The Declaration of the Global Plastics Associations for Solutions on Marine Litter

Progress Report – 2014



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Executive Summary

Marine litter is human-created waste that has been discharged into the coastal or marine environment. Marine litter is not only ugly – it can harm ocean ecosystems, wildlife, and humans. Its effects have prompted governments, private enterprise, environmental groups, and countless citizens to take action.

In March 2011, leaders from plastics associations across the globe signed a declaration to combat marine litter. The Declaration of the Global Plastics Associations for Solutions on Marine Litter (Global Declaration) represented a public commitment by a global industry to tackle a global problem: plastic litter in the marine environment.

Recognizing their important role in fighting marine litter, these plastics associations have made six public commitments that are aimed at contributing to sustainable solutions. The six commitments focus on education, research, public policy, sharing best practices, plastics recycling/recovery, and plastic pellet containment.

To fulfill these commitments, as of December 2013 more than 185 projects have been planned, underway, or completed – this represents a 90 percent increase in the number of projects since the Global Declaration was announced. The projects vary widely, from beach clean ups to expanding waste management capacities, and from global research to awareness and education campaigns.

Sixty associations representing 34 countries have signed the Declaration as of December 2013. The Global Declaration and list of signatories can be found at: www.marinelittersolutions.com/who-we-are/joint-declaration.aspx

Introduction: Marine Litter and the Global Declaration

In March 2011, leaders from plastics associations across the globe signed a declaration to combat marine litter. The <u>Declaration of the Global Plastics Associations for Solutions on Marine Litter</u> (Global Declaration) represented a public commitment by a global industry to tackle a global problem: plastic litter in the marine environment.

This Progress Report provides an update on that commitment. A previous Report published in December 2012 can be found at www.marinelittersolutions.com.

Marine Litter

Marine litter is human-created waste that has been discharged into the coastal or marine environment. Specifically: "Marine debris^{*} is defined to include any anthropogenic, manufactured, or processed solid material (regardless of size) discarded, disposed of, or abandoned in the environment, including all materials discarded into the sea, on the shore, or brought indirectly to the sea by rivers, sewage, storm water, waves, or winds."

Experts estimate that up to 80 percent of marine litter is from land-based sources, such as poor waste management and sewage overflows. Ocean based sources include trash from boats, abandoned fishing gear, and natural disasters.

Roughly 70 percent of marine litter, such as glass, metal, and all sorts of marine equipment and other refuse, sinks to the ocean floor. The remainder floats or is suspended.

Marine litter is not only ugly – it can harm ocean ecosystems, wildlife, and humans. It can injure coral reefs and bottom dwelling species and entangle or drown ocean wildlife. Some marine animals ingest the litter and choke or starve. Medical waste (such as syringes), sharp objects, and large pieces of litter can pose a direct threat to humans. The economic impact of marine litter is thought to be significant.

As the scope and potential impacts of marine litter have become better understood, governments, private enterprise, environmental groups, and countless citizens have taken action. Because ocean litter has no geographic or political boundaries, solutions must be global and involve international partnerships. Effective solutions focus on preventing all types of litter from entering waterways and oceans.

^{*} This is the definition of "marine litter" that has international consensus and is used in this report. Source: http://5imdc.files.wordpress.com/2011/03/honolulustrategy.pdf (The terms "litter" and "debris" are used interchangeably.)

The Declaration

While marine litter consists of all sorts of materials, many plastics float, making them more visible, and many also are resistant to degradation and persist in the marine environment. Plastics makers and processors have long been involved in efforts to reduce plastic marine litter, from conducting research to enhancing product stewardship to cleaning up beaches.

To leverage these efforts and to generate additional innovative solutions, 47 plastics associations from regions across the globe signed the <u>Declaration of the Global Plastics</u> <u>Associations for Solutions on Marine Litter in March 2011.</u>

The Global Declaration, signed at the 5th International Marine Debris Conference in Honolulu, Hawaii, identified six commitments (described in more detail below) that will contribute to sustainable solutions. Signatories also identified numerous specific actions – from educational campaigns to increased plastics recycling – designed to fulfill these commitments, and they agreed to track and report progress. Additional associations subsequently signed the Global Declaration, and as of December 2013 there were approximately more than 185 projects planned, underway, or completed – this represents a more than 90 percent increase in the number of projects since the Declaration was announced.

Signatories use the Global Declaration as a framework for action, in cooperation with governments, non-governmental organizations, researchers, and other stakeholders.

"Marine litter is a global problem, and it requires global solutions," said Vice President of Plastics for the American Chemistry Council (ACC), Steve Russell when announcing the Global Declaration, predicting that it would "generate the creative spark that launches innovative solutions."

"Plastics should not be part of the oceans, and marine litter is not acceptable," added then President of PlasticsEurope Jacques van Rijckevorsel. While plastics contribute significantly to our quality of life, resource preservation, and innovation, "they should be responsibly used and disposed of either via recycling or energy recovery," he said.

To date, 60 associations representing 34 countries have signed the Global Declaration. The Global Declaration and list of signatories can be found at: www.marinelittersolutions.com/who-we-are/joint-declaration.aspx

Commitments Made Under the Global Declaration

Humans cause marine litter – and humans have the power to stop it. This humble recognition has spurred people across the globe to fight the scourge of marine litter.

Plastics associations recognize their important role in fighting marine litter and have made six public commitments that contribute to solutions, coupled with more than 185 projects to fulfill the commitments. These commitments focus primarily on the plastics portion of marine litter. Success will require sustained, good faith cooperation among a wide range of stakeholders.

These example projects are pulled from the section of this Progress Report below titled "Projects Underway – A Snapshot." More detailed information on these and all projects is available at www.marinelittersolutions.com and from the Global Declaration's signatories.

1. Contribute to solutions by working in public-private partnerships aimed at preventing marine litter.

The focus of this commitment is *education*. By raising awareness of the problem and highlighting steps people are taking to combat it, this commitment can help change the behavior that leads to marine litter.

Projects include:

- A marine litter conference for African countries organized by South Africa's plastics association
- A museum exhibit on marine litter in Germany
- Coastal cleanups in Gulf Cooperation Countries (GCC)
- 2. Work with the scientific community and researchers to better understand and evaluate the scope, origins, and impact of and solutions to marine litter.

The focus of this commitment is *research*. While the general scope of the marine litter problem is apparent, studies are needed to determine the actual impacts of plastic marine litter, how and why marine litter enters the ocean, and how to prevent it.

Projects Include:

- Study of land-based sources of marine litter in European seas
- Support for assessing the impacts of microplastics in the open oceans component of the United Nation's "Transboundary Waters Assessment Programme" (TWAP)
- Multinational research to find technological solutions for the degradation of plastics in the marine environment (BIOCLEAN)
- 3. Promote comprehensive science-based policies and enforcement of existing laws to prevent marine litter.

The focus of this commitment is advocacy for effective *public policy*. Government policies – and the way they are or are not enforced – have a huge impact on the prevalence of litter in the oceans, so advocating effective and efficient policies can spur cleanups and prevent marine litter.

Projects include:

- Co-regulatory model for improved litter mitigation and compliance in Australia
- European plastics value chain supporting the "Zero Plastics to Landfill by 2020 in Europe" vision
- Coalition building between law enforcement and businesses in Turkey
- Help spread knowledge regarding eco-efficient waste management systems and practices, particularly in communities and countries that border our oceans and watersheds.

The focus of this commitment is sharing **best practices**. While individual projects may vary from place to place, sharing successes – and the knowledge that comes with them – helps industry, government, and others understand what actually works to prevent marine litter.

Projects include:

- Annually convening European industry, government, scientists, and waste experts to share best practices in recycling and recovery (IDENTIPLAST)
- Innovative waste collection systems that help prevent litter in Finland
- A non-profit that spreads best practices on curbside recycling to improve collection, profits, and sustainability in the USA (Curbside Value Partnership)

5. Enhance opportunities to recover plastic products for recycling and energy recovery.

The focus of this commitment is *recycling and recovering plastics*. Capturing plastics for recycling and energy recovery keeps plastics out of the waste and litter streams, as well as reduces energy use and greenhouse gas emissions.

Projects include:

- Campaign with GreenBlue's Sustainable Packaging Coalition to help consumers recycle more plastic film (bags and wraps) in the USA
- Anti-litter and recycling initiative for agricultural plastics in France
- Improved system for collecting and recycling expanded polystyrene fish boxes and floats in Japan
- Steward the transport and distribution of plastic resin pellets and products from supplier to customer to prevent product loss and encourage our customers to do the same.

The focus of this commitment is *plastic pellet containment*. Many types of plastics are sold to product companies as small pellets – if spilled or released into the environment during manufacturing or transportation, these pellets can be unsightly and be mistaken for food by wildlife, so reducing pellet loss is critical.

Projects include:

- Education initiative begun in the USA (Operation Clean Sweep) that focuses on proper containment of plastic pellets – now licensed to associations in 12 countries and one continent
- Pellet loss awareness campaign in Japan
- Planned campaign to implement good housekeeping and pellet containment practices in Malaysia

Case Studies

Commitment #1 - Education

3R's Awareness Campaign — Malaysia

Note: this campaign builds on the Malaysian Plastics Forum's "Don't Be a Litterbug" campaign that was a case study in the 2012 Progress Report. http://www.facebook.com/DontbeaLitterbug

The Malaysian Plastics Manufacturers Association (MPMA) in 2013 created a 3Rs Awareness Program, a campaign focused primarily on students to raise awareness of the importance of caring for the environment by promoting the 3Rs (Reduce, Reuse, Recycle). While MPMA focused on students because "the decisions we make today will have a direct impact upon the world they live in tomorrow," the Program also involved teachers, parents, and the community.

The Program held competitions in three schools to showcase the creativity of students and their understanding of the 3Rs. The competitions focused on innovative uses of recycled materials, collection of recyclables, and broader sustainability issues. Each school was given four weeks to complete their entries, and the schoolteachers submitted the top three efforts from their students for the judging process.

Three hundred guests attended the Awards Ceremony, including government officials, students, teachers, media, and representatives from various trade associations and MPMA members. A total of RM18,400 cash was awarded to the competition winners and the winning schools, and the program received significant media coverage.

Participating schools have committed to continue their recycling and sustainability projects after the completion of the Program.

A video that reviews the program and captures the kids in action can be viewed at: http://youtu.be/RKZXCnJ5v3o.

Commitment #2 - Research

BIOCLEAN Study – European Union

BIOCLEAN is a European funded research consortium that includes 19 partners from nine European Countries and one from China, including universities (6), research

institutes (4), small and medium enterprises (6), a multi-municipality, one enterprise, and the association of European plastic producers (PlasticsEurope).

Among other objectives, BIOCLEAN aims to find "smart and robust" technological solutions for the degradation of plastic fragments occurring in marine habitats. The goal is to help mitigate the impacts of plastics on marine ecosystems.

The consortium notes: "Biodegradation of synthetic plastics can occur in nature, in sediments and marine environments as well as in landfills, compost and soil. The process is governed by the polymer characteristics, the organisms available and the surrounding environmental conditions. However, the knowledge on the biodegradation of major synthetic polymers is still very limited and fragmented."

The consortium will concentrate on PVC, polystyrene, polypropylene, and polyethylene. Various work packages will focus on:

- identification of microbes and enzymes able to degrade polymers;
- development of pre-treatments to increase polymers' degradability;
- bioaugmentation studies in marine environments; and
- development of policy tools and knowledge transfer once studies are complete.

The consortium began in 2012, and research is expected to be complete by 2015. Read more about the project at www.biocleanproject.eu.

Commitment #3 – Public Policy

Legislation on Plastic Microbeads - USA

Some personal care products are formulated with tiny spheres of plastics that typically are used for exfoliating the skin or brushing teeth. Sewage treatment systems are not able to capture all of these "microbeads," so some of them end up in waterways and the marine environment.

Many product manufacturers (e.g., Unilever, L'Oréal, Colgate/Palmolive, Procter & Gamble, Johnson & Johnson) have pledged to voluntarily replace plastic microbeads with other materials.

To ensure that the phase out of the use of microbeads in personal care products is uniform and done in a timely matter, a coalition of industry groups and NGOs is advocating legislation in the state of Illinois (IL SB 2727) that would phase out the intentional addition of microbeads in personal care products. The legislation is supported by the plastics industry, the Personal Care Products Council, the Environmental Council, and others.

Supporters of the Illinois legislation are encouraging other states that are looking at similar measures (e.g., New York, California) to use the Illinois bill as a model.

Commitment #4 – Best Practices

Prevention of Land Sourced Litter – Germany, Austria, Switzerland

The plastics industries in Germany, Austria, and Switzerland commissioned a study on land source litter in the marine environment, which was completed in 2012. The study focused on three European Seas – North, Baltic, and Mediterranean – to develop a scientific basis for taking measures to prevent further litter.

Following the completion of this study, the plastics industries initiated efforts to identify and implement meaningful activities to prevent land-sourced marine liter.

In 2013, the industries organized a follow up expert workshop to build on the study and other work to date. More than 40 delegates representing the plastics industry, branded products, disposal and recycling companies, NGOs, and government identified measures "for effectively combating the discharge of waste at sea."

Workshop attendees brainstormed measures focusing on:

- product and material design,
- prevention of litter by individuals (behavioral changes), and
- waste management and infrastructure.

Following the workshop, organizers evaluated the results with stakeholders and are pursuing efforts to implement the measures through individual work groups of the delegates.

Commitment #5 - Recycling/Recovery

Wisconsin Wrap Recycling Action Project (WRAP) – USA

A coalition of businesses, government agencies, and recycling advocates in 2014 launched a campaign in Wisconsin to significantly increase recycling of plastics bags and other plastic film products, such as wraps for everyday consumer products.

The Wisconsin WRAP (Wrap Recycling Action Project) recycling awareness campaign includes a variety of public outreach methods, including:

- radio advertising in English and Spanish;
- news conference with public officials, as well as members of the grocery, plastics, and recycling community;
- op-ed in the Milwaukee Journal;
- new signage in grocery stores; and
- a web site that identifies what and where to recycle.

Similar to most plastic "film" collection programs in the USA, plastic bags and wraps do not go in Wisconsin's curbside recycling bins – instead, they must be returned for recycling to thousands of major grocery and retail stores. Consumers collect clean and dry bags and wraps in a plastic bag and then drop them in a storefront recycling bin. Consumers can check www.plasticfilmrecycling.org/Wisconsin to identify what can be recycled and the closest recycling locations. The plastic bags and wraps are recycled into products such as new grocery bags, benches, and decking for homes.

Wisconsin WRAP is an innovative public/private partnership that promotes recycling of plastic film *beyond* bags. The partnership is comprised of the ACC's Flexible Film Recycling Group, the Wisconsin Department of Natural Resources, and GreenBlue's Sustainable Packaging Coalition. The campaign is expected to increase supply of recycled plastics, attract new investment and jobs in plastics recovery and manufacturing, and serve as a model for other states.

Spotlight Case Study: Operation Clean Sweep®

Commitment # 6 - Plastic Pellet Containment

Problem: Pellet Loss

Many plastics are sold in pellet form: a small piece of plastic "resin" approximately the size of a split pea. These pellets are shipped through various means – in boxes, trucks, rail cars, barges – to companies that make products with these pellets.

Throughout this process, pellets can be spilled into the environment. If they reach waterways, they can be washed out to sea.

In recent years, researchers have reported that seabirds, turtles, and fish are ingesting plastic items. Most of these plastics are used consumer products (such as bottles caps) that have been carelessly discarded. However, some of this litter consists of resin pellets that sometimes cannot pass through sea creatures' digestive tracts, which may contribute to malnutrition and starvation.

While consumers are responsible for the proper disposal of the products they use, companies throughout the plastics supply chain also must take responsibility for keeping pellets out of the marine environment.

Response: Operation Clean Sweep

The Society of the Plastics Industry (SPI) in 1992 created an education initiative in the USA to minimize pellet loss called Operation Clean Sweep that focuses on proper containment of plastic pellets. Manuals and tools designed to improve good housekeeping practices were made broadly available to companies throughout the USA that handled plastic pellets, including resin producers, transporters, bulk terminal operators and plastics processors.

The goal: achieving zero pellet loss – which is both good for the environment and good for business.

SPI and ACC recently have worked together to enhance Operation Clean Sweep through new tools, additional communications materials, and expanded participation. To be successful, all employees in every aspect of the industry must be educated on the properly handling of plastic pellets. Everyone in every company, from top management to shop floor employees, must be committed to eliminating pellet loss.

SPI and ACC also supported legislation in the state of California that requires programs to reduce plastic pellet loss into the environment – legislation that is consistent with Operation Clean Sweep.

International Expansion

In addition to efforts in the USA, the goals of Operation Clean Sweep were incorporated as a commitment under the Global Declaration in March 2012. The commitment states: Steward the transport and distribution of plastic resin pellets and products from supplier to customer to prevent product loss and encourage our customers to do the same.

Since that time, numerous national plastics associations have launched Operation Clean Sweep in their countries by signing licensing agreements to utilize the program's tools and resources. To date, associations in 12 countries and one continent have signed licensing agreements:

- Brazil
- Canada
- Chile
- Costa Rica
- Denmark
- Europe (Plastics Europe)
- France
- India
- Mexico
- Nepal
- New Zealand
- South Africa
- United Kingdom

In addition, other national plastics associations are implementing pellet containment initiatives in their countries that meet the Global Declaration commitment, as well as increase awareness of marine litter across the plastics value chain. Those countries include:

- Belgium
- Finland
- Germany
- Gulf Cooperation Countries
- Italy
- Japan
- Malaysia
- The Netherlands
- Poland
- Portugal

- Spain
- Sweden

Operation Clean Sweep and its counterparts have sparked a global effort designed to prevent resin pellet loss and to keep pellets out of the marine environment.

More information can be found here: http://www.opcleansweep.org

Projects Underway – a Snapshot

To fulfill the six public commitments of the Global Declaration, signatories are implementing or have implemented approximately more than 185 projects – this represents a 90 percent increase in the number of projects since the Declaration announcement in 2011. Because some projects are implemented in more than one country, identifying an exact number is not feasible.

The following chart includes those projects that were originally announced as part of the Global Declaration and also subsequent projects – it is current through December 2013. The projects are segregated by the:

- geographic cluster (The Americas, Europe/Africa/Gulf, Asia/Pacific, Global)
- Global Declaration's six commitments, and
- location and responsible association (if appropriate).

The project status also is noted (if feasible).

More detailed information on these projects is available at www.marinelittersolutions.com and from the Global Declaration's signatories.

Note: some projects contribute to more than one commitment; however, each project is listed under only one commitment. Exceptions are marked with an asterisk* if the project elements are distinct enough to be listed under more than one commitment.

Status - December 2013

- Underway/Ongoing
- Planned
- × Cancelled
- Status uncertain at time of report

The Americas

Commitment	Statu	s Name/Project	Location
Education	0	America Recycles Day – promotes more	USA (ACC)
		plastics recycling	
Education	0	Anti-litter calendar design contest (student	Canada (CPIA)
		focused)	

Education	Ø	Anti-litter campaign – Keep America	USA (ACC)
		Beautiful (national)	
Education	0	Anti–litter web site/campaign	Canada (CPIA)
		(teacher/student focus)	
Education	0	App for mobile devices on facts about	USA (ACC, SPI)
		plastics recycling	
Education	V	Clean Community Competition –	USA (ACC)
		sponsored competition in Baltimore, MD,	
		to reduce litter, increase recycling	
Education	V	Earth 911 – partnership to raise awareness	USA (ACC)
		of/increase plastics recycling	
Education	V	Great Canadian Shoreline Cleanup	Canada (CPIA)
Education	V	Great Lakes Clean Up Partnership	Canada (CPIA)
Education	0	Living Classrooms – anti-litter	USA (ACC)
		program/river clean up (student focus)	
Education	0	National Recycling Campaign ("I want to	USA (ACC)
		be recycled") – Keep America Beautiful	
		and Ad Council (national)	
Education	0	Plastics Make it Possible – campaign that	USA (ACC, SPI)
		encourages increased plastics recycling,	
		such as "Bathroom to Bin" sweepstakes to	
		increase recycling of bathroom plastics	
Education	0	Rozalia Project – education and marine	USA (ACC)
		litter clean up (youth focus)	
Education	0	Ship to Shore – anti-litter program (fishing	Canada (CPIA)
		industry focus)	
Education	0	Sustainability Training Program (eco-	Mexico (ANIPAC)
		design, plastics use, recovery, etc.)	
Education	0	Tales for Recycling – dramatic	Mexico (ANIPAC)
		presentation (student focused)	
Education	0	Trash Free Waters – partnership with	USA (ACC, SPI)
		Environmental Protection Agency to	
		reduce trash entering bodies of water and	
		coastlines	
Research	V	Micro-plastics POPs affinity study – review	USA (ACC)
		of existing research	
Research	0	Micro-plastics – state of the science on POPs	USA (ACC)
Research	0	Monitoring marine litter on the Brazilian	Brazil (Plastivida)
		coast	
Research	0	Monitoring pellets found at port	Brazil (Plastivida)

Research	0	Post industrial plastics scrap survey	LICA (CDI)
nesedicii		Post-industrial plastics scrap survey –	USA (SPI)
		gather information on generation and disposition of post-industrial plastics scrap	
Research	I		LICA (ACC)
Research		SEA Pellet Analysis – study on the	USA (ACC)
		presence of resin pellets in North Atlantic	LICA
Research		Support for government (NOAA) funded research	USA (ACC)
Research	0	Sustainability Benchmark Survey – gather	USA (SPI)
		data on sustainability practices, including	
		recycling, of plastics companies	
Research	0	TWAP – funding support for assessing the	USA, Global
		impacts of microplastics in the open	(ACC)
		oceans component of the United Nation's	
		"Transboundary Waters Assessment	
		Programme"	
Policy	$\overline{\mathbf{V}}$	Support legislation to encourage plastics	USA (ACC)
·		recycling (New Jersey)	
Policy	0	Support legislation to spur purchase of	Mexico (ANIPAC)
,		recycled plastics	, ,
Policy	0	Support pellet containment law	USA (ACC, SPI)
•		implementation (California)	
Policy	$\overline{\mathbf{V}}$	Support pellet containment legislation	USA (ACC, SPI)
•		(California)	
Policy	$\overline{\mathbf{V}}$	Support reauthorization of marine litter	USA (ACC)
		legislation (federal)	
Best Practices	0	How2Recycle label campaign	USA (ACC)
Best Practices	0	Plastic Packaging Recycling and Recovery –	Canada (CPIA)
		online resources for recycling and energy	
		recovery options	
Best Practices	V	Plastics Recovery Seminar (Atlantic	Canada (CPIA)
		Canada)	,
Best Practices	V	Plastics Recovery Tours (Quebec)	Canada (CPIA)
Best Practices	0	Plastics. Too Valuable to Waste –	USA (ACC)
		partnership to expand recycling best	() = ()
		practices in California	
Best Practices	0	Reverse Logistics proposal for recycling	Brazil (Plastivida)
_ 551 . 1451.565		waste (awaiting government approval)	
Best Practices	0	Sustainability conferences – presentations	Canada (CPIA)
Dest i factions		on plastics recovery	Carrada (CFIA)
Best Practices	0	Sustainability Consortium – participate in	USA (ACC)
Dest Fractices		effort to improve product sustainability,	OJA (ACC)
		including preventing marine litter	
		morading preventing marine litter	

Best Practices	V	Waste Recovery Symposium for Canada	Canada (CPIA)
Best Practices	$\overline{\mathbf{A}}$	Webinars on best practices in plastics	Canada (CPIA)
		recycling, recovery	
Recycling/Recovery	0	A Bag's Life – campaign promotes reuse,	USA (SPI)
		recycling, recovery	
Recycling/Recovery	V	Agricultural plastics recovery research	Canada (CPIA)
Recycling/Recovery	0	Conversion technology trials and support	USA (ACC)
Recycling/Recovery	0	Conversion technology trials (Edmonton)	Canada (ACC, CPIA, SPI)
Recycling/Recovery	0	Curbside Value Partnership – non-profit	USA (ACC)
		seeking expanded education on curbside	
		recycling to improve collection, profits and	
		sustainability	
Recycling/Recovery	0	Expanded polystyrene (EPS) recycling	USA (ACC)
		partnerships (California)	
Recycling/Recovery	0	Expanded polystyrene (EPS) recycling	Canada (CPIA)
		projects (Quebec)	
Recycling/Recovery	0	Go Recycle Campaign (metro DC area)	USA (ACC)
Recycling/Recovery	0	Green Up Vermont (litter clean up)	USA (ACC)
Recycling/Recovery	0	Grocery rigid plastics recycling – focused	USA (ACC)
		on recycling rigid plastics from behind	
		grocery counters	
Recycling/Recovery	0	Pac Next (collaboration to optimize plastic	Canada, USA
		bag and film recycling/recovery and to	(ACC, CPIA)
		reduce impacts of plastic packaging)	
Recycling/Recovery	0	plasticfilmrecycling.org – enhance plastic	USA (ACC)
		bag and film recycling	
Recycling/Recovery	0	plasticsmarkets.org – connects plastics	USA (ACC)
		recyclers and buyers	
Recycling/Recovery	0	Plasticity Forum – international	USA (ACC)
		conference aimed at finding solutions to	
		recovering more plastics	
Recycling/Recovery	V	PlasticShore – recycling plastic marine	Canada (CPIA)
		litter trial	
Recycling/Recovery	0	Plastics recycling access reports measure	USA (ACC)
		percentage of population with access to	
		recycling of various plastics	
Recycling/Recovery	0	Plastics recycling/recovery education at	USA (ACC, SPI)
		conferences	
Recycling/Recovery	0	Plastics recycling/recovery technical	Canada (CPIA)
, -		assistance	
Recycling/Recovery	0	Plastics recycling reports	Canada (CPIA)

Recycling/Recovery	0	Plastics recycling reports	USA (ACC)
Recycling/Recovery	0	Plastics recycling terminology and tracking	USA (ACC)
		campaign – effort to create consistent	
		terminology for community collection	
		programs and for tracking recycling	
Recycling/Recovery	V	Plastics to fuel – Presented at UNEP Global	USA, Global
		Marine Litter Partnership meeting (GLOC2)	(ACC)
		new plastics-to-fuel technologies	
Recycling/Recovery	0	RecyclePlastics365.org – plastics recycling	USA (SPI)
		marketplace that links supply and demand	
		for plastic scrap	
Recycling/Recovery	0	Recycle Your Plastics – web site to help	USA (ACC)
		increase plastics recycling	
Recycling/Recovery	0	Recycling Committee – brings together	USA (ACC, SPI)
		plastics supply chain to support recycling	
		efforts	
Recycling/Recovery	0	Toy recycling and recovery (plastics-to-oil)	USA (ACC, SPI)
		project (Oregon)	
Recycling/Recovery	V	Upcycle the Gyres Society – trial project to	Canada (CPIA)
		turn plastic marine debris into oil	
Recycling/Recovery	V	Waste incineration feasibility study	Brazil (Plastivida)
Recycling/Recovery	0	WRAP (Wrap Recycling Action Project –	USA (ACC)
		partnership to promote increased	
		recycling of plastic film and wraps	
		(Wisconsin)	
Pellet Containment	V	Operation Clean Sweep/PAC NEXT webinar	North America
		 highlighted work of North American 	(ACC, CPIA, SPI)
		Plastics Alliance on Global Declaration;	
		encouraged participation in Operation	
		Clean Sweep	
Pellet Containment	0	Operation Clean Sweep – pellet	Brazil, Canada,
		containment program	Chile, Costa
			Rica, Mexico,
			USA

Europe, Africa, Gulf (GCC)

Commitment	Statu	ıs Name/Project	Location
Education		African Marine Declaration Conference – marine debris conference for Africa	South Africa, Africa (Plastics SA)

Education	0	Ambassador Program – education program	United Arab
		on reducing, reusing, recycling, recovery (youth focused)	Emirates (GPCA)
Education		Awareness seminar – sharing knowledge, establishing best practices and communications platform	Denmark (Plastindustrien)
Education	0	Beach Watch Big Weekend – beach clean up	UK (BPF)
Education	0	Berg2Beach – anti-litter and recycling project	South Africa (Plastics SA)
Education	×	Black Sea Project – study on contamination of Black Sea	Bulgaria, Romania (BAP, ASPAPLAST)
Education	0	Cape Argus PicknPay Cycle Tour – litter awareness	South Africa (Plastics SA)
Education	0	Clean the GCC – beach cleanup in Gulf Cooperation Countries	Gulf (GPCA)
Education	0	Clean Up South Africa Week	South Africa (Plastics SA)
Education		Cool Seas-Bottle Champion – anti-marine litter program (youth focused)	UK (BPF, PAFA, PlasticsEurope)
Education	0	Cool Waters – awareness program in primary schools	Turkey (PAGEV)
Education	0	Cuaderno de bitácora – Awareness program (sailing clubs focused)	Spain (Cicloplast, PlasticsEurope)
Education	0	Fish-line bins – collects discarded fishing line located at high density fishing areas	South Africa (Plastics SA)
Education	V	Golletta Verde – Awareness campaign (citizens, public administration focused)	Italy
Education	①	Happy Fish – litter clean up	Turkey (PAGEV)
Education	0	Innovations for Environment conference (recycling focus)	Turkey (PAGEV)
Education	0	International Coastal Clean Up sponsorship	South Africa (Plastics SA)
Education		Jonge Baekeland youth competition organized by science/nature magazine	Belgium (Federplast)
Education	0	Land-sourced Litter newsletter for German speaking countries	Austria, Germany, Switzerland (IK, KVS)
Education	0	La plastica in vacanza – awareness campaign on plastics and recycling on holiday	Italy

Education	0	Love Where You Live campaign – anti-litter initiative	UK (BPF)
Education	0	Marine and Coastal Educators Network (MCEN) – national and regional workshops on plastics industry marine litter actions	South Africa (Plastics SA)
Education	X	MARLIREC – awareness campaigns	Europe
Education	0	MARLISCO – Raise public awareness, facilitate dialogue, and promote coresponsibility of marine litter across European seas.	Europe (EuPC, EuPR, PlasticsEurope)
Education	Ø	North Sea Partnership – identifying solutions for collecting plastic waste	Denmark (Plastindustrien)
Education	V	"Out to the Sea? The Plastic Garbage Project" – Museum exhibit on marine litter	Germany (IK)
Education		PAGEV international congress – industry event focused on sustainability	Turkey (PAGEV)
Education		Plastics and the Environment – symposium to raise awareness	Greece (AHPI)
Education	0	Plastics Awards competition – award for contribution to marine litter solutions	Turkey (PAGEV)
Education	0	Plastics: "Too valuable to be thrown away" – educational activities (citizen, public administration focused)	Croatia (ндк)
Education	0	Plastika Chronika – bimonthly magazine including articles on marine litter	Greece (AHPI)
Education	0	Plastimobile – plastics recycling awareness exhibit for school children	Belgium (Federplast)
Education	0	Recycling Day SA – annual event to create awareness and promote recycling	South Africa (Plastics SA)
Education	0	Recykling Rejs – canoe rally on river to raise awareness	Poland (PlasticsEurope)
Education	0	Rivers & Mangroves – litter clean up	South Africa (Plastics SA)
Education		Sea is Not a Dump – anti-litter event	Denmark (Plastindustrien)
Education		Seas and Beaches 2012 – summer anti- litter advertising campaign	Italy
Education	0	Skai for Environment – cleanup at beaches and rivers	Greece (AHPI)
Education		Spiagge e Fondali Puliti – beach cleaning (sediment and seabed)	Italy

Education	$\overline{\mathbf{Q}}$	Spiaggia 101 – litter clean up on beaches	Italy
Education	0	Two Oceans Marathon – educational	South Africa
		exhibits and litter clean up	(Plastics SA)
Education	0	Vacances Propres – anti-litter campaign	France (Fed.
		(tourism focused)	Plasturgie)
Education	0	We Clean Greece – initiative to raise	Greece (AHPI)
		awareness and reduce litter	
Education	0	World Oceans Day clean up	South Africa (Plastics SA)
Research	V	As-Made – marine litter study	Belgium (Federplast)
Research	0	BIOCLEAN – European Commission funded study to find biotechnological solutions for degradation of plastics entering marine environment	Europe (PlasticsEurope)
Research	V	Land-sourced Litter in Marine Environment – marine litter study on Baltic, North, Mediterranean Seas	Austria, Germany, Switzerland (IK, KVS, WVK)
Research	0	Marine Debris monitoring – partner with institutions monitoring effects of marine litter on wildlife	South Africa (Plastics SA)
Research	0	Mosa Pura – study of floating plastics in river	The Netherlands (PlasticsEurope)
Research	Ø	Mussels and lugworm study – research on micro-plastics in mussels and lugworms	Belgium, France, The Netherlands (BPF, Elipso, EuPC, Federplast, IK, NRK, PlasticsEurope)
Research	0	Technical & Advisory Panel on Marine Debris – research assistance	South Africa (Plastics SA)
Policy	0	Coalition building – law enforcement cooperation with business	Turkey (PAGEV)
Policy	0	IMSA North Sea Marine Litter program – government, NGOs, industry stakeholders report on strategies to combat marine litter	The Netherlands (PlasticsEurope)
Policy	0	Plastics Waste Management and Pollution Prevention – advocacy on improved waste and anti-pollution strategies	South Africa (Plastics SA)

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Policy	0	Relationship building with regional governments – MOU with Ministry of	United Arab Emirates, Gulf
		Water and Environment in UAE; will	(GPCA)
		expand to other Gulf Cooperation	
		Countries (GCC)	
Policy	0	Zero Plastics to Landfill by 2020 –	Europe
		promoting diversion of plastics to	(PlasticsEurope)
		sustainable uses	
Best Practices	0	Ambassador Program – sharing world's	Gulf (GPCA)
		best practices with Gulf manufacturers	
Best Practices	0	Comuni Ricicloni – A competition that	Italy
		rewards best results in recycling, waste	
		management	
Best Practices	0	Identiplast – European event on	Europe
		recycling/recovery of plastics	(PlasticsEurope)
Best Practices	0	Land-sourced litter prevention initiative –	Austria,
		stakeholders reviewing product design,	Germany,
		behavioral changes, waste infrastructure to	Switzerland (ік,
		identify meaningful steps to prevent litter	KVS)
Best Practices	0	MOLOK-deep collection of waste –	Finland
		innovative waste collection and litter	(Muoviteollisuus ry)
		reduction system	
Best Practices	0	Plastics Innovation Awards – best recycling	Gulf (GPCA)
		or energy saving program	
Best Practices	0	Stash Your Stick – encourage collection of	South Africa
		fishing light sticks for recycling	(Plastics SA)
Recycling/Recovery	0	Agriculture Plastiques et Environnement	France (CPA,
		(APE) – anti-litter and recycling initiative	PlasticsEurope)
/-		(agricultural film focused)	
Recycling/Recovery	0	Clean the GCC – partner with company to	United Arab
		recycle materials from beach clean up	Emirates (GPCA)
Recycling/Recovery		Half-litre plastic bottles: Close the Loop –	The
		program to capture bottles for recycling	Netherlands (NRK)
Recycling/Recovery	0	Industry Waste Management Plan – actions	South Africa
		to increase recycling rates (awaiting	(Plastics SA)
		government approval)	
Recycling/Recovery	0	Landfills away from coast – effort to	Finland
		discontinue use of landfill near shore,	(Muoviteollisuus ry)
		recover energy from plastics	

Recycling/Recovery	0	Nedvang/Plastic Heroes – Government, cities, industry agreement on disposition of packaging waste, increased recycling	The Netherlands (PlasticsEurope)
Recycling/Recovery	0	New plastic packaging waste recovery routes – enhanced recycling bins and responsibilities	Finland (Muoviteollisuus ry)
Recycling/Recovery	1	Passive capturing of floating debris – new marine litter collection technology	Belgium (Federplast)
Recycling/Recovery	0	Recycling at GPCA (plastics association) events	United Arab Emirates (GPCA)
Recycling/Recovery	0	Value chain agreement – plastics life cycle	The Netherlands (NRK, PlasticsEurope)
Recycling/Recovery	V	Waste Free Oceans – marine litter clean up initiative using fishing trawls	Belgium (Federplast)
Recycling/Recovery	0	Waste Free Oceans – marine litter clean up initiative using fishing trawls	Europe (EuPC, EuPR)
Recycling/Recovery	Ø	Waste Free Oceans – marine litter clean up initiative using fishing trawls	France
Recycling/Recovery	0	Waste Free Oceans – marine litter clean up initiative using fishing trawls	Turkey (PAGEV)
Pellet Containment	0	Coastal Pellet Watch Project – quarterly monitoring of pellets and micro-plastics	South Africa (Plastics SA)
Pellet Containment	0	Operation Clean Sweep – pellet containment program [Note: PlasticsEurope represents numerous European plastics associations and will promote OCS to its members]	Denmark, France, Plastics Europe, South Africa, United Kingdom
Pellet Containment	0	Responsible Care Program – Preparing code of Practice document for managing plastic pellets throughout supply chain	Gulf (GPCA)
Pellet Containment	0	Yksikään pelletti ei karaka – anti-litter effort through plastics supply chain	Finland (Muoviteollisuus ry)

Asia, Pacific

Commitment	Statu	ıs Name/Project	Location
Education	V	1 Malaysia Green, 1 Malaysia Clean	Malaysia
		Campaign – citizen education on reducing,	(MPMA)
		reusing, recycling plastics	

Education	0	3Rs Awareness Programme – anti-litter and reduce, reuse, recycling education (student focused)	Malaysia (MPMA)
Education	0	Don't Be a Litterbug – anti-littering campaign	Malaysia (MPMA)
Education	0	Hi-5 ME (Mother Earth) Don't Be a Litterbug – public campaign at malls and public area	Malaysia (MPMA)
Education	\square	Kerteh Beach clean up	Malaysia (MPMA)
Education	Ø	Music video – anti-littering parody of "Gangnam Style" song	Malaysia (MPMA)
Education	0	National Recycling Day	Malaysia (MPMA)
Education	A	National Youth Day 2011 – Reduce, reuse, recycling education	Malaysia (MPMA)
Education	0	Plastics Recyclables Collection Competition – involving 30 schools in Penang State	Malaysia (MPMA)
Research	V	Degradable Plastics Performance – study completed on impact of various degradable plastics in Australian environment	Australia (PACIA)
Research	0	Driftage litter – verify energy recovery methods for marine litter from fishing activities	Japan (JPIF)
Policy	V	1 Malaysia Green, 1 Malaysia Clean Mini Lab – elevate campaign to National Agenda	Malaysia (MPMA)
Policy	V	* Australian Packaging Covenant – co- regulatory model for improved litter mitigation and compliance	Australia (PACIA)
Policy	0	Review of container, packaging recycling law, focused on combination of recycling/recovery	Japan (JPIF)
Best Practices	0	* Australian Packaging Covenant – developing and sharing packaging design improvements	Australia (PACIA)
Best Practices	0	PACIA Design for Sustainability with Plastics (D4S) – advocates life cycle approach starting in packaging design stage	Australia (PACIA)
Best Practices	0	Sustainability in Supply Chains – guidance to drive sustainability	Australia (PACIA)
Best Practices	0	Sustainable Plastics Recovery Guidance – principle-based policy guidance for government, industry, communities	Australia (PACIA)

Recycling/Recovery	0	5R Recycling Campaign	Malaysia (MPMA)
Recycling/Recovery	0	* Australian Packaging Covenant – focus on	Australia (PACIA)
		increased recycling, markets, recovery	
Recycling/Recovery	0	National Recycling Plan – public-private	Malaysia
		partnership to increase plastics recycling	(MPMA)
Recycling/Recovery	0	Plastics recycling survey – national, annual	Australia (PACIA)
Recycling/Recovery	$\overline{\mathbf{A}}$	Recycling expanded polystyrene (EPS) –	Japan (JPIF)
		focused on waste from 2011 tsunami	
Recycling/Recovery	0	Recycling of expanded polystyrene (EPS)	Australia (PACIA)
		across New South Wales	
Recycling/Recovery	0	Recycling system for waste expanded	Japan (JPIF)
		polystyrene (EPS) – improved fish box and	
		fishing floats recycling	
Pellet Containment	•	Minimisation Pellets Losses Programme –	Malaysia
		pellet containment campaign	(MPMA)
Pellet Containment	0	Operation Clean Sweep – pellet	India, Nepal,
		containment program	New Zealand
Pellet Containment	0	Pellet loss awareness program	Japan (JPIF)

Global

Commitment	State	us Name/Project	Location
Education	V	Newsletter – Global Declaration signatories highlighted marine litter projects to raise awareness among policymakers, researchers, others	Global (ACC, Plastics SA, PlasticsEurope)
Research	0	GESAMP research on micro-plastics – support multinational research on occurrence and impact	United Nations (ACC, PlasticsEurope)

The Global Declaration's Countries and Participating Organizations

Countries with Global Declaration Signatories (34)

Argentina, Australia, Austria*, Belgium, Brazil, Bulgaria, Canada, Chile*, China, Costa Rica*, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, India, Italy*, Japan, Malaysia, Mexico, Nepal*, The Netherlands, New Zealand, Philippines, Poland*, Portugal, Romania, South Africa, South Korea, Spain, Sweden, Switzerland, Thailand, Turkey, United Arab Emirates, United Kingdom, United States of America

Participating Plastics Organizations (60)

- 1. ACC, American Chemistry Council, Washington, D.C., United States of America
- 2. AICM, Association of International Chemical Manufacturers, Beijing, China
- AIPMA, All India Plastic Manufacturers Association, Mumbai, India
- 4. AHPI, Association Hellenic Plastics Industries, Athens, Greece
- 5. ANAIP, Spanish Association of Plastics Industry, Madrid, Spain
- 6. ANAPE, Asociación Nacional de Poliestireno Expandido, Madrid, Spain
- 7. ANDIMAT, Asociación Nacional de Fabricantes de Materiales Aislantes, Madrid, Spain
- ANIPAC, Asociación Nacional de Industrias del Plástico, Asociación Civil, Mexico City, Mexico
- 9. APIP, Associacao Portuguesa da Industria de Plasticos, Lisbon, Portugal
- ASECONP, Asociación Española de Fabricantes de Contenedores Plásticos para Residuos Urbanos, Madrid, Spain
- ASEMUPLAST, Asociacíon de Empresarios del sector Plástico de la región de Murcia,
 Spain
- 12. ASEPUR, Asociación Española de empresas de polyuretano, Madrid, Spain
- ASETUB, Asociación Española de fabricantes de tubos y accesoros plasticos, Madrid,
 Spain
- 14. ASOVEN, Asociacíon Ventanas pvc, Madrid, Spain

^{*} These countries conduct marine litter projects and are included in the "Projects Underway – A Snapshot" section. However, they are not included in the country count because they have no Global Declaration signatory.

- 15. ASPAPLAST, Romanian Plastics Processor Employers' Association, Bucharest, Romania
- 16. BAP, Bulgarian Association Polymers, Sofia, Bulgaria
- 17. BPF, British Plastics Federation, London, United Kingdom
- 18. CEP, Centro Español de Plásticos, Madrid, Spain
- 19. Cicloplast, Madrid, Spain
- 20. CIRFS, European Man-Made Fibres Association, Belgium, Brussels
- 21. CPA, Comité Français des Plastiques en Agriculture, Levallois Perret, France
- 22. CPIA, Canadian Plastics Industry Association, Mississauga, Canada
- 23. CPPIA, China Plastics Processing Industry Association, Beijing, China
- 24. ECOPLAS Argentina SA, Buenos Aires, Argentina
- 25. Elipso, Les entreprises de l'emballage plastique et souple, Paris, France
- 26. EPS-IA, EPS Industry Alliance, Crofton, MD, USA
- 27. Essenscia, Belgium Federation for Chemistry, Plastics and Life Sciences, Brussels, Belgium
- 28. EuPC, European Plastics Converter Association, Brussels, Belgium
- 29. EuPR, European Plastics Recyclers, Brussels, Belgium
- 30. EUROMAP, European Plastics and Rubber Machinery, Frankfurt, Germany
- 31. FAMA, Asociación de Fabricantes de Articulos Monouso Reciclables, Madrid, Spain
- 32. Federation de La Plasturgie, French Association of Plastic Converters, Paris, France
- 33. Federplast, Belgian Federation of Plastics Producers and Rubber Products, Brussels, Belgium
- 34. Fetraplast, Federacion Espanola de Transformadores y Manipuladores de Plasticos, Madrid, Spain
- 35. FTI, Federation of Thai Industries, Bangkok, Thailand
- 36. GPCA, Gulf Petrochemicals & Chemicals Association, Dubai, United Arab Emirates
- 37. HGK, Croatian Chamber of Economy, Zagreb, Croatia
- 38. IK Industrievereinigung Kunststoffverpackungen e.V, Bad Homburg V.D.H, Germany
- 39. Instituto do PVC, Sao Paulo, Brazil
- 40. IPI, Indian Plastics Institute, Mumbai, India
- 41. JPIF, The Japan Plastics Industry Federation, Tokyo, Japan
- 42. KPIA, Korea Petrochemical Industry Association, Seoul, South Korea
- 43. KVS, Kunststoff Verband Schweiz, Aarau, Switzerland
- 44. MMSZ, Association of Hungarian Plastics Industry, Budapest, Hungary
- 45. MPMA, Malaysian Plastics Manufacturers Association, Selangor, Malaysia
- 46. Muoviteollisuus ry, Finnish Plastics Industries Federation, Helsinki, Finland
- 47. NRK, Dutch Rubber & Plastics Federation, Leidschendam, The Netherlands

- 48. P&K, Plast och Kemiforetagen, Stockholm, Sweden
- 49. PACIA, Plastics and Chemicals Industries Association, Melbourne, Australia
- 50. PAFA, Packing and Films Association, Nottingham, United Kingdom
- 51. PAGEV, Turkish Plastics Manufacturers Research, Development & Educational Foundation, Istanbul, Turkey
- 52. PlasticsEurope, European Association of Plastics Manufacturers, headquartered in Brussels, Belgium with regional centers in Frankfurt, Germany, London, United Kingdom, Madrid, Spain, Milano, Italy and Paris, France
- 53. Plastics New Zealand, Manukau City, New Zealand
- 54. Plastics | SA, Gauteng, South Africa
- 55. Plastindustrien, Danish Plastics Federation, Copenhagen, Denmark
- 56. Plastivida, Instituto Sócio-Ambiental dos Plásticos, Sao Paulo, Brazil
- 57. PPIA, Philippine Plastics Industry Association, Caloocan City, Philippines
- 58. SPI: The Plastics Industry Trade Association, Washington, D.C., USA
- 59. SPPCR, Association of Plastics Industry of the Czech Republic, Prague, Czech Republic
- 60. WVK, Wirtschaftsvereinigung Kunststoff, Bad Homburg, Germany