



MAPPING OF SOURCES AND CONCENTRATION OF PLASTIC WASTE GENERATION IN THE IMUS RIVER WATERSHED

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This study mapped the sources and concentration of plastic waste in the Imus River watershed, which lies in the Philippine province of Cavite. It aimed to identify different origin points for plastic waste, and determine the magnitude of plastic waste generation within the watershed.

Data relating to plastic waste generation was obtained by analyzing the 10-year Solid Waste Management (SWM) plans of the seven cities and municipalities located within the boundaries of the river watershed: Tagaytay, Silang, Amadeo, Dasmariñas, Imus, Bacoor, and Kawit.



A trash boom helps trap and collect floating riverine debris in Bacoor.

(Gregg Yan / PRF)

Remote sensing technology was used to identify the coordinates of different potential point sources. Google Imagery was used to prepare base maps which were imported and georeferenced in ArcMap.

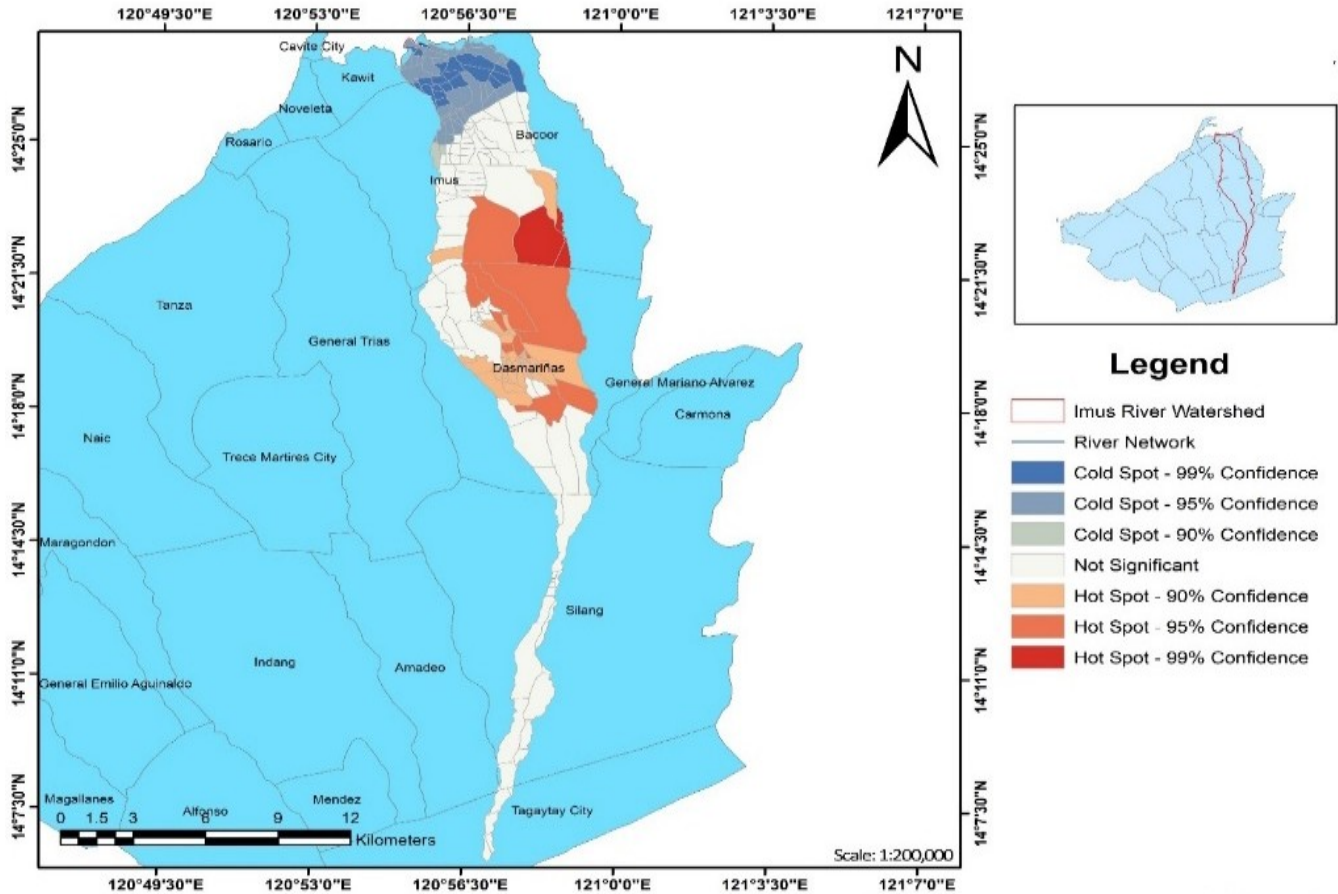
A seven-day waste characterization study in three selected barangays was conducted to determine the average amount of plastic waste generated per household.

The study covered **222 barangays** situated within the watershed, hosting a population of **1,351,057 people**.

The major source of waste production was **households, followed by commercial, institutional, and industrial establishments**. A total of 778 commercial, institutional, and industrial establishments were identified, while 54 waste storage facilities were found within the watershed.

An average of 0.17 Kg/day per household of plastics were generated in the watershed, or 0.05 Kg/day per capita. An intensified clustering of high plastic waste generating barangays was identified in Dasmariñas. Various tributaries of the Imus River converge in the area, meaning it is likely an important zone for plastic waste leakage into the river system.

A clustering of low plastic waste generating barangays was identified in parts of Imus, Kawit, and Bacoor. These coldspots should not be ignored, as increasing plastic waste generation in this area could rapidly transform this region into a hotspot, due to its intensified population clustering.



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Source:
PhirGIS.org
National Mapping and Resource Information Authority
Google Earth Pro



Properly identifying pollution hotspots can better help public and private sector players to manage waste along the Imus River. (PRF)

ABOUT PROJECT ASEANO

East Asian countries produce over half of our world's marine plastic pollution. Rivers act like conveyor belts to discharge waste to the oceans.

To stem this flow, Project ASEANO is developing practical and sustainable measures to reduce the impacts of plastic pollution and their implications on both socioeconomic development and the environment.

The ASEAN – Norway local capacity development project is a three year project that aims to enhance local capacity on monitoring and understanding the source, flow and nature of riverine waste. It aims to strengthen local enforcement and provide practical solutions to tackle problems at the local level.

The project uses an integrated solid waste management approach and focuses on the city and municipal level through two pilot sites: the Citarum River in Indonesia and the Imus River in the Philippines. For more information, Email PEMSEA ASEANO Project Manager **Thomas Bell** at TBell@pemsea.org or download the **Full Study** at pemsea.org.