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Introduction

Good afternoon Chairman Graham, Vice Chairman Leahy, and other esteemed Members of the Subcommittee on State, Foreign Operations, and Related Programs. It is a pleasure to be here with you today and I very much appreciate the opportunity to discuss the State Department's role in addressing the increasingly important issue of marine debris. Even during this time of incredible uncertainty, we continue to address this complex challenge around the world. The State Department works closely with our interagency partners to leverage our combined resources and expertise in our global marine debris engagement.

Marine debris is a global problem with global consequences. Marine debris originates from mismanaged waste leaking into the environment, usually starting on land and then entering the ocean. The American people see this on the coasts of the Atlantic, Pacific, and Arctic Oceans, and on the shores of lakes and rivers. Reliable estimates put the direct economic impact of marine debris on Asia Pacific Economic Cooperation Forum (APEC) economies (including the United States) at over $10 billion annually. A component of the tourism sector is hit particularly hard by lost revenue from tourists who choose to spend their vacations away from polluted marine environments, forcing local, state, and national governments to spend millions of dollars cleaning beaches. Marine debris also harms marine ecosystems and fishing industries through economic losses due to abandoned or lost fishing gear, commonly referred to as "ghost gear." Ghost gear continues to capture fish and other marine life for as long as it drifts, depleting seafood stocks and ultimately reducing regional food security. Floating debris also poses major navigational hazards for ocean-going vessels, for example by entangling ship drives.

Though marine debris includes various materials, such as glass, metal, cloth, and rubber, one of the most common materials comprising marine debris is plastic. Current estimates indicate that there are more than 150 million tons of plastic waste in the ocean with another 8 million tons added each year; that works out to a full garbage truck's worth of plastic entering the ocean every minute. By 2050, there could be more plastic than fish (by weight) in the ocean.

Plastics are a vital societal asset and tradable commodity in the global economy. Their durability and non-biodegradable properties that are so valuable for food safety and other applications, can also lead to plastic accumulation on land and in the marine environment when plastic waste is not managed in an environmentally sound manner. Plastic can take hundreds of years to decompose naturally, if it decomposes at all. In many cases, plastic degrades into smaller harmful "micro and nano-plastic" fragments that are impossible to retrieve, but which enter the food chain when consumed by sea life. Moreover, micro and nano-plastic are transported across the globe, including by ocean currents and jet streams, and can now be found from the deepest parts of our oceans to the ice and snow of our highest mountains.

Marine debris does not respect international boundaries and the problem cannot be solved by one country alone. Combatting marine debris, including marine plastic litter, requires collaborative efforts from all stakeholders, public and private. We welcome and actively support efforts by all U.S. stakeholders to work with governments and other actors globally to address this problem.

Global Engagement

Marine debris is a far-reaching issue that impacts environmental and food security, economic stability, resource management, and potentially human health. The size and complexity of the challenge is immense, especially in developing economies that may not have the appropriate infrastructure or policy apparatus to take effective action. Our international approach focuses on promoting environmentally sound waste management, supporting recycling and recycling markets, promoting sustainable materials management, encouraging innovation to prevent mismanaged waste from entering the environment, and supporting debris removal efforts. The United States has a wide array of technology and expertise to assist countries in improving their waste management and recycling systems. We are working closely with colleagues from the Environmental Protection Agency, National Science Foundation and the Department of Energy to highlight U.S.

expertise and innovation to combat marine debris through new waste management technologies, materials research, and other cutting-edge solutions. We also engage with countries to understand the scale and scope of the problem, supporting efforts to combat land and sea-based sources of marine debris, promoting government and stakeholder outreach to positively influence cultural and societal norms, encouraging a more sustainable approach to plastic use and disposal, and fostering dialogue to expand research into more recyclable materials and alternatives. We are dedicated to supporting and highlighting the best available scientific information and data collection methods necessary to inform policy makers and private industry about the economic, environmental, and health implications of marine debris and identify pollution hot spots.
The People's Republic of China (PRC) is the biggest offender, responsible for 30% of waste, far more than any other country. Our approach to the PRC is to hold it accountable for addressing its own waste management issues, both land-based and sea-based, and to do so with their own resources. Prioritizing our efforts on improving waste management infrastructure and practices in other major source countries will yield results, but cultural norms also need to shift to effect permanent change and solve the longer-term issue. Increased efforts to curb ghost gear, enhance cross-sectoral collaboration (e.g., connecting financial institutions with innovators and entrepreneurs), and promote innovation throughout product lifecycles will also aid in solving the marine debris and plastic pollution problem.

As you know, the bipartisan Save our Seas Act of 2018 (P.L. 115-265) directed the State Department to take a comprehensive approach to its international engagement on marine debris. The Department of State, through the Bureau of Oceans and International Environmental and Scientific Affairs, is working with interagency, private sector, academic, industry, and non-governmental stakeholders to engage multilaterally, regionally, and bilaterally with partners around the world to address marine debris.

The Department of State works with interagency partners in the EPA, NOAA, USAID, NSF, DOC, DOE, USCG, and USTR to bring together diverse international stakeholders and underscore the importance of global cooperation – from the public and private sectors – to prevent and reduce marine debris. The United Nations has increased its focus on marine debris in recent years as we have worked extensively to elevate the issue in bilateral and multilateral fora. In June 2012, UN Environment Programme (UNEP) launched the Global Partnership on Marine Litter. Since then, nations, including the United States, have worked in concert to prevent and reduce marine debris worldwide, while mitigating its impact on economies and human and animal health. The Department of State leads

interagency engagement as contributing members of the UN Environment Program's Ad Hoc Open-Ended Expert Group on Marine Litter and Microplastics where we promote the United States' holistic vision for combatting marine debris. The outputs from the Expert Group will provide key inputs to policy discussions at the fifth session of the United Nations Environment Assembly, planned for February 2021.

We have also advocated for solution that recognize the important role of the private sector as a key stakeholder that can contribute towards pragmatic solutions. We continue to engage with private sector-led initiatives, including the Alliance to End Plastic Waste and Circulate Capital, which are mobilizing billions of dollars to assist countries to improve their waste management and recycling systems and to create a value chain for recycled plastics.

We also work in the G7 and G20 fora to tackle marine debris. In the G7, we promote better coordination of various country-level initiatives supporting additional research on microplastics and their impact on human health, improved scientific monitoring, and advocating for better use of resources to recover, reduce, recycle and repurpose waste. In 2019 at the G20 Leaders meeting, we worked closely with Japan's G20 Presidency to help develop the Osaka Blue Ocean Vision 2050, which aims to reduce additional marine plastic litter pollution to zero by 2050. We also supported the development and adoption of the G20 Implementation Framework for Actions on Marine Plastic Litter and the G20 Resource Efficiency Dialogue aimed at increasing mutual understanding regarding activities and best practices on marine plastic litter.

We also support working through the existing Regional Seas Programs and other regional initiatives to address marine debris and marine plastic litter. The United States is a member of two Regional Seas Programs that engage neighboring countries to collaborate on preventing pollution from entering the ocean. Through the Caribbean Environment Program, created in connection with the Cartagena Convention, we led an effort to make marine debris reduction a priority. We worked jointly with EPA launching an initiative in partnership with UN Environment Programme and the Peace Corps to develop community-based trash reduction projects and create effective solid waste management policies. Projects in Jamaica and Panama helped those countries to advance their efforts to keep waste from entering the Caribbean.

Our work in APEC has yielded significant public and private action. For example, following the success of several workshops in meetings held in the Asia-Pacific

region over the last several years, the Department of State and our interagency partners at NOAA spearheaded the establishment of a marine debris sub-fund with nearly a million dollars in seed funding for projects to combat land-based sources of marine debris in the APEC region. The estimate of direct economic costs that I cited earlier – exceeding $10 billion annually in the APEC region alone – is from a report[1] that the United States commissioned to enhance regional and global understanding of the true cost of the problem. We were also successful in leading an interagency effort with the Republic of Korea to establish an APEC Roadmap on Marine Debris that now serves as the guiding document for the organization's efforts.

In the Pacific Islands, we provide financial and technical support under the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, also known as the Noumea Convention. The Department of State is partnering with the U.S. Coast Guard to enhance Pacific Islands' capacity to combat marine pollution. Our work has also extended to the Arctic Council, OECD, the IMO, the ASEAN Regional Forum, Regional Fisheries Management Organizations, and a wide array of other international entities now tasked with working to address marine debris.

The United States leadership on addressing marine debris, specifically ghost gear, is also exemplified by our recent joining of the *Global Ghost Gear Initiative* (GGGI). GGGI is the preeminent international initiative working to address the problem of ghost gear and convenes a broad coalition of members, including fifteen other countries and 13 U.S.-based fishing and seafood companies. While our membership with GGGI only became official a few weeks ago our close collaboration with GGGI and it's parent organization, the Ocean Conservancy, date back years as evident by ongoing Department of State grants in the Indo-Pacific and Caribbean regions.

Supporting U.S. Economic Interests

In international fora, the Department has seen increasing calls for stopgap solutions to global waste issues, including implementation of bans on single-use plastics, support for negotiating a legally binding international agreement on plastics, and the development of measures that inhibit the global market for recycled goods. Barriers, bans, and trade restrictions can reduce recycling by lowering the value of

[1] Report available at: https://www.apec.org/Publications/2020/03/Update-of-2009-APEC-Report-on-Economic-Costs-of-Marine-Debris-to-APEC-Economies

commodities, and often do not consider negative environmental and economic trade-offs associated with alternative materials.

Beginning in 2018, the PRC implemented its National Sword policy, banning the import of 24 types of solid waste and scrap material, including a variety of plastics and unsorted mixed papers. The policy disrupted a number of the waste management and recycling streams across the United States and elsewhere that were previously structured for export to China. These disruptions in the global movement of recycling commodities continues to reduce market prices and alter trade relationships and markets. There are also concerns that the National Sword Policy and similar restrictions will divert waste to countries, in particular developing countries in Southeast Asia, with comparatively weaker waste management systems and high rates of waste leaking into the environment. More recently, in May 2019, the Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal amended the Convention to make most non-hazardous plastic waste and scrap exports subject to the prior informed consent of the importing country. Beginning on January 1, 2021, the new plastic waste amendments will prohibit the 187 Basel parties from trading most plastic waste and scrap with the United States, a non-Party, except under the terms of a separate agreement or arrangement with us that provides for environmentally sound management. We anticipate these amendments will significantly disrupt the global movement of plastic scrap and potentially cut off U.S. exports and imports of certain non-hazardous plastic scrap.

This challenge and the broader issue of tackling marine debris presents opportunities for U.S. businesses. Plastic and other materials that are recovered can generally be recycled and often traded as recyclable commodities, creating sustainable supply chains and green jobs across a diverse set of industrial sectors if we work together to find the solutions.In 2018, the U.S. solid waste management and recycling industry generated an estimated $100 billion in revenue. The global waste management market size is expected to reach $530 billion by 2025, with the Asia-Pacific region expected to see the highest compound annual growth rate, at about 6 percent during the period from 2018 to 2025. Expanding overseas markets for U.S. waste management and recycling services and technologies would yield benefits to American companies and countries with underdeveloped waste management infrastructure; a win all around. Our Embassies are vital in helping U.S. businesses navigate ever-changing national and local conditions, including market-enabling environmental policies and regulatory developments, and identifying potential opportunities for U.S. waste and recycling firms, and the State

Department continues to connect U.S. businesses with our Embassies to provide on-the-ground advice and information.

Programmatic Efforts

We are also working bilaterally with key source countries. For example, the Department of State is working closely with the interagency and civil society partners to support the Indonesian government's recently stated ambitious goal of reducing its marine litter by 70 percent by 2025. As part of that effort, we sponsored a renowned American marine debris expert, Dr. Jenna Jambeck of the University of Georgia, as a U.S. Embassy Speaker. With Embassy support, Dr. Jambeck met with students, academia, civil society, and government officials in South Africa, Japan, Vietnam, Philippines, China, and Indonesia. The Department of State has also developed an outreach campaign called Face the Waste to provide educational materials on environmentally sound waste management techniques and technologies and highlight the expertise of agencies like EPA, USAID, the Department of Commerce, USTR, and NOAA. In addition, U.S. Embassy Public Diplomacy sections regularly conduct outreach events to engage and educate the host country's public on marine debris, as well as inform exporters of U.S. environmental technology and services about opportunities in foreign countries.

Over the past five years, the Department of State has developed and managed over $5.8 million dollars in grants to combat marine debris and plastic pollution. We provided a nearly one million-dollar grant to the Ocean Conservancy to aid the implementation of Vietnam's National Action Plan on Marine Debris, to support the informal waste management sector, and advance additional research into waste pathways into the marine environment. We also worked with local NGOs in Vietnam to reduce marine debris via social change in Ly Son Island. The project established a local steering committee on environmental protection, conducted training with community leaders, engaged in coastal clean-ups, and trained households on the proper methods for waste sorting and recycling and provided reusable shopping bags. We continue to support the Ocean Conservancy's annual International Coastal Clean-up activities. We regularly highlight and promote this event, aimed at building awareness and gathering data around the impact of marine debris on coastlines. Our embassies also sponsor coastal clean-ups on Earth Day around the world and participate in the annual International Coastal Clean-up serving to highlight U.S. commitment to the issue.

Our grant work has a global reach to conduct coastal clean-up activities and host community outreach events. We also collaborate with industry to develop and

implement alternative materials for fish boxes tested by the fishing industry to reduce polystyrene marine debris. In Panama and Costa Rica, our NGO partner provided technical assistance to six coastal cities that reduced waste, trained municipal officers, developed local government solid waste management plans, and instituted a public information plan to incentivize actions that reduce marine debris. To date, that campaign has reached roughly 1.9 million people. Grants we implemented in Indonesia and the Philippines aim to reduce marine debris by building effective waste management and plastic recycling economies and reduce land-based leakage of plastic waste through engagement with local governments in over 80 cities to promote zero-waste systems and product redesign.

Other grants have included work to curb the prevalence of ghost gear in Peru's coastal waters by collecting and recycling end-of-life fishing gear. This project has managed to collect more than 220 tons of end of life fishing nets for recycling annually. In Jamaica and Grenada, another grant program incentivizes good fisheries management practices through an insurance product and developed innovative fishing gear and gear marking technologies to prevent ghost gear from occurring while facilitating gear recovery.

Currently, the Department is developing a program to support municipalities in West Africa to improve environmentally sound management of plastic waste and encourage innovation along the plastic supply chain to reduce plastic waste leakage into the environment.

As has already been shown, our embassies have been engaged on the issue as well. Embassy Green Teams develop and support environmentally friendly activities ranging from promoting the use of reusable water bottles and packaging at the embassy to working with host country partners to reduce local waste generation. For example, Embassy Bangkok worked closely with the hospitality industry in Phuket, Thailand to establish a successful waste reduction program in hotels by promoting reusable container use.

We need innovation in materials and design, changes in behavior, and significant improvements in waste management systems to reduce the amount of marine debris and plastic pollution. These solutions should also vary according to regional and national contexts. For example, work by manufacturers on automated, high-throughput sorting technologies to efficiently categorize plastic materials by physical and chemical characteristics is necessary for nations with well-established material recovery facilities. But this solution sometimes does not translate to developing nations where many consumers are forced to use single-use plastic

sachets of daily goods like soap and detergent, simply because they cannot afford to buy larger containers. We need different solutions to fit the local realities.

With that in mind, we plan to continue efforts to work in major source countries to combat land-based sources of marine debris via development of improved waste management infrastructure, support recycling and markets for recycled material, encourage innovative product lifecycle design, promote debris removal, and promote behavior change, including through demonstration projects, workshops, and public awareness campaigns. We also plan to combat sea-based sources of marine debris, particularly ghost gear, by promoting gear-making guidelines and workshops to share best practices with key target countries. We will also support the contributions of our interagency partners to international scientific initiatives, studying the environmental and economic impact of marine debris globally through monitoring programs, micro- and nano-plastics research, assessments of land-based sources, as well as workshops and scientific exchanges with U.S. researchers to promote U.S. expertise, methodologies, and technologies.

Conclusion

These are just a few examples of the State Department's wide-ranging international engagement on marine debris, working together with our interagency colleagues, private sector stakeholders, and international partners. As the Save Our Seas Act of 2018 recognizes, addressing marine debris is impossible without close coordination both domestically and internationally. American leadership is critical to advancing the global effort to combat marine debris by focusing on effective solutions that are grounded in innovation, environmentally sound waste management, sustainable materials management, and support for recycling and recycling markets.

Congress has been an invaluable partner in our efforts and we greatly appreciate your support and interest in this critical topic. Thank you again for the opportunity to appear before you today and I would be pleased to answer any questions that you might have.