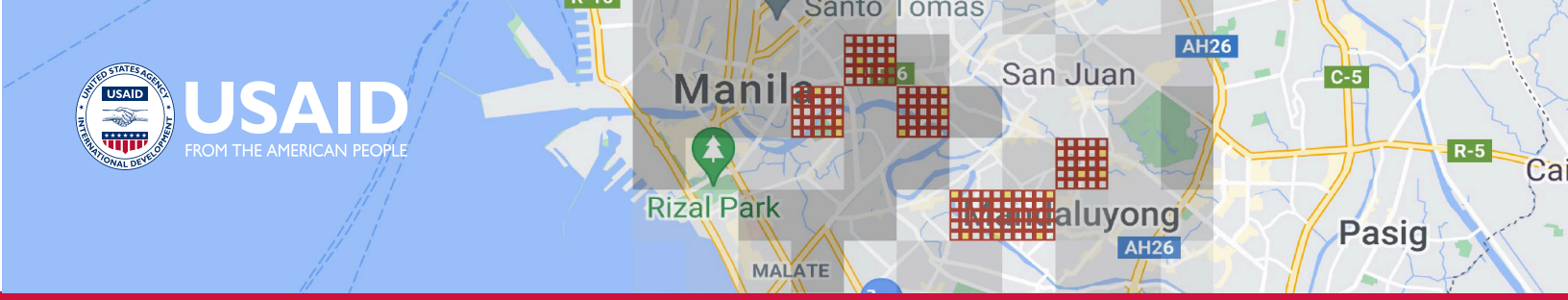

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COLLECTING BETTER DATA TO MANAGE PLASTIC WASTE IN MANILA BAY

Manila Bay is the most economically and politically significant body of water in the Philippines. It is also the most polluted.[1] The bay straddles highly developed, densely populated regions where more than 13 million people reside. Three river systems empty into Manila Bay, carrying large volumes of untreated sewage and solid waste, harming fishing and recreation industries. The Philippines Department of Environment and Natural Resources' Environmental Management Bureau began rehabilitating Manila Bay in 2019, with support from the Metropolitan Manila Development Agency, Pasig River Rehabilitation Commission, and National Solid Waste Management Commission. USAID, through a Municipal Waste Recycling Program (MWRP) grant, funded the University of Georgia (UGA) New Materials Institute's Center for Circular Materials Management, led by Dr. Jenna Jambeck, to help the government collect better data to understand plastic waste leakage into Manila Bay.

HIGHLIGHTS TO DATE

- **27 sample sites tracked**, including plastic consumption, product design and use, waste collection gaps, and plastic leakage into the environment.
- **UGA's Marine Debris Tracker, an Apple recommended app**, used to produce four studies on waste patterns in Manila Bay.

APPLYING A CIRCULARITY ASSESSMENT OF LAND-BASED PLASTIC LEAKAGE

Partnering with its local subgrantee Save Philippine Seas, UGA implemented its Circularity Assessment Protocol (CAP) in Metro Manila to collect community-level data on plastic usage. The team used the CAP to track debris patterns in 27 sites in Quezon City, Manila City, and Mandaluyong City, all located in Metro Manila and the Manila Bay watershed area. The survey data identified local plastic waste flows (e.g., the types and quantities of plastic waste, waste patterns among areas with varying population densities, and the origins of the plastic). These data are enabling authorities to make decisions on single-use plastic regulations, informing the private sector on the design/utilization of plastic material to enable its reuse, and encouraging urban communities to increase recycling to reduce land-based plastic waste leakage into Manila Bay. UGA provided technical assistance to another USAID MWRP grantee, Ecological Waste Coalition (EWC) of the Philippines, to support production of four technical studies on Manila Bay using the data collected by the CAP.

ANALYZING SOCIAL MEDIA SENTIMENT TO HELP SAVE THE BAY

In addition to the CAP findings, UGA conducted an in-depth social media analysis documenting post patterns on Twitter, Facebook, and Instagram. The analysis tracked conversations linked to key hashtags like #BreakFreeFromPlastic and #ClimateJustice to determine attitudes towards plastic pollution. Metro Manila city governments and communities used the analysis, which revealed the public's concern for ocean plastic pollution, to encourage the national government to invest in improvements in environmental infrastructure. Understanding public concerns expressed on social media helps shape future action to save the bay.

[1] *Jambeck, J.R. et al. (2015). Plastic waste inputs from land into the ocean. Science 347(6223), 768-771. doi: 10.1126/science.1260352.*

PROJECT: A Circular Assessment Protocol to Address Plastics Waste in Manila Bay – Targeted Grant | **DURATION:** October 1, 2019 – July 31, 2021 | **IMPLEMENTER:** University of Georgia (UGA) | **LOCATION:** Manila Bay, Philippines | **BUDGET:** $100,000