

Outcomes of APEC Stakeholder Meeting on Improving Data and Coordination and Developing New Partnerships

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November 2018



**Addressing
Marine Plastics**
A Systemic Approach



Ocean Conservancy and the Trash Free Seas Alliance™ partnered with the United States Agency for International Development (USAID) and the United States Department of State to host a two-day stakeholder meeting, focused on improving data and coordination and developing new partnerships for reducing marine debris in the Asia-Pacific Economic Cooperation (APEC) region. The meeting was held on the margins of the 2018 Our Ocean Conference in Indonesia. Approximately 80 participants from government, academia, non-governmental organizations, multilateral development banks, impact investors, consumer goods companies, resin producers treatment technology providers and others convened in Bali on November 23, 2018.

The workshop built on the 2009 APEC report on [“Understanding the Economic Benefits and Costs of Controlling Marine Debris in the APEC region”](#) and advanced implementation of the [2016 APEC Policy and Practice Recommendations on Overcoming Barriers to Financing Waste Management Systems and Reducing Marine Litter](#). Participants shared information on partnerships and policies to reduce litter leaking into our ocean. The meeting was endorsed by APEC’s Ocean and Fisheries Working Group, Chemical Dialogue, and Virtual Working Group on Marine Debris.

The following summary is based on the final project report submitted to the APEC Secretariat and does not imply endorsement by Ocean Conservancy.

Overall Policy Messages

- There is not a one-size fits all solution, localized solutions will be required.
- Improving waste collection systems is critical.
- There are a range of policy interventions that can be used at various stages including: regulatory instruments (e.g. regarding circularity and recyclability targets); awareness and education campaigns; pricing or fiscal instruments; subsidies or grants for innovation in packaging; recycling technologies; recovery of litter and clean-ups.
- APEC has been a leader on sharing information regarding enabling policies, including: implementing the Policy and Practice recommendations; reducing legislative and regulatory uncertainty; developing the right incentives and risk allocation structures; and maintaining public sector commitment.
- When alternative products are introduced the infrastructure must be in place to handle those materials, to ensure that alternatives do not cause bigger environmental strains

Session Summaries

Session 1: Opening Remarks and Welcome

Min Kang, Project Overseer, U.S. Department of State

Consul General Mark McGovern, U.S. Consulate General Surabaya

Andreas Hutahaeen, Coordinating Ministry of Maritime Affairs, Indonesia

Carrie Thompson, USAID Deputy Assistant Administrator for the Bureau for Economic Growth Education and Environment

- Regional action is necessary to address the challenge of marine litter thus the meeting is aimed at promoting implementation of the 2016 APEC Policy and Practice recommendations on overcoming barriers to financing waste management systems as well as highlight the outcomes of the [2009 APEC marine debris study](#) regarding the costs and benefits of controlling marine debris
- In addition to regional action, local solutions will be required for local circumstances
- Indonesia has a goal to reduce plastic leakage by 70% by 2025 and is a top priority. Some of the barriers they are facing include: unintegrated waste management, limited awareness and cross-sectoral engagement, and lack of standardized detection methodologies
- Improving waste collection is key and highlighting women's leadership in waste separation and collection is integral
- Financing is also a critical component; the U.S. is developing financing tools including: guarantees, loans, and political risk insurance programs.

Session 2: Setting the Scene

Chever Voltmer, Plastics Director, Ocean Conservancy

Dr. Jenna Jambeck, Assistant Professor, University of Georgia

Susan Ruffo, Managing Director, International Initiatives, Ocean Conservancy

Ryan MacFarlane, Coordinator, APEC Virtual Working Group on Marine Debris

- A combination of policy, economics, and governance issues are involved which will require NGOs, academia, citizens, industry, and government working together to address material and product design, consumption, collection, treatment, and leakage issues.
- APEC has done good work on reducing barriers to investment in waste management by focusing on the need to systematically de-risk the waste management asset class; improve collection and sorting; improve the regulatory environment and increase the role of international finance institutions in the solution set
- APEC Finance Ministers have been involved as well through the Asia-Pacific Infrastructure Partnership to identify and address financing barriers

Session 3: Recap of the 2009 Report and Objectives for 2018-2019 Study and Report

Alistair McIlgorm, Professor, University of Wollongong

Karen Raubenheimer, Professor, University of Wollongong

- The 2009 APEC marine debris study sought to improve the awareness amongst governments, communities, and industry within the APEC region of the economic implications of marine debris. The study looked at the shipping, fishing, insurance, and tourism sectors and estimated the cost at \$1.265 billion per year.
- The 2019 report, expected Fall 2019, will provide an updated assessment of the economic impacts of marine debris in APEC economies, identify urban marine debris “hot spots” that may benefit from targeted control interventions, and examine case studies on the technical effectiveness of marine litter devices such as river traps and harbor booms. A cost-benefit analysis of potential solutions and policy recommendations that may lead to reductions in the amount of litter leaking into the ocean will also be included.

Session 4: Individual Reports at Economy and Local Levels

Devi Dwiyanti, Ministry of Marine Affairs and Fisheries, Indonesia

Ryuzo Sugimoto, Director, Global Environment Bureau, Ministry of Environment, Japan

Kevin Kim, International Affairs Specialist, KOEM, Republic of Korea

- In addition to their collaboration with the World Bank to assess [hotspot cities](#), Indonesia is instituting guidelines for coastal waste management, developing public campaigns and awareness, and increasing technical support and research to reduce marine debris.
- Japan is developing regional plans, looking to harmonize microplastic monitoring methodologies, and supporting local governments in coastal cleanups through \$30 million in funding. Japan is focusing on reducing land-based sources of marine litter through proper waste management, promoting 3R (reduce, reuse, recycle), sustainable consumption and production, and circular economy. Japan will host an environment/energy ministerial meeting under the G20 in 2019 and will continue to cooperate with Southeast Asian economies on waste management and ocean monitoring.
- Through its National Marine Debris Management Plan covering 2014 to 2018, The Republic of Korea is focused on improving the recycling system for marine waste resources, methods for increasing the collection rate of sea-based litter, developing local capabilities, and expanding research on microplastics. ROK continues to manage the APEC capacity building program, now in its second phase, and is encouraging the development of APEC Marine Debris Management Guidelines to incorporate aspects of policy development, capacity building, research and innovation, as well as financing and private sector engagement.

Session 5: The Need for New Financing Measures

Chever Voltmer, Plastics Director, Ocean Conservancy

Delphine Arri, Senior Environmental Engineer, World Bank

Rob Kaplan, Founder and CEO, Circulate Capital

Stew Harris, Director, Marine and Environmental Stewardship, World Plastics Council

Robert Allen, Head of APAC, FullCycle

- The World Bank launched a multi-donor trust fund called PROBLUE that was designed to support the Blue Economy. The role of development finance institutions include helping countries establish the policy environment and infrastructure to help reduce marine litter (e.g. waste management); support for knowledge exchange platforms; technical assistance; and financing including helping to mobilize private sector financing and sovereign bonds. Multiple solutions are possible, policy changes can be immediate, solid waste management is more medium term and innovation is typically longer term. The solutions may require country specific approaches.
- The rationale for establishing Circulate Capital was to help address the financing gap between the small start-ups and the large scale investments needed for waste management infrastructure and value chain development. Through their investments Circulate Capital looks to help convert waste plastic to revenue. Philanthropic capital is used at the start-up stage and combined with catalytic capital to help take the innovations to scale. The work will take a suite of solutions including public policy, corporate commitment, financial incentives, and changes in behavior.
- Plastics provide significant benefits to society and are critical to achieving the sustainable development goals but plastics in the environment are unacceptable. Industry is committed to developing partnerships; contributing to research; improving the recyclability, recovery, and efficiency of plastic; providing catalytic capital to de-risk investments from other sources; and working to develop pilot projects to accelerate the development of waste management infrastructure where it is needed. Implementing the Policy and Practice recommendations, reducing legislative and regulatory uncertainty, developing the right incentives and risk allocation structures and maintaining public sector commitment are important to creating an enabling environment to develop solutions.
- Waste is estimated to be a \$220 Billion/year market with untapped potential. In developed countries there are relatively high disposal fees and relatively inexpensive power, while in developing countries there is relatively low disposal fees and relatively expensive power. Direct investment in companies and using blockchain technology can accelerate participation and impact.

Session 6: Creating Enabling Environments for Technology and Innovation

Simon Baldwin, Director, SecondMuse

Sumangali Krishnan, Head of Research, Gone Adventurin'

Cloe Ragot, Policy Advisor, Plastic Energy

Febriadi Pratama, Co-founder, Gringgo

- The chemical recycling technology sector continues to grow and is seen as a complement to mechanical recycling particularly for low value, contaminated plastics. Some of the policy steps that can be taken to incentivize groups these technologies include establishing recycling targets that include chemical recycling; including chemical recycling in renewable energy directives; creating markets to use recycled outputs, facilitating land concessions; enabling or incentivizing the diversion of waste from landfills where appropriate.
- Using technology to help waste collectors by providing information including prices for scrap materials, can help improve collection rates. It can also help organize operations and reduce inefficiencies (e.g. overlapping collectors) to make the collectors more productive. A pilot project in Denpasar has resulted in more litter being collected and higher incomes for collectors resulting in an 80% increase in plastic recycling.

Session 7: Good Governance for Improving Solid Waste Management

Steve Morrison, US National Oceanic and Atmospheric Administration

Guilberto Borongan, Senior Program Specialist Regional Resource Center for Asia and the Pacific, Asian Institute of Technology

John Rey Tiangco, Mayor of Navotas, The Philippines

Crispian Lao, Vice Chairman, National Solid Waste Management Commission, The Philippines

Andrew Horan, International Environmental Protection Specialist, US EPA

Widita Vidyaningrum, Solid Waste Specialist & Consultant, USAID Municipal Waste Recycling Program

Nalim Mannapperuma, Director, Waste Management Authority, Sri Lanka

- The U.S. has established the Interagency Marine Debris Coordinating Committee (IMDCC) to coordinate responses, research priorities, monitoring techniques, education programs and regulatory actions. The group is chaired by National Oceanic and Atmospheric Administration; vice chaired by the U.S. Environmental Protection Agency and includes the U.S. Coast Guard, Department of State, U.S. Navy, Department of the Interior, Department of Justice and others. Recent areas of focus include: evaluating the cost of marine debris, emergency response, impacts of opening arctic sea routes, and increasing coordination of international engagement. Some of the elements that enable its success include: (1) legislative mandate to participate; (2) all relevant agencies are present at meetings; (3) reporting mechanism to the legislative body; (4) mechanism to identify new issues and opportunities; (5) required to have regular meetings.

- The Philippines passed the Solid Waste Management Act, which established a commission with government, private sector, and NGO participation. A challenge is that some of the key players are still missing and sometimes information is not disseminated widely enough. There is no mandatory fund and so waste management can depend on the priorities of local governments. They are currently looking at ways to increase income for informal sector and transition them to the formal sector. There is interest in increasing investment from the private sector but a stable feedstock is needed and a lack of a definition for waste is impeding investment
- In Sri Lanka, waste management is overseen by the provincial authority and 85% of waste is collected by the local government. The public is supporting of paying for waste disposal and policies are changing to support the improvement and collection of waste.

Session 8: Public Private Partnerships

Clare Romanik, Senior Urban Specialist, USAID

Chandrarathna Vithanage, Senior Assistant Secretary General, Ceylon Chamber of Commerce

Mignonne Maramis, Secretary General, PRAISE

Feri Prihantoro, Yayasan Bina karta Lestari, Bintari

Lalith Wickramaratne, Deputy Municipal Commissioner (Engineering Services), Colombo Municipal Council

Ly Nguyen, Executive Director, Center for Environment and Community Research (CECR)

- USAID's [Municipal Waste Recycling Program](#) seeks to fund organizations that can implement municipal waste recycling solutions with a focus on reducing plastics pollution of the marine environment in Indonesia, the Philippines, Sri Lanka and Vietnam. The current amount of funding is \$3.5 million though that will increase to over \$5 million in grants. Thus far 20 projects have been funded.
- The Ceylon Chamber of Commerce described how initial attempts to ban and impose a tax on plastics were met with resistance however after meeting with relevant stakeholders they were able to develop an evidence-based approach that all stakeholders could agree with and ultimately the private sector supported their policy.
- The mission of the Packaging and Recycling Association for Indonesia for Sustainable Environment (PRAISE) to increase awareness that each stakeholder is responsible for waste management in an integrated way; to strengthen the capacity of packaging waste management; and to enlist government, private and public sectors to take part in reducing the impact of packaging waste on the environment. The group focuses on advocacy, research and education, and partnerships and collaboration.
- Bintari is an Indonesian NGO focused on developing sustainable communities. They are working with Indofood to improve collection of packaging waste. Households in their

service area create limited amounts of packaging waste which isn't economical to transport. Working together they addressed some of the efficiency and cost issues in a way that made sense for the local community.

- The city of Colombo has outsourced half of waste management services to the private sector and half to the public sector. Staff salaries are reimbursed by the central government. Equipment is from local revenues (property tax and other incomes, parking meters) and covers 79% of budget for solid waste management. The private sector is mostly involved in recycling.
- In Vietnam, a fee per family (\$2) or per capita (\$0.30) fee is charged on a monthly basis which covers part of the waste management costs, government budget covers the rest. The Vietnam Administration of Sea and Island (VASI) under the Ministry of Environment is developing a National Action Plan on Plastic Waste Management with the first consultation taking place in December and is scheduled to be finalized in the second quarter of 2019.

Session 9: Inclusion in Waste Recycling Sectors

Sonia Mendoza, Chairman, Mother Earth Foundation

Nguyen Thi Hoai Linh, Country Manager, Environmental Development Action in the Third World (ENDA) Viet Nam

Swietenia Lestari, Divers Clean Action

Hery Yusamandra, Misool Foundation, Indonesia

- In the Philippines, simple material recovery facilities have been established which have helped to create jobs and increase compliance. Educational programs have reduced waste management costs (e.g. reduced the number of city trucks needed to collect waste) and reduced waste going to landfills.
- Similar to other economies in the region, Vietnam underscores the critical need to support informal waste collectors, connect independent waste collectors (IWC) with local governments, develop incentives for IWCs (healthcare and incentives for collecting low-value plastic) and the critical role of women in waste management. It is difficult for IWCs to access social protections (e.g. health insurance) and thus it's often necessary to organize into cooperatives and unions.
- The Misool Foundation is leading an effort to create waste banks in West Papua, Indonesia. They currently have 3,743 participants, of which approximately 70% are women. The Misool waste banks will increase the amount of plastic being recycled from 85 metric tons to an estimated 175 metric tons in 2018.

Session 10: Breakout Sessions

Parallel sessions on public-private partnerships and supporting local governments and increasing coordination for improving solid waste management; inclusion in waste recycling (gender, youth, and civil society groups); platforms for technology and innovation; and data collection for informing policy were held. A number of issues were discussed including:

- Gender issues and how to empower women and enable their participation at the household level and in waste collection and processing
- The importance of governments establishing enabling policy environments and infrastructure to support innovation
- Technologies (collection, segregation, treatment as well as those that can help influence behavior and make products more efficient and recyclable)
- More data is needed to inform strong policymaking, including on the role of rivers and the impacts of marine litter; methodologies for collection and use of data needs to be harmonized