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Measures to counter marine plastic debris in Taiwan: A holistic approach

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MARINE PLASTIC POLLUTION RULE OF LAW IN ASIA-PACIFIC WORKSHOP

Monday & Tuesday 19 & 20 October 2020

A wide-angle photograph of a desert landscape. The foreground is dominated by sand dunes with distinct, wavy ripples. The dunes extend into the distance, where they meet a clear, bright blue sky. The lighting suggests a sunny day, with the sand appearing in shades of golden-brown and tan. The overall scene is serene and expansive.

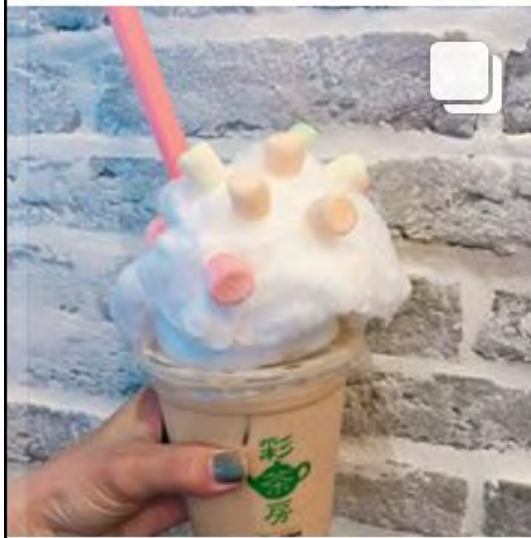
I. Introduction

Technology, industry and life style

- The devil of convenience
 - In 2018
 - 15.2 billion plastic bags (shopping)
 - average of 660 per person per year.
 - (3.55 grams each), up to 53960 metric tons
- not to mention the taking away and night market culture....



Exporting such culture to the world



Taiwan as plastic kingdom...

Yet, not always bad

- The widely use of one time use plastics could be the good way to curb COVID-19 spreading?



<https://cdn2.ettoday.net/images/2727/2727195.jpg>



As a highly populated small island....



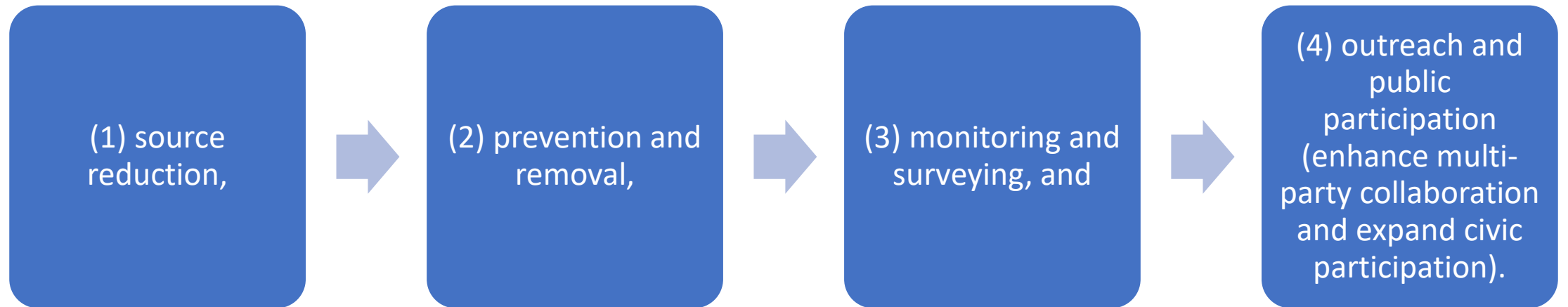
[https://www.leezen.com.tw/uploads/article-content/78/pic02%20\(1\).jpg](https://www.leezen.com.tw/uploads/article-content/78/pic02%20(1).jpg)

II. Overview of Measures to tackling marine debris



A holistic approach

Narrow approach to deal with marine debris



Broader and holistic approach to deal with marine debris

Rule of law

(1) source reduction

Very high intensity of rule of law ★ ★ ★ ★ ★



(2) prevention and removal, (3) monitoring and surveying, and (4) outreach and public participation (enhance multi-party collaboration and expand civic participation).

Very low intensity of rule of law ☆

The proper distribution of the works among different ministries

Ministry's determination to improve the governance

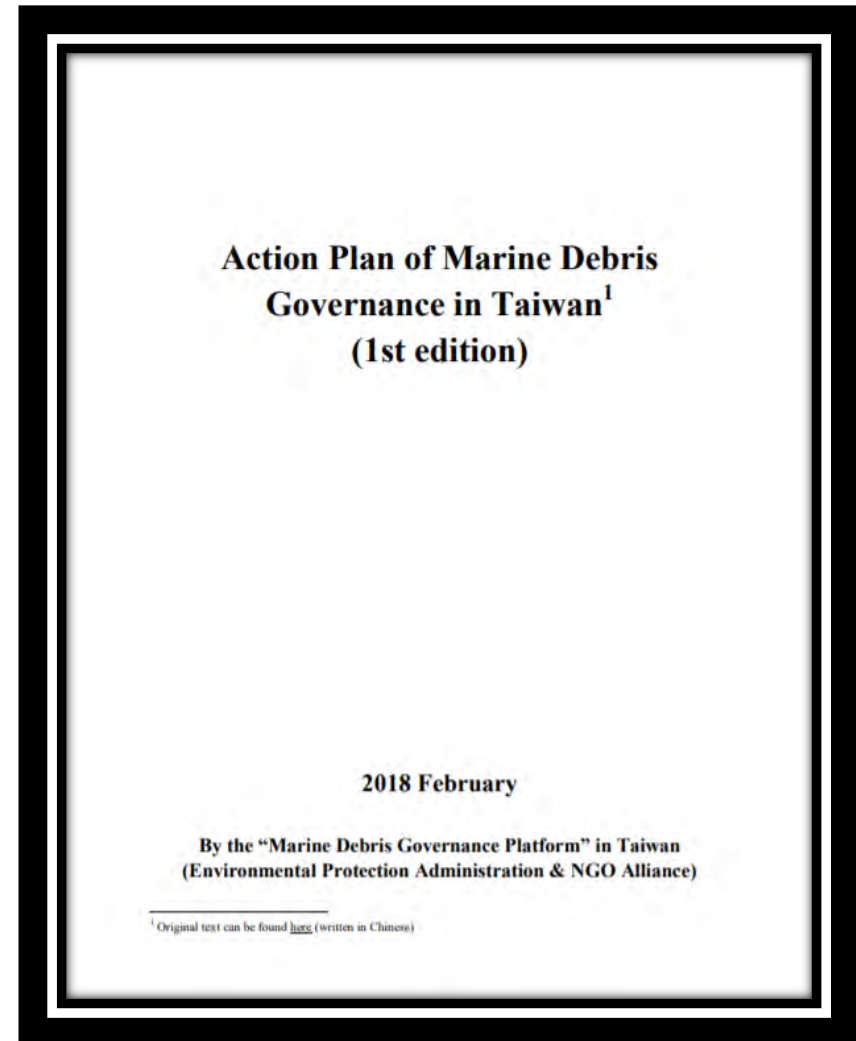
- May 2018 The establishment of the Marine Debris Governance Platform



The screenshot shows the website of the Environmental Protection Administration (EPA) of the Republic of China (Taiwan). The page is titled "海廢治理平台專區" (Marine Debris Governance Platform Special Area). The main content area displays the "臺灣海洋廢棄物治理行動方案" (Taiwan Marine Debris Governance Action Plan) with two entries: "臺灣海洋廢棄物治理行動方案(第一版)-中文版 (PDF)" and "臺灣海洋廢棄物治理行動方案(第一版)-英文版 (PDF)", both dated 107-05-08. The page includes a sidebar with navigation links such as "最新消息", "我國限塑政策國際相關報導", "臺灣海洋廢棄物治理行動方案", "海廢治理平台會議紀錄", "六直轄市轄內飲水機設置情形", "海岸淨灘認養資訊系統", and "公有掩埋場分布". The footer contains a "跳轉至" (Jump to) section with a dropdown menu set to "1", a page count of "1 頁", and a "送出" (Send) button. There is also a "回上頁" (Go to top) button.

Ministry's determination to improve the governance

- The publication of the **Marine Debris Governance Action Plan**



Ministry's determination to improve the governance

行政院環境保護署
Environmental Protection Administration
Executive Yuan, R.O.C. (Taiwan)

海廢治理平台專區

海廢治理平台會議紀錄

會議紀錄	日期
第一次海廢治理平台會議紀錄1060807(PDF)	107-05-08
第二次海廢治理平台會議紀錄1060823(PDF)	107-05-08
第三次海廢治理平台會議紀錄1061019(PDF)	107-05-08
第四次海廢治理平台會議紀錄1061221(PDF)	107-05-08
第五次海廢治理平台會議紀錄1070410(PDF)	107-07-07
第六次海廢治理平台會議紀錄1070702(PDF)	108-01-14
第七次海廢治理平台會議紀錄1070905(PDF)	108-01-14
第八次海廢治理平台會議紀錄1071121(PDF)	108-01-14
第九次海廢治理平台會議紀錄1080121(PDF)	108-02-27
第十次海廢治理平台會議紀錄1080402(PDF)	108-04-29
第十一次海廢治理平台會議紀錄1080625(PDF)	108-12-05
第十二次海廢治理平台會議紀錄1080830(PDF)	108-12-05
第十三次海廢治理平台會議紀錄1081125(PDF)	109-09-09

- Regular meetings to supervise the progress

Ministry's determination to improve the governance

- Willing to negotiate with other ministries and public players to clearly distribute works and “responsibilities”

(2) Prevention and removal

A. Effectively remove debris from hotspots

No.	Ongoing Actions	Lead Agency/Partner
2.1.O-1	- Mechanically or manually remove waste in certain ports	Ports cooperation, Fishermen's Association
No.	Future Actions	Lead Agency/Partner
2.1.F-1*	- Port authority to take responsibility to clean up wastes, purchase necessary equipment or remove floating marine debris	Lead: Maritime Bureau Partner: EPA, Fisheries Agency, Fishermen's Association
2.1.F-2	- Encourage more fishing vessels to assist in cleaning up floating marine wastes and aim to recruit 5,000 fishing vessels to participate in environmental protection fleet in five years	Lead: EPA, Fisheries Agency, Fishermen's Association
2.1.F-3	- Train volunteers with scuba diving skills and encourage them to assist in underwater wastes removal in a correct and safe manner	Partner: NGO

*To be decided

2.2.F-6*	<ul style="list-style-type: none"> - Encourage the recycling of derelict fishing gear and nets - Set up storage places for fishing gear in ports - Work with recycling and cleaning companies to regularly remove the gear and explore methods to reuse this derelict gear - Encourage fishermen to bring waste to land 	Lead: Fisheries Agency and EPA Partner: Fishermen's Association, NGO, local governments
2.2.F-7	<ul style="list-style-type: none"> - Enhance waste management on boats and ships, including the navy, coast guard and fishing sector to bring wastes back on shore 	Lead: Ministry of National Defense, Coastal Guard, Fisheries Agency, EPA Partner: Fishermen's Association

2.2.F-7	<ul style="list-style-type: none"> - Enhance waste management on boats and ships, including the navy, coast guard and fishing sector to bring wastes back on shore 	Lead: Ministry of National Defense, Coastal Guard, Fisheries Agency, EPA Partner: Fishermen's Association
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Unique in Taiwan's policy planning history

The mentioning of the role of
key environmental NGOs in
official Action Plan

□ 參與之環境保護組織【依筆畫順序】

序號	中文全名	簡稱	英文縮寫	官網
1	台灣蠻野心足生態協會	蠻野	WHLD	http://zh.wildatheart.org.tw/
2	社團法人台灣環境資訊協會	環資	TEIA	http://teia.tw
3	海湧工作室	海湧	HIIN	http://hiinstudio.wixsite.com/hiin
4	社團法人中華民國荒野保護協會	荒野保護	SOW	https://www.sow.org.tw/
5	財團法人海洋公民基金會	海洋公民	POCF	http://www.iocean.org.tw/
6	財團法人慈心有機農業發展基金會	慈心	TOAF	http://toaf.org.tw/
7	財團法人綠色和平基金會	綠色和平	Greenpeace	http://www.greenpeace.org/taiwan/zh/
8	財團法人黑潮海洋文教基金會	黑潮	KOEF	http://www.kuroshio.org.tw/newsite/#



A. Monitor pollution on Taiwan coastline and in nearby oceans

No.	Ongoing Actions	Lead Agency/Partner
3.1.O-1	- Civil society organizations to regularly monitor marine debris on certain coastlines	NGO
3.1.O-2	- Research on wildlife (whales and dolphins) affected by marine debris	
3.1.O-3	- From land to ocean: cross-continental research plan	
3.1.O-4	- Global research project on micro-plastic pollution in salt	
3.1.O-5	- Survey on the use of disposable plastics in Taiwan, Hong Kong, and Korea	
No.	Future Actions	Lead Agency/Partner
3.1.F-1	<ul style="list-style-type: none"> - Research on the source of coastal wastes - Local governments to continue coastal cleanup and report basic data - Local governments to identify one spot and research the components and sources of marine debris 	Lead: EPA, National Parks or scenic area Administration, Forestry Bureau Partner: local governments
3.1.F-2	<ul style="list-style-type: none"> - Beach survey - First beach survey to be held in June 2018 to survey current status of pollution in Taiwan coastline 	NGO
3.1.F-3*	- Research on marine debris and its influence on biology and ecology	Academics, NGO, Forestry Bureau, National Park Administration, Fisheries Agency
3.1.F-4*	- Research on marine debris and its influence on local economy	National Park Administration, academics, NGO

The leading, instead of supplementary, role of NGOs in official Action Plans

Unique in Taiwan's policy planning history?

Table 1. Different NGOs' role in monitoring pollution along the Taiwanese coastline and in nearby oceans

3.1.O-1	- Civil society organisations to regularly monitor marine debris on certain coastlines	Environmental Information Center The Society of Wilderness Kuroshio Ocean Education Foundation I-Ocean
3.1.O-2	- Research on wildlife (whales and dolphins) affected by marine debris	Kuroshio Ocean Education Foundation
3.1.O-3	- From land to ocean: cross-continental research plan	The Society of Wilderness
3.1.O-4	- Global research project on micro-plastic pollution in salt	Green Peace
3.1.O-5	- Survey on the use of disposable plastics in Taiwan, Hong Kong, and Korea	Green Peace

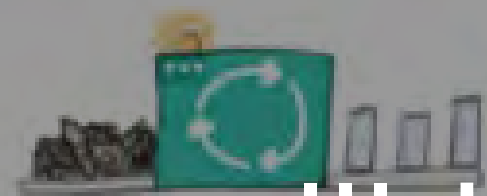
NGO's role

NGO's role

- Table 2. Different NGOs' role in **raising public awareness and attention in society**
- Source: 2018 Action Plan, p. 10.

No.	Ongoing Actions	Lead Agency/Partner
4.2.0-1	Screening of 'A Plastic Ocean' from Aug 2017 to Aug 2018	Green Peace
4.2.0-2	Tour of plastic creatures	Kuroshio Ocean Education Foundation
4.2.0-3	'Find back the waste' tour	Kuroshio Ocean Education Foundation

IMPROVE MANAGEMENT OF PLASTIC WASTE



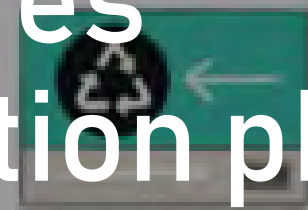
TECHNOLOGIES

III. Legal Measures at Source Reduction phase

RE-PURPOSE



RE-USE



DEPOSIT SCHEMES



COLLECTING



SORTING



Special website to promote these measures EPA's website: plastic source reduction

The screenshot shows the EPA's website for plastic source reduction. The header includes the EPA logo and the title '行政院環境保護署 一次用產品源頭減量宣導網'. The navigation menu contains: 首頁, 政策說明, 國際減量作法, 相關法規, 常見問答, 推動情形及案例, and 意見信箱. The main content area features a '源頭減量類別' (Source Reduction Categories) carousel with icons for: 購物用塑膠袋 (Shopping plastic bag), 一次用飲料杯 (To go cup), 免洗餐具 (Disposable utensils), 吸管 (Straws), 塑膠微粒 (Debris), and 網購包裝減量 (Online shopping packing). Below the carousel is a '最新消息' (Latest News) section with a search bar and a list of news items with dates.

行政院環境保護署
一次用產品源頭減量宣導網

首頁 政策說明 國際減量作法 相關法規 常見問答 推動情形及案例 意見信箱

最新影音
VIDEO
中央流行疫情指揮中心
Central Epidemic Command Center
外食安心使用
查看更多

源頭減量類別

購物用塑膠袋 一次用飲料杯 免洗餐具 吸管 塑膠微粒 網購包裝減量

最新消息
News

新聞資訊 【置頂】內用不得提供各類材質免洗餐具之縣市及實施時間 Hot 2020/10/07

新聞資訊 【置頂】網購包裝循環活動起跑 Hot 2020/10/05

新聞資訊 週夜市環保YES! 全國示範環保夜市動起來 2020/06/30

新聞資訊 防疫也要愛地球：中央防疫指揮中心呼籲減少使用免洗餐具，適當清洗即可有效清除餐具上的病菌，請安心使用環保餐具。 2020/05/22

新聞資訊 網購包裝減量目前成效 2020/05/22

- Shopping plastic bag
- To go cup
- Disposable utensils
- Straws
- Debris
- Online shopping packing

Main legal basis

Art 21 of Waste Disposal Act

- EPA, Ordinance on the Restriction of the Use of Plastic Bags (購物用塑膠袋限制使用對象、實施方式及實施日期)
- Ordinance on the Restriction of the Use of Disposable Utensils (免洗餐具限制使用對象及實施方式), promulgated on 9 June 2006, latest revision on 8 August 2019
- EPA, ordinance to restrict the manufacturing, import, and sales of personal care and cosmetic products containing plastic microbeads (限制含塑膠微粒之化粧品與個人清潔用品製造、輸入及販賣), 3 August 2017,
- EPA, Ordinance on the Restriction of the Use of One-time Use Plastic Straws, promulgated on 8 May 2019,

Art. 13 and 14(1) and (2) of Resource Recycling Act.

- EPA, Ordinance on the Restriction of overpackaging (限制產品過度包裝), promulgated on 1 July 2005,

Art. 22 of the Waste Disposal Act

- EPA, Ordinance on Source Reduction or Recycling Awards for To-go Cups (一次用外帶飲料杯源頭減量及回收獎勵金實施方式), promulgated on 4 January 2011,

Main measures

A. Restriction on the Use of Plastic Shopping Bags and Disposable Utensils in 2002, Expanded in 2017

B. Restriction on Overpackaging in 2005

C. Restriction on the Use of Plastic Trays and Packaging Boxes in 2007

D. Reduce Disposable To-go Cups in 2011

E. Restrictions on Personal Care and Cosmetic Products Containing Plastic Microbeads in 2017

F. Restricting Use of Plastic Straw in 2019

G. Future Actions 1. Banning Plastic Items by 2030

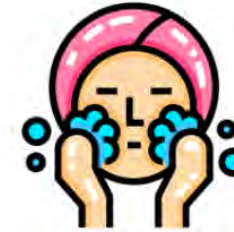
Ex. Recent measures on Restrictions on Personal Care and Cosmetic Products Containing Plastic Microbeads in 2017

- Plastic microbeads are particles with a size of less than five millimeters, used for human body exfoliation or cleaning, with contents, such as nylon, PE (Polyethylene), PP (polypropylene), PS (polystyrene), acrylic, etc.
- The products include shampoos, face wash, make-up removers, bath soaps, body scrubs, and toothpastes.
- Violation of the ban can result in an administrative fine for manufacturing and importing, ranging between NTD 60-300 thousand and NTD 1200-6000 for sales ban violation.

管制品項包含：



1.洗髮用化粧品類



2.洗臉卸粧用化粧品類



3.沐浴用化粧品類



4.香皂類



5.磨砂膏




6.牙膏

Restricting Use of Plastic Straw in 2019

- Since 7 July 2019, the public sector, schools, department stores/shopping malls, and fast food chains have been prohibited from using one-time use plastic straws for 'non-take-away' food or drinks.



A close-up photograph of a sea turtle's head resting on a dark, textured surface. A small, white, translucent piece of plastic is protruding from the turtle's nostril. The turtle's skin is a mottled grey and brown color, and its eye is visible. The background is dark and out of focus.

A good deal/trade off? Saving sea turtle with more plastic?

IV. Beyond the law

Voluntary actions on “package” and “packings”

1. Corporate Responsibility

- EPA also promotes corporations' voluntary **reduction of plastics** and promotion of **biodegradable plastic packaging**. (Action Plan of Marine Debris Governance in Taiwan, on page 3.)
- E.g., the wholesale mall RT-Mart launched a voluntary scheme to **stop the sales of shopping plastic bags since 1 July 2017**, expecting the annual reduction of 7.3 million plastic bags on the market.



2. E-commerce Platform and Package Reduction

the EPA published 'Guidelines on online shopping package reduction (網購包裝減量指引)

- by the end of 2019, the weight of the package should not exceed 10% of total package weight,
- by the end of 2020, the package materials should use single recyclable materials (paper or PE) or 100% recyclable paper mixed with more than 25% recycled plastic.

‘online-shopping package reduction label’

16 received this label,
including 10 B2C platforms
and 6 B2B2C/C2C platforms

B2C platforms	B2B2C/C2C platforms
<p>Pchome 24h購物https://24h.pchome.com.tw/ MOMO, https://www.momoshop.com.tw/ Yahoo!奇摩購物中心https://tw.buy.yahoo.com/、 博客來 https://www.books.com.tw/ 蝦皮https://shopee.tw/ IKEA https://www.ikea.com.tw/zh/、 神腦生活https://online.senao.com.tw/、 台塑購物網http://www.fpgshopping.com.tw/、 東森購物https://www.etmall.com.tw/、 直接跟農夫買www.buydirectlyfromfarmers.tw</p>	<p>Pchome 商店街 https://www.pcstore.com.tw/ https://tw.mall.yahoo.com/ Yahoo 奇摩超級 商城 Yahoo 奇摩拍賣https://tw.bid.yahoo.com/ 生活市集https://www.buy123.com.tw/ 台糖易購網https://www.ego888.com.tw/ 露天拍賣https://www.ruten.com.tw/</p>



Conclusion

Key points

- Early
 - Taiwan made extensive efforts in tackling marine debris, long before the UN announcement in 2018.
- Political will is the key
 - raising/prioritising such issues in the political agenda seemed to be the driving force for further measures. Perhaps this is the first time Taiwan has such a ‘de-plastic’ plan for 2025 and 2030.
- Institutional design to complement the role of “rule of law”
 - How to well distribute works and missions among different government agencies
- The important role of NGOs

The increasing plastic use this year? Increasing plastic use at the time of covid-19

- Fading political will to deal with plastic?
 - Now the president and parliament election is over ..
 - since 2017, regular meetings of the Marine Debris Platform were held: four meetings in 2017, four in 2018, five in 2019. However, there has been *no meeting* this year, thus far.



Thanks for your attention
welcome your comments and questions