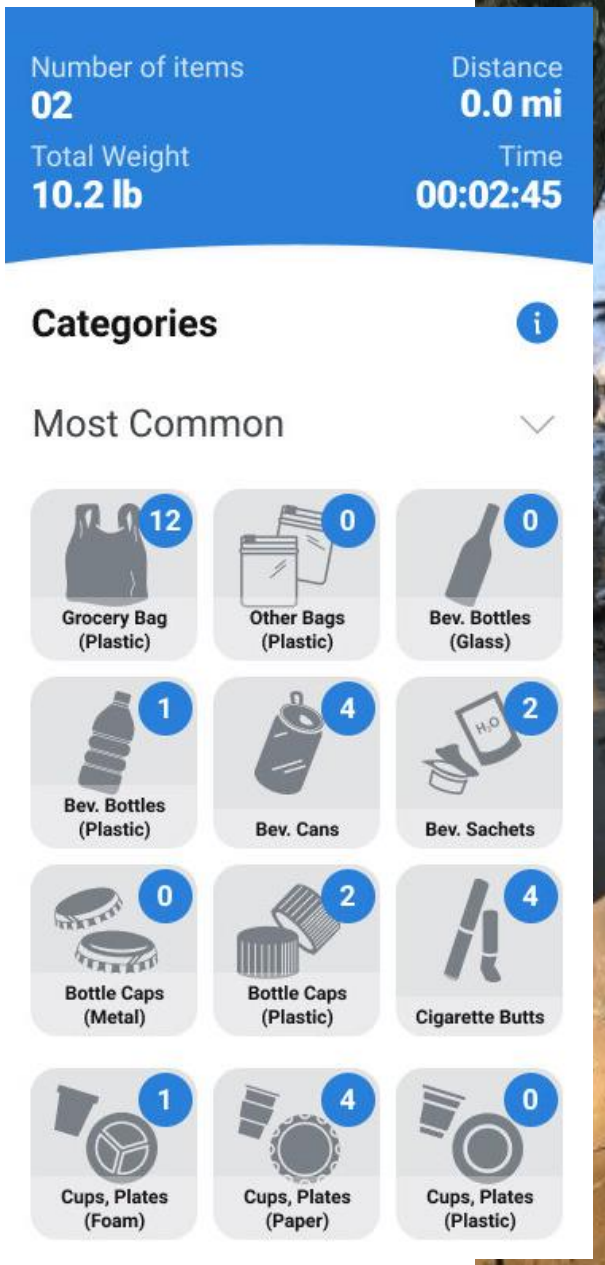


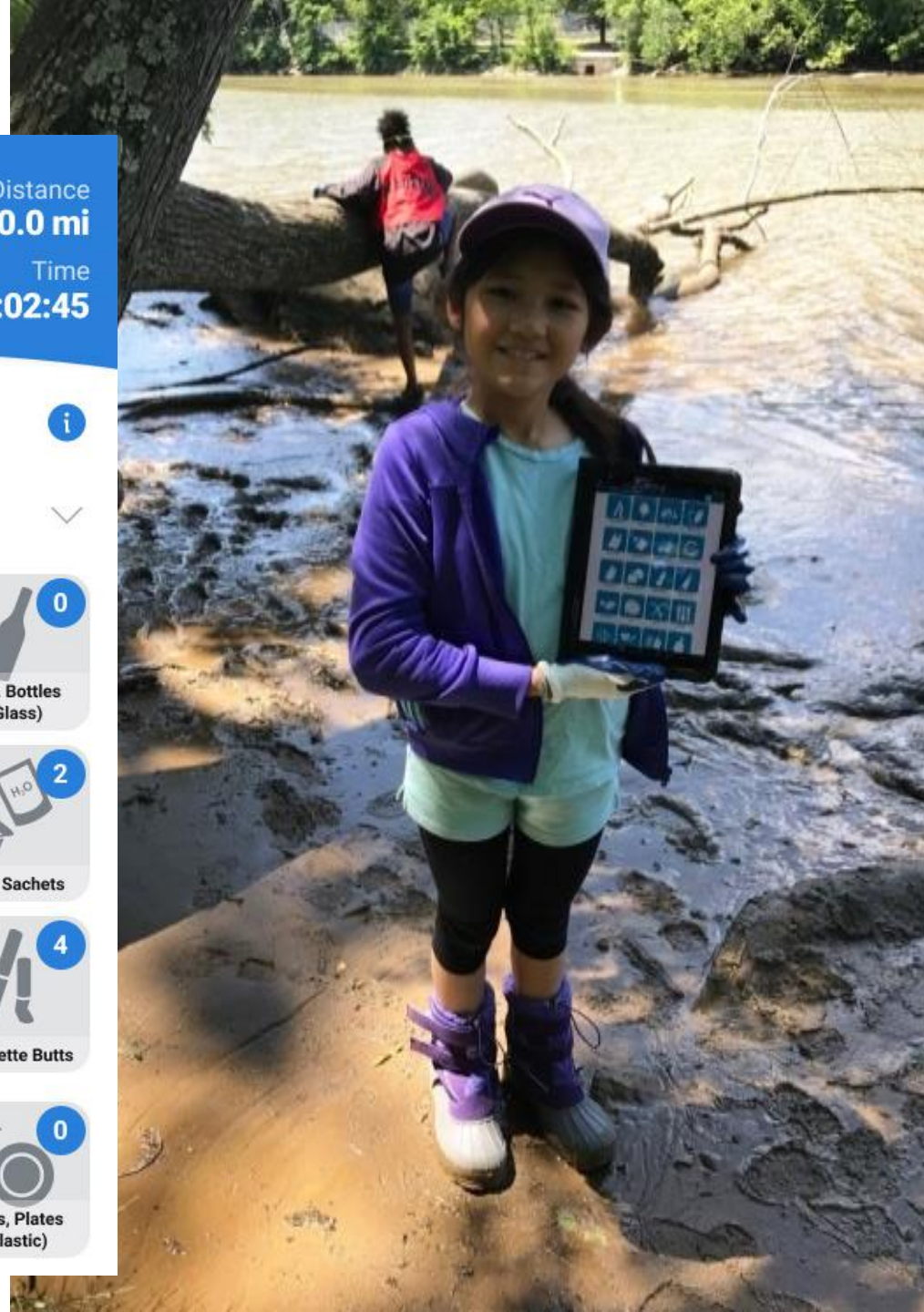
Cards are mailed, scanned and sent to OC or ICC Coordinators enter them directly into the TIDES database

Ocean Conservancy®

Data Collection Resources: Clean Swell App

- Paper data card → Mobile device
- Data → immediately in online database
- Yes! The app can be used year-round
- Yes! You have access to all data
- Yes! This can be used without Wi-Fi or cellular service





Cleanup Data for All

www.CoastalCleanupData.org

- Available to anyone! Make a free account to access and download reports from anywhere in the world
- Standardized entry allows for easy comparison across time and different locations
- Cleanups can be tagged with you group name and search for in the reports section!

Ocean Conservancy®

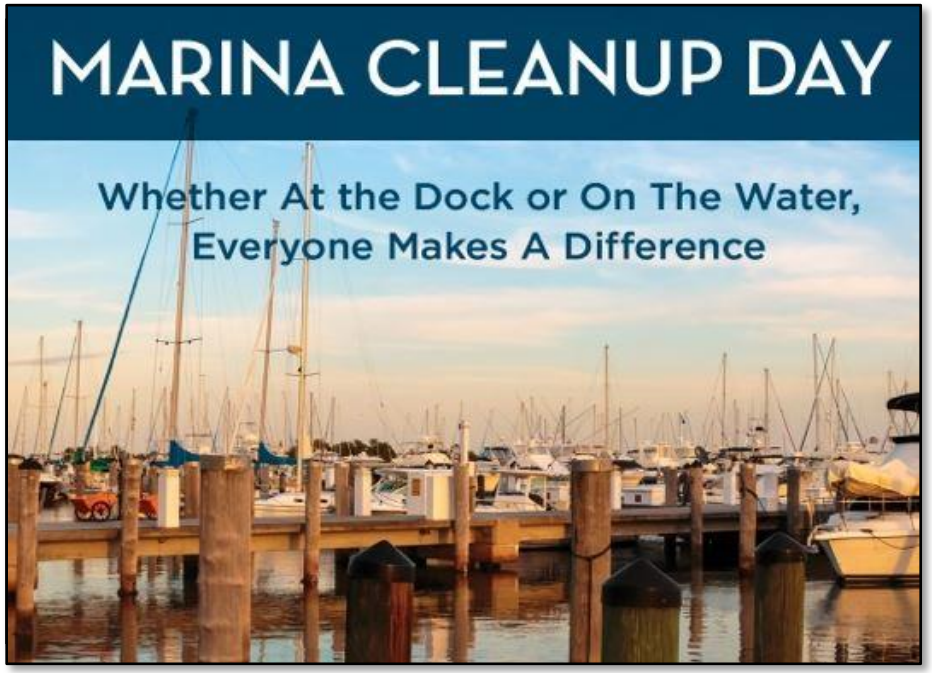
ICC Data → Policy

Data collected during the International Coastal Cleanup have informed and inspired policies to prevent ocean trash, including:

- Country-wide bans on importation of certain types of plastic and/or certain plastic products
- Municipal laws against smoking-related litter
- Laws prohibiting mass balloon releases
- Bans/fees on single-use plastic bags
- Laws prohibiting the use of polystyrene (foam)
- (U.S.)Passage of the Microbead-Free Waters Act of 2015
- (U.S.) Adoption of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78 Annex V)

Ocean Conservancy®

Education & Outreach Materials



- Education materials/lessons for youth: www.OceanConservancy.org/ed
- Skip the Straw: www.OceanConservancy.org/straws
- Materials for recreational boaters and marinas: www.OceanConservancy.org/goodmate
- International Trash Trap Network: www.oceanconservancy.org/ittn

Project #TeamSeas

Ocean Conservancy®

Importance of Community

- We truly believe in the **power of the ICC Coordinator community**, and look forward to a time when we can meet in-person again!
- We host **regional and global ICC convenings** for networking, sharing ideas, and working through challenges together
- Until it is safe for all to gather in person again, we will continue to utilize video chats for meetings
- Email us if you would like to be added to the ICC Coordinator email list for invites to meetings like these!

Ocean Conservancy®

Thank You!

Questions?

E-mail: skollar@oceanconservancy.org

Twitter: @OurOcean | @sekollar

Instagram & Facebook: @OceanConservancy

ICC Coordinator Private Facebook Group:
https://www.facebook.com/groups/coastalcleanup

Request to join!

Ocean Conservancy®

Appendix 4d – Experience sharing

VESS cleaning up beaches in Vanuatu

Why I started organizing cleanups

Dive Against Debris

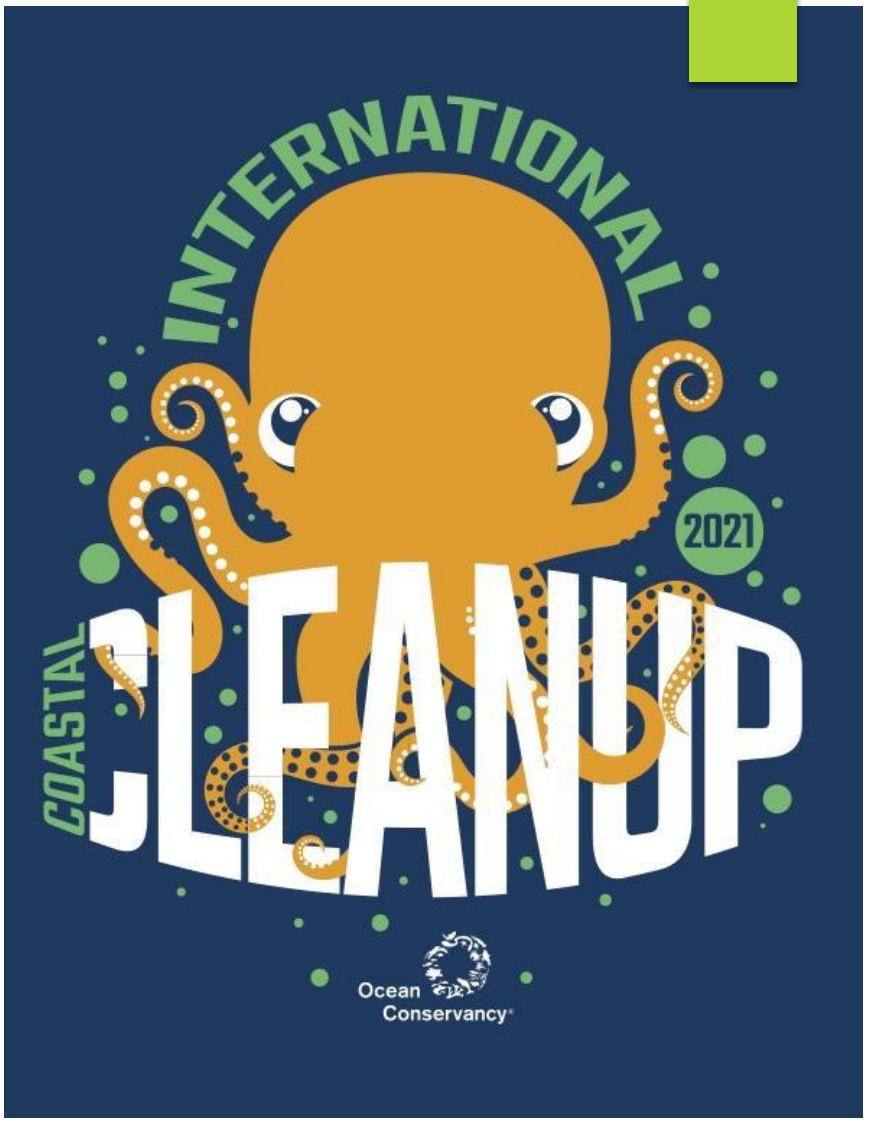
- First DAD dive I organized was in July 2013
- Since then, we organized 32 dive against debris
- All data is reported to Project aware and can be seen on our Project Aware My Oceans page

Dive Against Debris®

Dive Against Debris

Litter cleanups

- We started VESS in September 2014
- We organized our first beach cleanup World Environment day and World Ocean day in June 2015
- We became an International Coastal Cleanup coordinator in September 2015
- Since then we have organized 17 cleanup events. Mostly in June and September.



Cleanups on land

VESS
VANUATU ENVIRONMENTAL SCIENCE SOCIETY

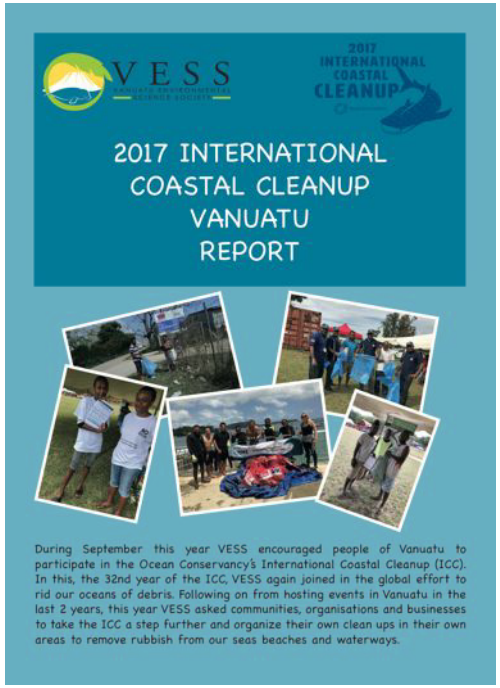
Results

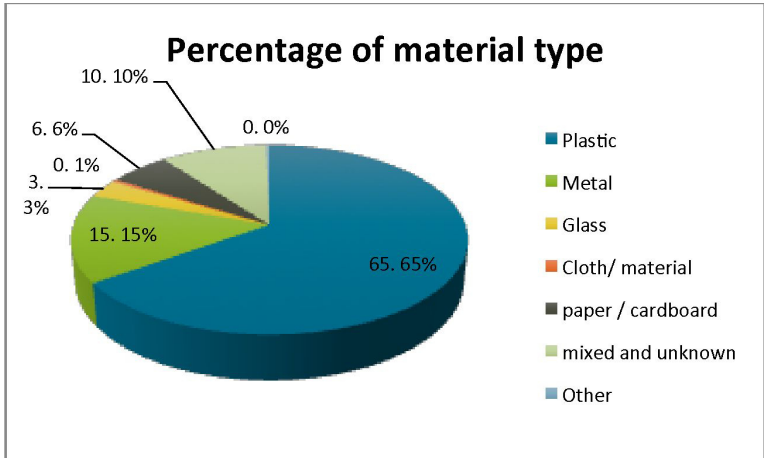
140,360 pieces of litter collected during 17 community cleanups. Including:

- 4533 plastic shopping bags
- 3796 polystyrene takeaway containers
- 1180 plastic straws
- 18,492 plastic food wrappers
- 13,161 aluminum cans
- 14,014 plastic bottles

Data collection

- VESS is the Vanuatu coordinator for the International Coastal Cleanup run by the Ocean Conservancy
- Big Blue and VESS data are added to the global database on marine litter





The single use plastic ban

Press release announcing the ban :

The Government's decision to ban certain plastics was based on the outcome of field study reports done by environmental marine coastal groups working jointly with the Department of Environment which discovered that a considerable amount of different forms of plastic waste have already entered our oceans."

VANUATU DAILY POST

THE NEWS YOU TRUST

DAILYPOST.VU

PACIFIC MINI GAMES COUNTDOWN 124 DAYS

PLASTIC BAN

PM says Vanuatu will ban plastic bags, bottles

By Anita Roberts

PLASTIC BAGS AND BOTTLES WILL BE banned in Vanuatu.

The government has decided to address plastic waste disposal which is causing huge environment impacts and serious problems.

Therefore, the government will be creating a ban to phase-out the use of bottles and plastic bags nationwide, the Prime Minister (PM), Charlot Salwai, declared when he was addressing the nation on Independence Day.

PM Salwai said the government will ban the use and importation of bottles and plastic bags, which cannot be reused.

Vanuatu will be the first country in the pacific region to be implementing this if it becomes a reality, he said.

The PM's announcement came following a plastic bag ban campaign that was announced during this year's National Environment Week.

'No plastic bag, plis', the name of the campaign- calls for Vanuatu to move to legislation to reduce the use of plastic bags and value re-usable shopping bags and local baskets.

The online and paper petition to ban single-use plastic bag was initiated by few people who care for the environment which humans depend on for survival and want to see it be protected.

Many people living within and abroad participated urging for action.

The organizers said that if the petition gets 1,000 signatures they will present it to the PM, Minister of Climate Change and Environment, the Leader of Opposition, and the mayors of Port Vila and Luganville towns.

PM Salwai when making the announcement on July 30 said a policy to ban the use and importation of bottles and plastic bags favors the Vanuatu National Ocean Policy.

Bottles and plastic bags are risky to human life and the environment, he stressed.

Mr Salwai said keeping the environment in Vanuatu clean and safe is a priority of the government.

As the government eyes bottle and plastic bag ban, it's high time people start valuing local baskets

Livelihood of Pacific People Essential: Salwai

READ THE FULL REPORT BY GODWIN LIGO

Mystery Island thirst threatens green coconuts

Co-Creation Program assists Vanuatu's agriculture sector

Tafea i kam bihaen blong sekiurum grand faenol ples

Single use plastic ban came into effect 1st July 2018 – Plastic shopping bags, plastic straws and polystyrene take away containers

The effect

- Cleaner environment with a reduction in the amount of rubbish on the streets and in the environment.
- International media coverage.
- Pride
- Locally made alternatives

The unwanted results

Phase 2

- artificial plastic flower
- disposable plastic cup
- disposable plastic fork
- disposable plastic knife
- disposable plastic plate
- disposable plastic spoon
- disposable plastic stirrer
- plastic egg carton container
- plastic mesh net

Came into effect 1st December 2019

Top tips - what we have learn form 7 years of community cleanups

- Don't reinvent the wheel - Join the programmes that are already running.
- They come with tool kits and have very helpful people working on the programmes
- You can adapt datasheets to your own needs still keeping it compatible for data upload

Dive Against Debris®

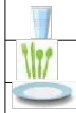
Top tips - what we have learn form 7 years of community cleanups

The data is the difference

- If you don't collect the data and report it is just a cleanup which is not a solution.
- The data can be used to influence policy and educate
- Even small cleanups with messy data can tell you some things
- Record unit of effort

VESS Cleanup / litter data sheet

Name of organizer _____ Contact: Phone _____ email _____
Location of Cleanup: Name _____ Description of area: _____
Date of cleanup_____ Number of people: Women _____ Men _____ Boys _____ Girls_____
Duration of cleanup (minutes) _____ Distance cleaned (estimate) _____ KM
Number of bags of rubbish collected _____ Weight of rubbish ___KG (estimated or weighed?)

	Litter Item	Tally				Total		Litter Item	Tally				Total
Bags 	Thin Shopping bags (banned)					Plastic Bottles 	Water bottles				
	Reusable plastic Shopping (thick)						Other drinks bottles				
	Plastic netting e.g for fruit and veg						Drink pouches and sachets				
	Other Plastic Bags										
	Paper Bags						Other bottles (oil, shampoo)				
Take Away container	Clear Plastic						Glass bottles & jars				
	Cardboard or bamboo						Juice and milk boxes				
	Polystyrene (white foamplastic)						Aluminum drinks cans (e.g. Coke)				
Straws 	Plastic Straws (long)						Tin cans - steel (e.g. tin fish)				
	Plastic Straws (short)										
	Paper Straws						6 pack holders				
	Batteries						Condoms				
	Plastic Caps and lids						Nappies				
	Metal Caps and lids						Pads & tampons				
	Plastic Plates & Cups						Cotton buds sticks / swabs				
							Clothes				
	Plastic knives, forks and spoons						Shoes and flip-flops				
	Metal, glass and ceramic plates & cups						PPE - gloves				
	Metal, knives, forks and spoons						PPE - mask				
Food Packaging 	Food Wrappers - Plastic					Fishing gear 	Fishing line				
							Fishing net				
							Rope (any kind)				
	Food wrappers - paper & cardboard						Fishing floats and buoys				

Please turn over the page for more litter categories

Top tips - what we have learn form 7 years of community cleanups

Find out what the community needs to participate

- In Vanuatu the biggest barrier was the rubbish collection.
- Mostly, we need to provide everything needed including data sheets, clip boards, pens, gloves and rubbish bags

Top tips - what we have learn form 7 years of community cleanups

Publicise your events and effort

- Stories and articles in the newspaper and on social media at the time of the cleanup events.
- Raises awareness of the issue of marine plastic pollution and littering
- Raises your organisation's profile and opportunities to make more of a difference will find you.

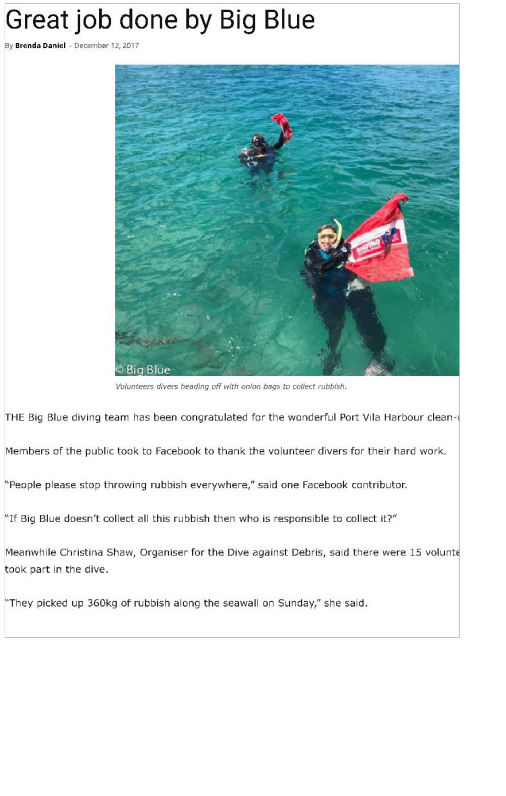

VANUATU DAILY POST

FIRST WITH THE NEWS SINCE 1993

ISSUE Nº 4583 | MONDAY, SEPTEMBER 21, 2015 WWW.DAILYPOST.VU

TEXT JOIN NOW TO 406

Coastal Cleanup a Success


Great job done by Big Blue

By Brenda Daniel - December 12, 2017

Volunteers divers heading off with onion bags to collect rubbish.

THE Big Blue diving team has been congratulated for the wonderful Port Vila Harbour clean-

Members of the public took to Facebook to thank the volunteer divers for their hard work.

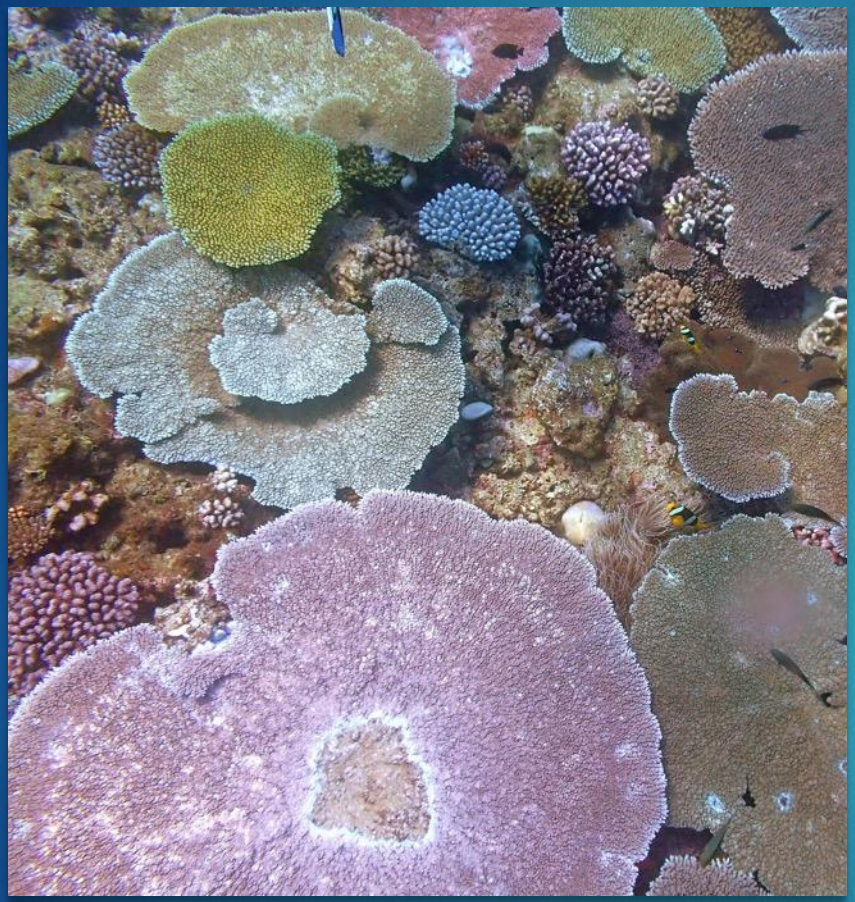
"People please stop throwing rubbish everywhere," said one Facebook contributor.

"If Big Blue doesn't collect all this rubbish then who is responsible to collect it?"

Meanwhile Christina Shaw, Organiser for the Dive against Debris, said there were 15 volunte took part in the dive.

"They picked up 360kg of rubbish along the seawall on Sunday," she said.

Thank you for your attention



VESS
VANUATU ENVIRONMENTAL SCIENCE SOCIETY

Appendix 4d – Conduction of a statistically sound waste survey and audit

Quality monitoring that informs decision-making.

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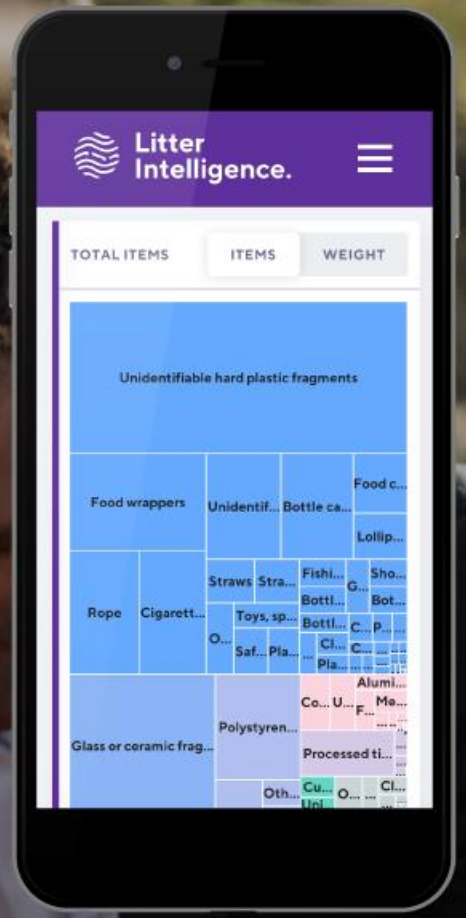


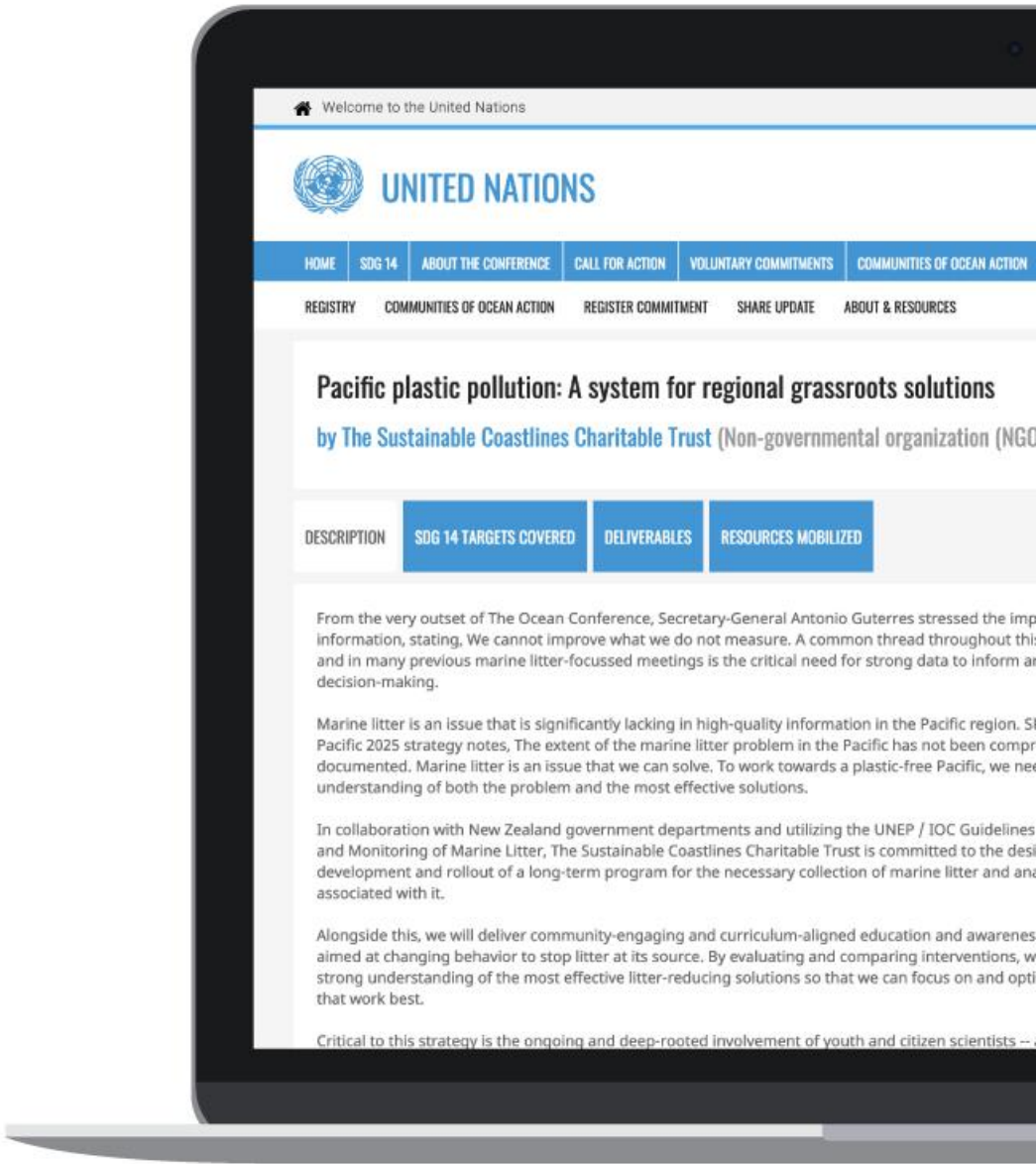
Camden Howitt • camden@sustainablecoastlines.org • **litterintelligence.org**

Why monitor litter?

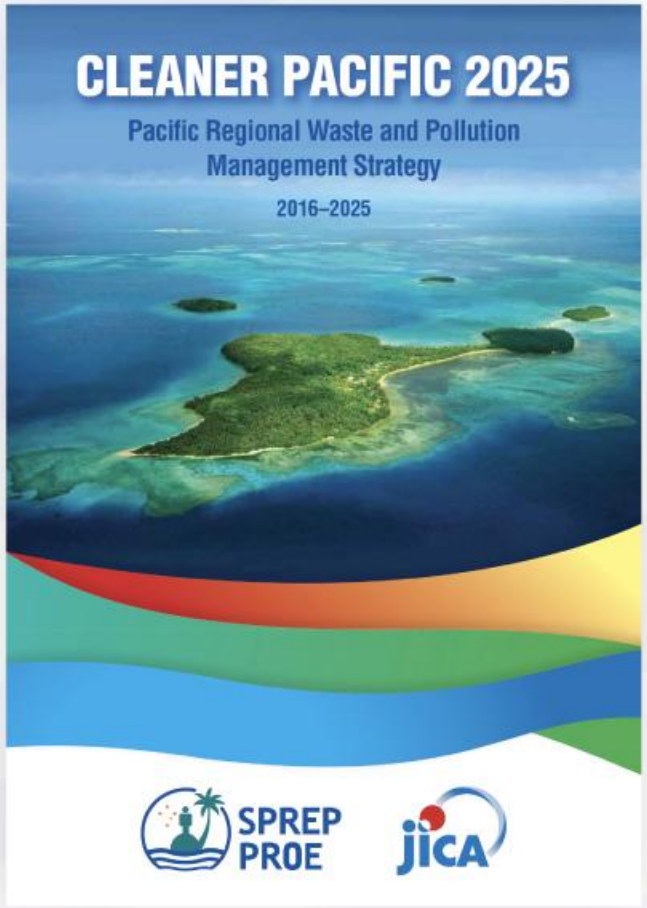

We know litter
is a problem. So
why measure it?

“We cannot improve what we do not measure”

ANTÓNIO GUTERRES, UN SECRETARY GENERAL
THE OCEAN CONFERENCE, NEW YORK, JUNE 2017



Strategic fit



"The extent of the marine litter problem in the Pacific region has not been comprehensively documented."

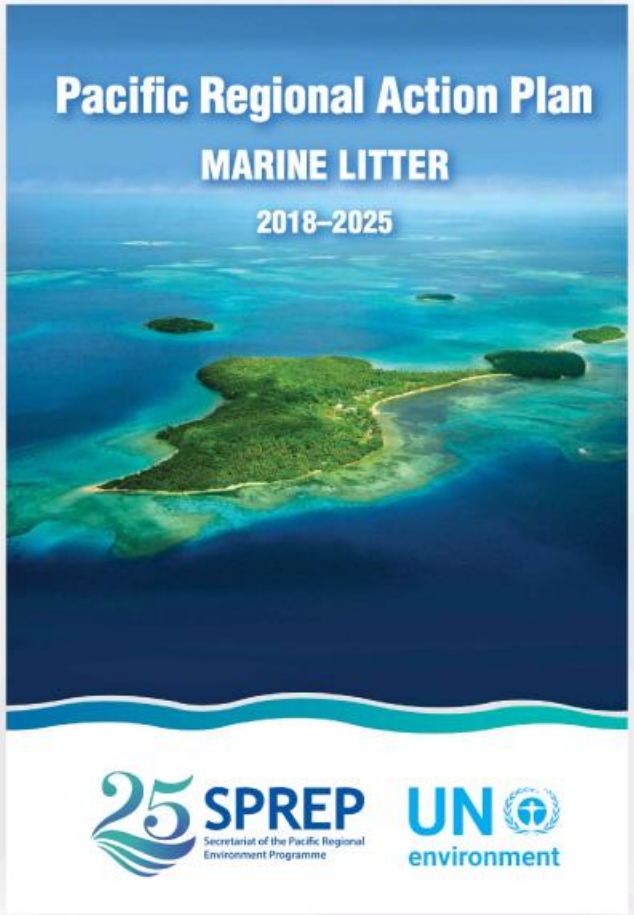
STRATEGIC GOAL 4

Improve monitoring of the receiving environment.

STRATEGIC ACTION 10

PICTs, supported by SPREP and partners, shall implement best practice environmental monitoring and reporting programmes.

Strategic fit



Requiring a specific protocol to standardise sampling methods as a subcomponent of all Coastal Clean Ups. The aims of the data collection and analysis to be implemented across all participating PICTs are to:

- **Track progress and record geographically** which foreshores have been cleaned up and the **frequency** of clean up;
- Understand if the litter collected on particular foreshores is **changing in time** from both a **volume and a type** perspective;
- **Quantify the likely sources** of the litter collected, thereby in forming other strategies to control litter at source.

What is Litter Intelligence?


sustainable coastlines
Litter Intelligence.
Data. Insights. Action.
PROGRAMME PURPOSE
Inspire and inform better decisions for a world without litter.

Global collaboration

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THE OCEAN CONFERENCE
UNITED NATIONS, NEW YORK, 5-9 JUNE 2017

Concept launched at the UN World Ocean Conference, 2017.

UN environment

Adapted from the UNEP/IOC global litter methodology.

Presented at UN Environment Assembly, 2019.

GPML
Global Partnership on Marine Litter

Regularly present updates at GPML meetings.

SPREP
Secretariat of the Pacific Regional Environment Programme

Presented at Pacific Environment Forum, 2019, and Clean Pacific Roundtable, 2022.

Government partners

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Ministry for the Environment
Manatū Mō Te Taiao

Provided initial funding for programme design, launch and national rollout.

Environmental reporting.

Stats NZ
Tatauranga Aotearoa

Co-design of data quality assurance and controls.

Environmental and wellbeing reporting.

Data governance.

Department of Conservation
Te Papa Atawhai

Co-design of localised adapation to UNEP/IOC methodology, review of refinements.

Data governance.

Marine reserve monitoring (in negotiation).

Progress to date

2 APRIL 2022 **insights.litterintelligence.org**

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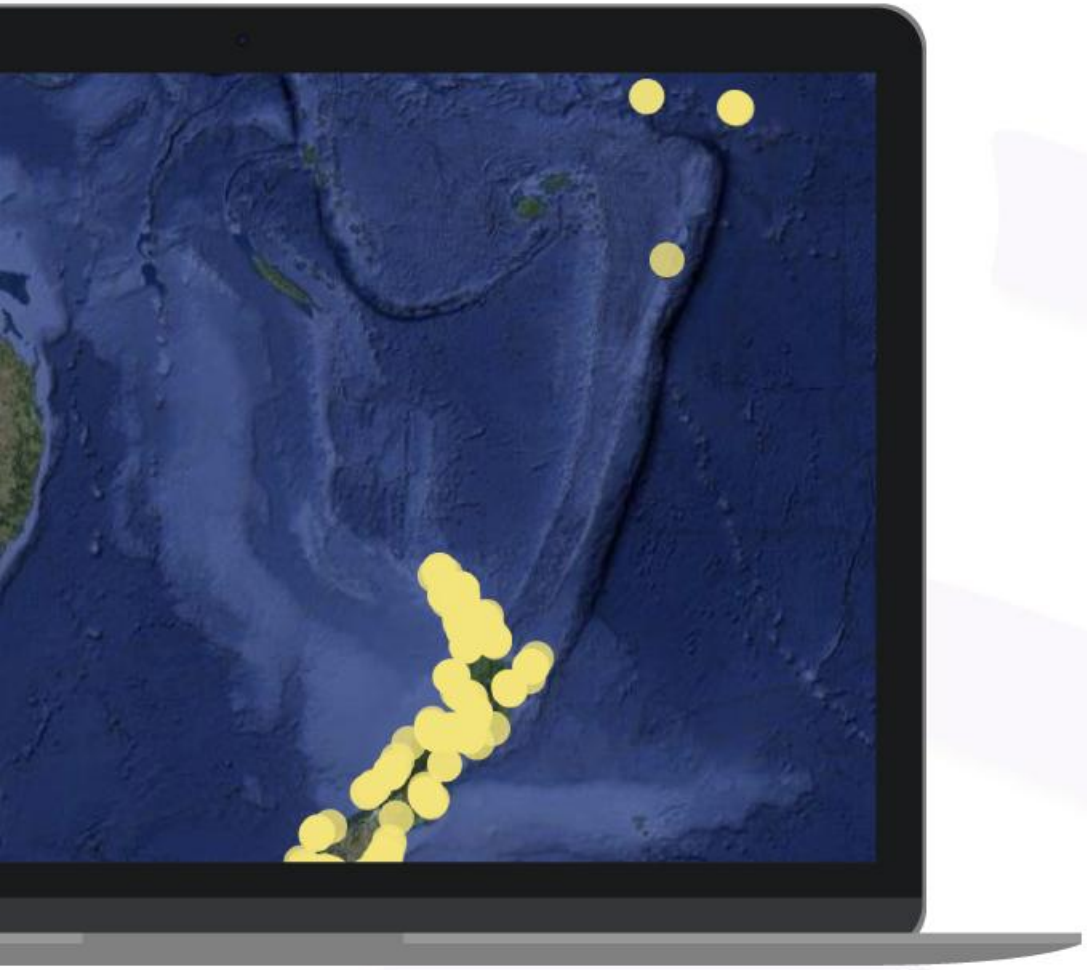


Beach

Stormwater

Freshwater

369
MONITORED SITES

15,200
VOLUNTEER HOURS

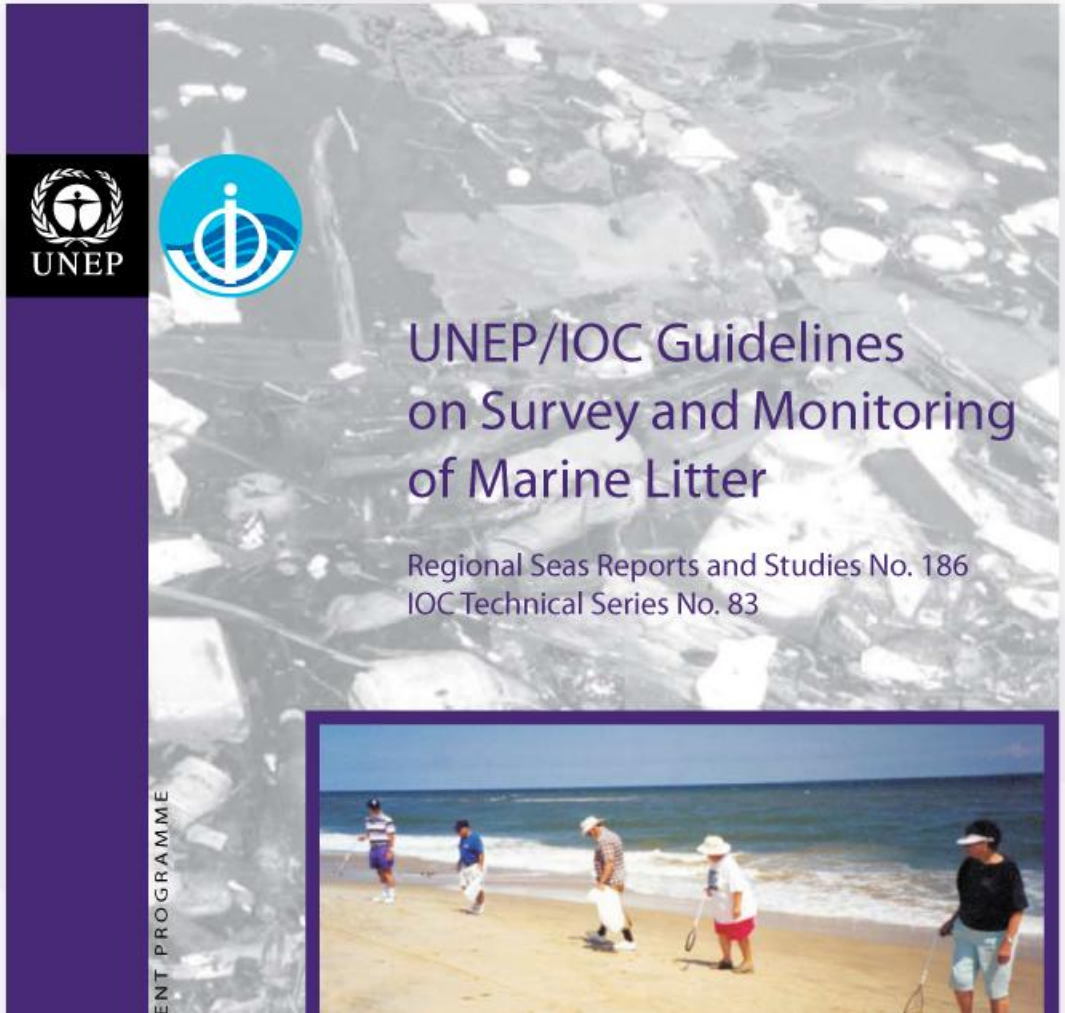
1,229
SURVEYS COMPLETED

81
SCHOOLS IN EDUCATION PROGRAMME

The methodology

Localised adaptation of the **United Nations Environment Program / Intergovernmental Oceanographic Commission** Guidelines on Survey and Monitoring of Marine Litter.

- Measures **litter flux**
- Global comparability
- Reporting on SDGs
- Rigorous, high quality data
- Great for citizen science



The monitoring process

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Litter Intelligence.

Set-up survey area

1

2

Survey & remove litter

Repeat four times/year

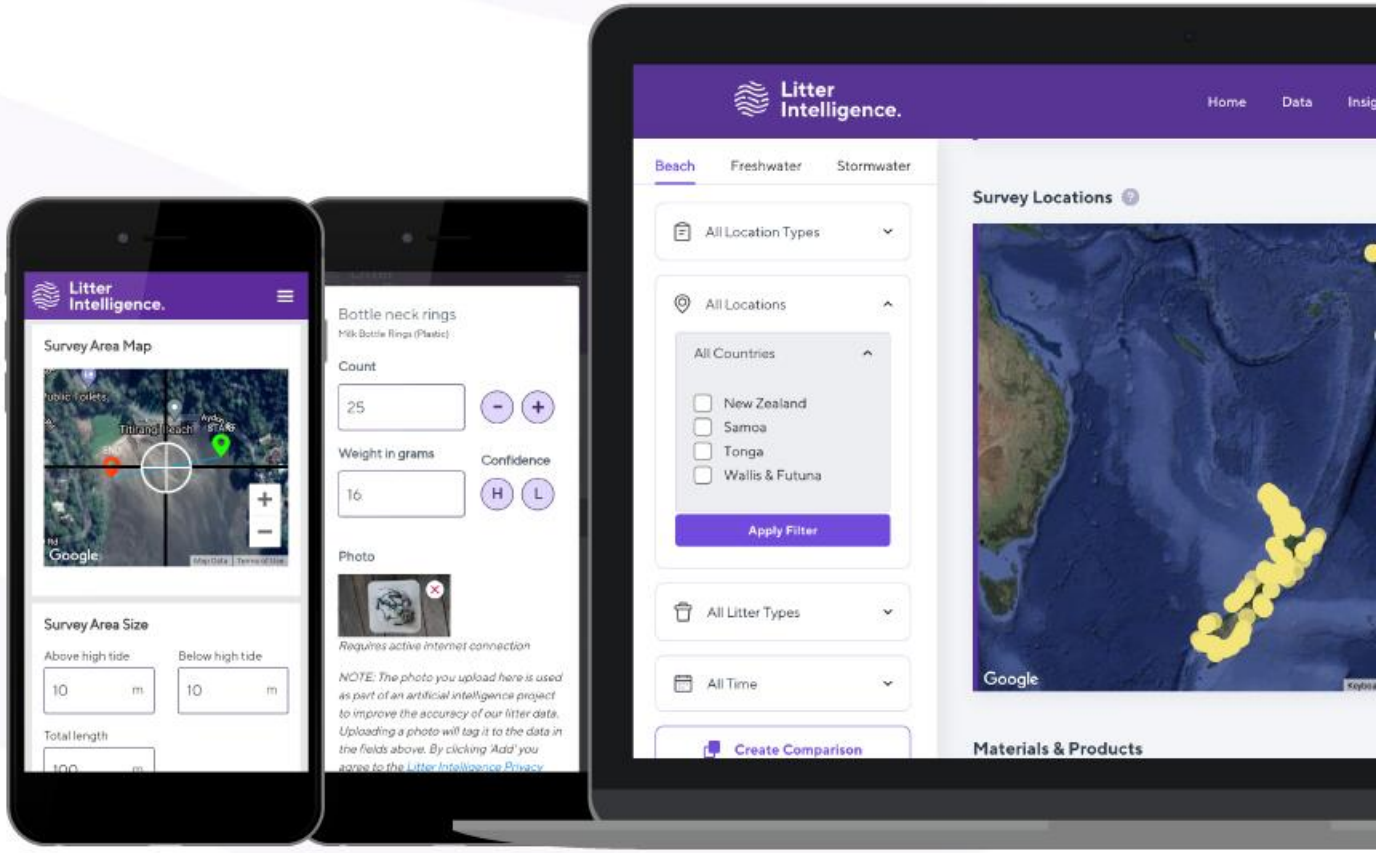
3

Audit litter

The technology

Cloud-hosted website, database and data entry custom designed for this programme. Check it out at **www.litterintelligence.org**

- Data entry from any desktop, laptop, tablet or smartphone.
- No app = no downloads or updates.
- Works offline, connect to submit.
- Open and free data access.
- Download raw data.
- Explore, compare & analyse data.
- Other languages can be added.



Insights

2 APRIL 2022 **insights.litterintelligence.org**

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Beach

319 Items per 1000m²
MEAN LITTER DENSITY

283
MONITORED SITES

1,065
SURVEYS COMPLETED

Data quality

- Quality Assurance
- Quality Controls
- Data Dictionary
- Open Data Policy
- Data Governance Group
- Privacy & Security

QAQC available at **litterintelligence.org**

SUSTAINABLE COASTLINES CHARITABLE TRUST

LITTER INTELLIGENCE
QUALITY ASSURANCE AND QUALITY CONTROLS

Version 1.0
Prepared by: Camden Howitt, Shawn Elise Tierney, Shelley Butt, Ben Knight
Date: 15 October 2020

Purpose of document:

This document provides an overview of the Quality Assurance measures and Quality Controls that have been established to ensure that the Litter Intelligence Citizen Science programme consistently produces high-quality, credible and scientifically rigorous data.

Our **Quality Assurance** measures are proactive, and include the systems and processes we have built into the Litter Intelligence programme, training and technology that aim to prevent and minimise errors, and ensure data quality.

Our **Quality Controls** are reactive and corrective processes that we have put in place to identify and resolve any data entry/user issues or errors, to ensure the data that appears on the Litter Intelligence platform is robust and can be trusted.

These measures are important for providing ongoing confidence in data collected through this programme, and more broadly to instill confidence and trust in Citizen Science data for the widest audience possible including environmental reporting.

The *Litter Intelligence Data Governance Group* will peer review this document and -- pending changes and approval -- this document will be published on the Litter Intelligence website to add to the credibility and transparency of the programme and its data.

Objectives:

Image recognition

ARTIFICIAL INTELLIGENCE TO ENHANCE QUALITY

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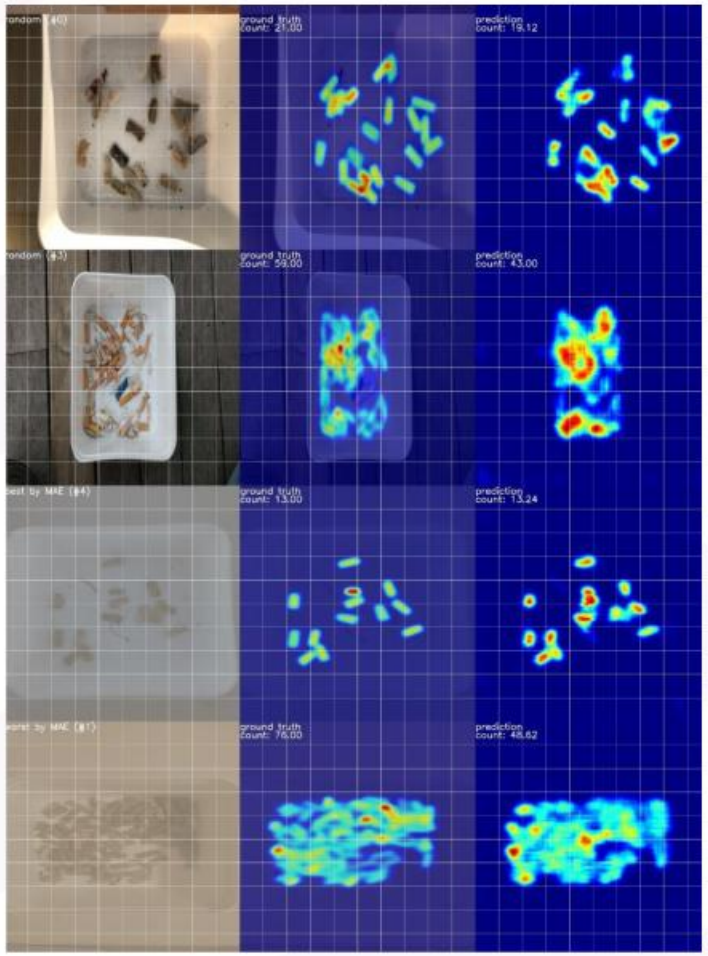

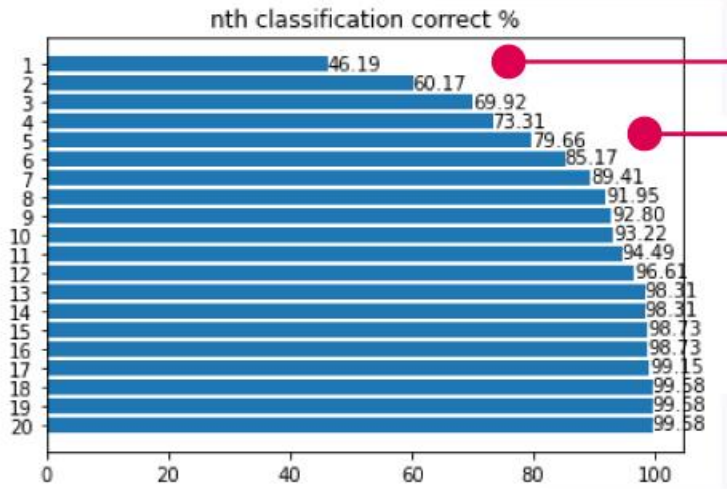

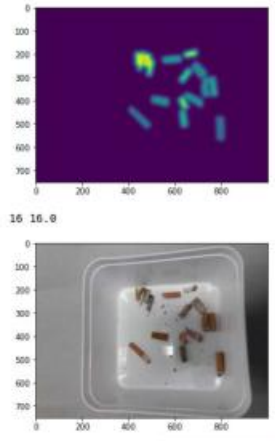

46%

of the time the model predicts the right litter classification.

80%

of the time the correct classification is in the **top five** predictions of the model.

Microsoft

What does success look like?

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Success stories

GOVERNMENT

OCT 2019 — NOV 2019 — NOV 2020 — JUNE 2021

"The data set that is being provided by Sustainable Coastlines is a huge advantage to the Ministry for the Environment as a public policy tool, as it shows the areas that are most problematic and highlights to us the things that can be fixed."

HON DAVID PARKER
MINISTER FOR THE ENVIRONMENT

Policy action

CORRECT AT 2 APRIL 2022 **insights.litterintelligence.org**

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KEY **Banned** **Banned: still to implement** **Under consultation** **Likely affected by policy action**

#	PRODUCT	MATERIAL	TOTAL ITEMS	% OF TOTAL
1	Unidentifiable hard plastic fragments	Plastic	87,300	27.09 %
2	Glass or ceramic fragments	Glass & Ceramic	35,768	11.10 %
3	Food wrappers	Plastic	22,731	7.05 %
4	Polystyrene insulation or packaging	Foamed Plastic	15,261	4.74 %
5	Rope	Plastic	14,516	4.50 %
6	Cigarettes, butts & filters	Plastic	14,201	4.41 %
7	Unidentifiable soft plastic fragments	Plastic	13,556	4.21 %
8	Bottle caps & lids	Plastic	13,030	4.04 %
9	Processed timber & pallet crates	Wood	7,339	2.28 %
10	Unidentifiable foamed plastic fragments	Foamed Plastic	6,402	1.99 %

#	PRODUCT	MATERIAL	TOTAL ITEMS	% OF TOTAL
11	Construction material	Glass & Ceramic	6,331	1.96 %
12	Food containers	Plastic	5,565	1.73 %
13	Lollipop sticks	Plastic	4,379	1.36 %
14	Straws	Plastic	3,460	1.07 %
15	Strapping bands & tape	Plastic	3,374	1.05 %
16	Other Plastic	Plastic	3,339	1.04 %
17	Bottles & jars	Glass & Ceramic	3,263	1.01 %
18	Toys, sport, & recreation (Plastic)	Plastic	2,896	0.90 %
19	Construction material	Metal	2,805	0.87 %
20	Safety & construction related	Plastic	2,778	0.86 %

Policy action

CORRECT AT 2 APRIL 2022 **insights.litterintelligence.org**

sustainable coastlines | Litter Intelligence.

KEY **Banned** **Banned: still to implement** **Under consultation** **Likely affected by policy action**

#	PRODUCT	MATERIAL	TOTAL ITEMS	% OF TOTAL
21	Plastic bags	Plastic	2,541	0.79 %
22	Unidentifiable metal fragments	Metal	2,429	0.75 %
23	Fishing line	Plastic	2,201	0.68 %
24	Bottles <= 2 L	Plastic	2,162	0.67 %
25	Gardening & farming related	Plastic	2,119	0.66 %
26	Shotgun wadding & shells	Plastic	1,813	0.56 %
27	Bottle neck rings	Plastic	1,787	0.55 %
28	Other Foamed Plastic	Foamed Plastic	1,718	0.53 %
29	Bottle seals & tabs	Plastic	1,638	0.51 %
30	Other cloth	Fabric & Textiles	1,632	0.51 %

#	PRODUCT	MATERIAL	TOTAL ITEMS	% OF TOTAL
31	Polystyrene cups or food packs	Foamed Plastic	1,627	0.50 %
32	Aluminium drink cans	Metal	1,444	0.45 %
33	Foil wrappers	Metal	1,332	0.41 %
34	Sanitary items	Other	1,288	0.40 %
35	Fishing gear	Plastic	1,242	0.39 %
36	Metal Bottle caps, lids & pull tabs	Metal	1,207	0.37 %
37	Clothes pegs	Plastic	1,163	0.36 %
38	Plastic sheeting	Plastic	1,159	0.36 %
39	Cups, food trays & wrappers	Paper & Cardboard	1,152	0.36 %
40	Cable ties & zip ties	Plastic	1,143	0.35 %

Success stories

GOVERNMENT

"Reliable, timely, comprehensive, and consistent data is critical for measuring progress towards, and ultimately achieving the United Nations Sustainable Development Goals."

SUSTAINABILITY SCIENCE (2020)
FRAISL, D., CAMPBELL, J., SEE, L. ET AL.

Sustainability Science
https://doi.org/10.1007/s11625-020-00833-7

ORIGINAL ARTICLE

Mapping citizen science contributions to the UN sustainable development goals

Dilek Fraisl[1,2] · Jillian Campbell[3] · Linda See[1] · Uta Wehn[4] · Jessica Wardlaw[5] · Margaret Gold[6] · Inian Moorthy[1] · Rosa Arias[7] · Jaume Piera[8] · Jessica L. Oliver[9,10] · Joan Masó[11] · Marianne Penker[2] · Steffen Fritz[1]

Received: 4 November 2019 / Accepted: 14 June 2020
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Abstract
The UN Sustainable Development Goals (SDGs) are a vision for achieving a sustainable future. Reliable, timely, comprehensive, and consistent data are critical for measuring progress towards, and ultimately achieving, the SDGs. Data from citizen science represent one new source of data that could be used for SDG reporting and monitoring. However, information is still lacking regarding the current and potential contributions of citizen science to the SDG indicator framework. Through a systematic review of the metadata and work plans of the 244 SDG indicators, as well as the identification of past and ongoing citizen science initiatives that could directly or indirectly provide data for these indicators, this paper presents an overview of where citizen science is already contributing and could contribute data to the SDG indicator framework. The results dem-

Looking forward

PROGRAMME DEVELOPMENT

Waste flows in waterways and coastal marine environments

This indicator will show the amount of waste discharged into waterways and coastal areas around New Zealand each year. The term 'waste' includes chemicals, sewage, and solid waste.

This indicator is still to be developed.

Development of official 'Tier 1' indicator for litter.
Reporting on Wellbeing Indicators.

Train the Trainer programme.

Better online delivery tools.

Enhanced Learning Management System.

Increased cultural and language accessibility.

Further Pacific piloting and rollout.

Litter action workshops.

Terrestrial litter and microplastics data integration.

Beach | Stormwater | Freshwater | Land | International

Kia ora
Thank you

Camden Howitt
Co-Founder & Programmes Director
Sustainable Coastlines
camden@sustainablecoastlines.org

Find out more and explore data at
litterintelligence.org

sustainable coastlines | Litter Intelligence.

Appendix 5 – Post-Event Report

The following document is the Post-Event Report and Project Completion Report by InsightPact for the SPREP SWAP Marine Litter Workshop hosted by SPREP which took place last 6 April 2022

This report was written by Patricia Matute of InsightPact.

Post-Event Report

Summary and Context

The SPREP SWAP Marine Litter Workshop was a successful event that brought together various marine conservation and waste reduction organizations to discuss and learn best practices from SPREP partners from the Pacific region and beyond.

The active collaboration and communication between SPREP, InsightPact and OnCall Interpretation paved the way for the smooth delivery of the event. The execution of the workshop was characterized by trust and collaboration. Our solid collaboration translated into a co-ownership state of mind where each team member had opportunities to share ideas or recommendations to improve the workshop, with excellence and empathy in mind.

These are points that need to be celebrated in the preparation and delivery of the SPREP SWAP Marine Litter Workshop. The report following will discuss the numbers and learnings derived from this experience.

Conference data with analysis

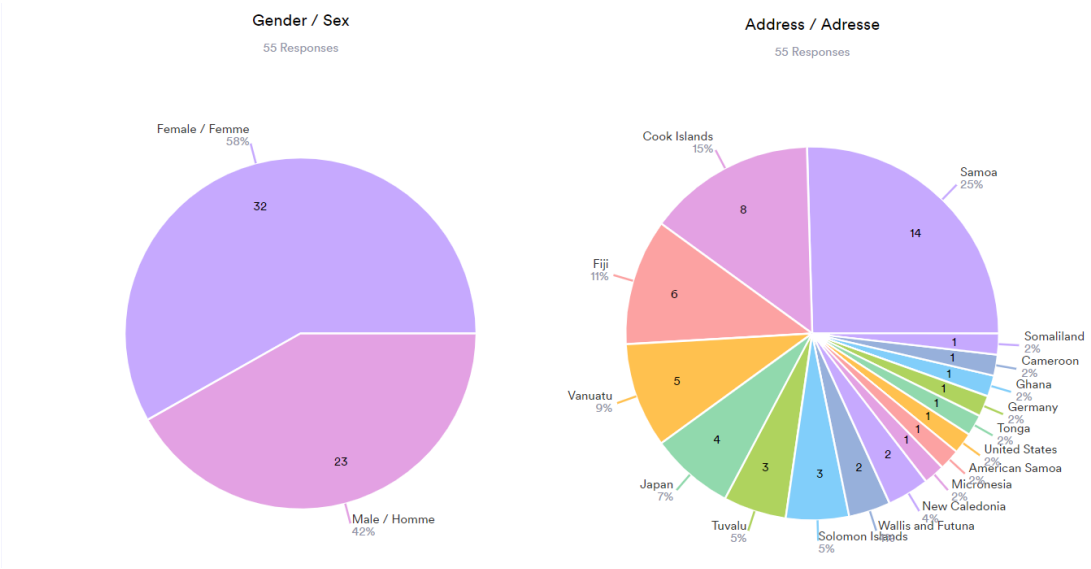
Participants and Registration

Registration for the Workshop was set up through Jotform, an online form builder. It featured both English and French prompts provided by SPREP and has gathered a total of 55 responses. Access to the Registration Form and Responses is available through these links:

Workshop Registration | Participant Responses | Attendees list

Invites were sent out through emails and circulars prepared by SPREP, which included the link to the Registration Form. Participants who then signed up for the Workshop were sent a Google Calendar invitation including a direct Zoom Link to the Workshop. This way, participants had the ability to block off their calendars and reach out to the technical facilitators when needed, while organizers had the option to track and nudge confirmation from interested participants at any time.

Out of the 55 registered participants, 32 (58%) were females and 23 (42%) were males,with a majority coming from Samoa, with 14 (25%) of the total registered participants. There was also a strong presence from the Cook Islands (15%), Fiji (11%), and Vanuatu (9%).



The registered participants varied from being project managers and directors to journalists and researchers of civil society organizations, media networks, or government offices.

During the program proper, about 45 participants joined the Workshop, one account in particular joined in hybrid format where their team gathered in-person to watch and participate. Drop-offs were experienced at the later part of the program, some due to prior commitments and schedule conflicts.

<u>Speakers</u>

The speakers' contact information and invitations were provided by SPREP. Technical support and preparation through speaker guides, calendar invites and pre-program technical checks were provided by InsightPact. The speakers in the event were as follows, in order of presentation:

1. Anthony Talouli, Acting Director of WMPC
2. Julie Pillet, SWAP Project Coordinator of WMPC
3. Camden Howitt, Co-Founder and Programmes Director of Sustainable Coastlines
4. Sarah Kollar, Outreach Manager, International Coastal Cleanup (ICC) Trash Free Seas® Program of Ocean Conservancy
5. Dr. Christina Shaw, Chief Executive Officer of The Vanuatu Environmental Science Society

Live session support was also provided to the speakers in the form of chat prompts and presentation back-up. Post-event communications were also sent to provide participants the

resources made available to them by the speakers via email. This email collated the speakers' presentations in PDF format and links to additional resources or opportunities, including the contact information of the session speakers.

Recordings

The whole Workshop was recorded and can be accessed through these details:

> Topic: SPREP/SWAP: Marine Litter Workshop
> Date: Apr 6, 2022 12:59 PM Independent State of Samoa
>
> Meeting Recording:
> https://us02web.zoom.us/rec/share/4qWc7KJcP7tOdtLLaWZg3WfQXCHcbduFDN7MoCusr3LpnB8Aka7hIdWEwuhNWQ.MA50quhbQZJ2xMPX
>
> Access Passcode: 8e#7!TRt

A processed recording will also be made available through the SPREP Youtube Account shortly.

Evaluation of Event

The responses to the evaluation can be found here in this hyperlink.

The event was delivered virtually using Zoom Meeting as the main conferencing platform. The event overall ran smoothly from a technical standpoint. Some commonly encountered issues were delays on shared screens or files and connectivity on the speaker side.

The invited speakers were very insightful and inspiring, having shared impactful work on the topic of marine litter, community organizing and data. They were very mindful of their time limits and have maximized their time well in sharing as many stories as they could, while answering any lingering questions on the chat asynchronously. One area of improvement could have been in giving more time for participants to reflect on the sessions, share their insights or questions, and interact with speakers or with each other. A singular discussion period proved too short given the variety of topics covered in about 2 hours.

In the brief assessment form filled-in near the end of the program, all of the participants (15 as of April 8, 2022) who sent in their assessments were satisfied with the workshop. Some were left wanting in terms of the depth of the presentations, but 80% of them are very appreciative of the time allocations for each speaker. Inclusion of breakouts, question and answer portions, and discussion sessions were some of their suggestions, on top of having an engaging and interactive technical facilitation, for the next workshops.

Insights for continuous improvement

- A break is always a welcome addition in the program. The use of videos is a good way to introduce a pause in between sessions
- Live chat prompts for technical tips, questions, and resources are useful for participants who have limited capacity to engage in the session
- Emphasizing technical preparation for all speakers' set-up should be prioritized in speaker communication

Project Completion Report

Scope of work

Access to WorkPlan Spreadsheet can be found here: Workplan-SWAPWorkshops-21MAR22

a. Work plan development
    i. **Description:** Develop a plan of actions and tasks to be undertaken in regards to the InsightPact scope of work, and execute them in a systematic way on a timeline to the workshop.
    ii. **Challenges:** Alignment with the SPREP team on which event should be reflected on the Workplan caused delay on setting up a clear live document.
    iii. **Successes:** After clarifications that the Work Plan be focused on the Workshop alone, the rest of the details and deliverables went smoothly thereafter.
b. Registration and participant support
    i. **Description:** Create a participant registration form and support participants in attending the event live.
    ii. **Challenges:** Relatively low registration turnout weeks before the event.
    iii. **Successes:** Registration form was simple and easy, and sourcing participant information allowed for quick and easy sending of reminders about the Workshop schedule
c. Pre-workshop speaker support
    i. **Description:** Support speakers prior to event proper through a speaker guide and scheduled technical preparation call.
    ii. **Challenges:** Some speakers were not able to share their slides before the event.
    iii. **Successes:** Speakers were very responsive over email and took ownership of sharing their screens and resources during the event. All speakers were able to join the technical preparation call 20 minutes before the program starts.
d. Live Technical Facilitation
    i. **Description:** Support all live sessions with live technical support for speakers and the audience and audience interaction elements.

ii. **Challenges:** Usual challenges such as supporting speakers to join who had poor connections, and nudging interaction from participants through chat
iii. **Successes:** Ability to share files and links through chat helped participants archive the resources shared by the speakers.

e. Interpretation Management
   i. **Description:** Coordinate the needs and materials of the outsourced interpreters, including their technical preparation in Zoom.
   ii. **Challenges:** Some slides were not shared prior to the event, leaving the interpreters a small room to prepare for some sessions. There is no break time during the Workshop.
   iii. **Successes:** For those who used the translation channel, participants were able to choose and hear the medium of communication in their native language, French.

Appendix 6 – Survey responses

In general, are you satisfied with the SPREP/SWAP Marine Litter Workshop?	Was the length of the workshop appropriate?	Did the agenda and content of the SPREP/SWAP Marine Litter Workshop meet your expectations?	Were the topics covered in sufficient detail?	Was the quality of the interventions satisfactory?	Have you encountered any difficulties in using the "translation" mode offered by the virtual workshop platform?	Apart from any technical issues, was the interpretation service satisfactory?	What improvements could be made at the next workshop (length, content, format, etc.)?	Would you consider participating in the upcoming training on how to conduct a coastal clean-up campaign and a statistical marine litter audit?	If yes, what would be your expectations and needs in regards to the training	Additional comments
Yes	Yes	Yes	Yes	Yes	Did not use it	Yes	Tech Facilitators who keep the Workshop interactive and engaged. The technical tips and follow ups with links, PDF's of the presenters made it just better. I have to admit , in the many calls i have been on - I have not seen an engaged Tech Facilitator like this.	Yes		
Tech Facilitators are fantastic!! Kept the engagement lively both in the Live and Chat.	Concise. To the point. Facilitators did not drag sessions. Informative. No data overload.	New to the space of Waste impacts, this workshop helped me find solutions that can be applied to our situation/s.	Yes	Yes	No	No	Maybe a brief scenario? Breakaway groups with a scenario of what they would do.	Yes	We need this! We need to be more aware! Our data lacks this type of information that allows us to take this to an official level.	I really enjoyed the Tech Facilitators - they took the initiative and time to keep each participant engaged. A few zoom coordinators could take a page of their book!!! :) :) Thank you for making it a Fun, Interactive and Informative - please hold a workshop that deals with Zoom - How to have fun!!! The choice of presenters chosen covered the topic concisely and expertedly (is that a word??) Nothing was out of their scope. it made me more aware and informed. Thank you,
It was great to talk about litter. But probably it would be more effective to discuss ways with actually eradicate the sources of pollution. Taxing is a possibility as it will be a disincentive to manufacturing plastics. E.g. Why are we forces to have a kg of rice to come with plastics? Plastics is not driven by demand. It is imposed by businesses. Needs to be heavily taxed	Yes	Could improve. Lets discuss deeper on the reasons of litter. It is not just a consumer, People's behavior. It is imposed by governments and lobbies	Yes	Yes	No	Yes	SPREP regional offices need to engage more with communities...	Yes	I found statistics a bit disengaging. Education and Action more relevant	
Yes	Yes	Yes	Yes		No	Yes	None	No		
Summarises the main areas as far as Marine Litter is concerned	Quite short for an important regional and global Agenda like Marine litter. Understanding of the aspect and systems is very vital and so its timing to deliver	Yes	Yes		No	Yes	Slight extended timing to give more time for more explaination	Yes	Indepth	
Divers échanges intéressants	Un peu trop long	No	Yes	Yes	No	Yes	Durée	Yes	Partage de solutions	
A good line up of ppts. Information shared has opened up new opportunities for collaborative work.	Timing was okay. Presenters needed a bit more time but overall it was fair distribution of time for each presenter.	Yes	Whilst being brief, information shared was sufficient.	Yes	No	Yes	Content as in information shared.	Yes		
Yes	Yes	Yes	Yes	Yes	No	Yes	Everything was meeting up to my expectations may be having a session for question and answer or maybe interaction.	No		
I would like to be a part of this workshop because I am dealing with waste in general	I would like to have more time of discussions and sharing	Exactly	They are sufficient but I would like more	Satisfactory with websites to actually visit on our own. Better for future assistance and reference	No need	Yes	more time more sharing of experiences	Yes	looking forward to a marine cleanup in September of this year	Thank you for confirming my participations
I haven't known that there's an app for marine litter. I'd love to use it when i do cleanup.	Yes	Yes	Yes	Yes	No	Yes	I'd love to know the detail how effect to the human body	No		
Would like to see more examples of real activities.....	No	Yes	No	Yes	No	Ima n english speaker it was fine!	will get back to you on this!	Yes	Absolutely..... we want to expand our area	Some of these questions are not yes/no answers!
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Honestly--it was a great session. Well organized and moderated. Excellent. Good networking opportunity to synergize on different projects.	Yes		

In general, are you satisfied with the SPREP/SWAP Marine Litter Workshop?	Was the length of the workshop appropriate?	Did the agenda and content of the SPREP/SWAP Marine Litter Workshop meet your expectations?	Were the topics covered in sufficient detail?	Was the quality of the interventions satisfactory?	Have you encountered any difficulties in using the "translation" mode offered by the virtual workshop platform?	Apart from any technical issues, was the interpretation service satisfactory?	What improvements could be made at the next workshop (length, content, format, etc.)?	Would you consider participating in the upcoming training on how to conduct a coastal clean-up campaign and a statistical marine litter audit?	If yes, what would be your expectations and needs in regards to the training	Additional comments
Yes	But maybe a break between presentations and a chance to ask questions then would be helpful	Yes	Yes	Yes	Didn't use it	Didn't use it	More breaks for questions / discussions	Yes	Maybe be interested depending onetime required	
Very good information.	There was enough time, I think we can have more but 2hrs is enough.	Yes	Yes	Yes	I didnt need to, was using English.	N/A in my case	Not sure really.	Yes	Maybe how to become a sub-agency for Sustainable Coastlines or Ocean Conservancy.	
Yes	Yes	Yes	Yes	Yes	No	Yes	More questions and discussion with the audience. Perhaps a structured Q&A or panel session to take the pressure off attendees.	Yes		