





Chiapa de Corzo Litter Snapshot

The City of Chiapa de Corzo (Chiapas, Mexico) is located on the shore of the Grijalva River, upstream of the Sumidero Canyon National Park. The Chiquito River meanders through Chiapa de Corzo before it flows into the Grijalva River. In 2023, litter traps were installed and maintained at three locations in the Chiquito River over a period of five months. These in-stream devices intercepted floating litter and prevented it from flowing farther downstream. The goal? To stop litter in its tracks and raise public awareness about the flow of litter downstream to the ocean.

Marine Litter?

But Chiapa de Corzo Is Far from the Ocean:

Most litter found in the ocean originates on land. In other words, marine litter is mostly land-based litter—everyday household or take-out items that travel by wind and water before reaching their last stop, the ocean. In the case of Chiapa de Corzo, local litter can enter small rivers before flowing into the Grijalva River and catching a ride downstream to the Gulf of Mexico.

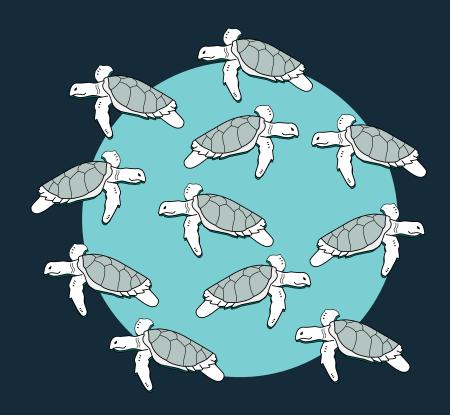


Trash capture devices, including the litter boom pictured above, were installed at three sites on the Rio Chiquito in Chiapa de Corzo at: Los Manguitos, Super Che, and Domingo Ruiz. *Source*: Osprey Initiative



of trash were removed from the Chiquito River and surrounding area in Chiapa de Corzo over the course of the five-month pilot project in 2023.

To put that in perspective, that is the weight of



more than adult Kemp's ridley sea turtles

The **Kemp's ridley sea turtle** (*Lepidochelys kempii*) is an endangered species found primarily in the Gulf of Mexico. According to NOAA, these turtles can mistake marine litter for food and ingest it.



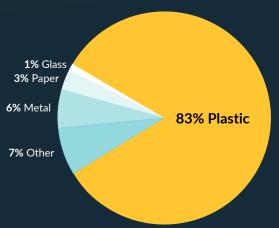
What did we find?

Let's dig into the details.

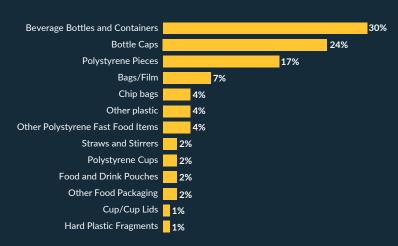
The US Environmental Protection Agency's (EPA's) <u>Escaped Trash Assessment Protocol</u> (ETAP) was used to characterize the litter collected in the traps. It helps us gain a better understanding of the types of litter prevalent in our ecosystems and how best to reduce their potential impacts. Using an existing protocol also helps ensure that the data collected are reliable and comparable, and can be integrated into larger analyses to get a better picture of the issue.

Chiapa de Corzo, Chiapas, Litter Snapshot





Plastic Items Breakdown



The Plastic Pollution Problem

As you can see, most of the litter found in the local stream is made up of plastic, and plastic is very persistent: it doesn't just decompose and disappear—instead, it travels. The journey of marine litter begins every time you drop trash on the ground, throw it out of a car window, or toss it off a boat. You can also create litter by accident if wind or wildlife move your discarded items to faraway places. Whether actively or passively, once litter is created, it enters the environment and begins its journey to the ocean.

These data paint a picture of the issue, giving us an idea of what needs to be addressed in the community. The more you dig into the data, the more clues you get. The condition of each of the items collected was noted, and we found that 54% of the litter in the waterway was still intact, 40% was partially intact, and the remaining 6% was degraded. This helps us estimate how long most of the litter had been in the waterway.

Plastic litter doesn't just disappear, it slowly breaks down over time into smaller pieces. Wind, waves and UV rays damage the plastic and break it down into tiny pieces called microplastics, which remain in the environment. Microplastics have been found in almost all marine and coastal environments, from surface water to the seabed, and from sandy beaches to Arctic ice.

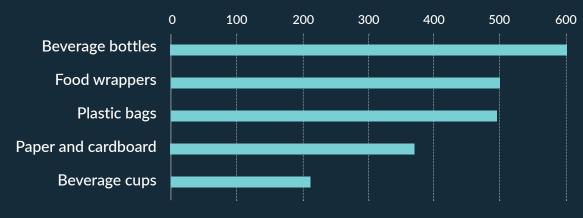
The Power of Community Science

During the fall of 2023, volunteers and students from the Chiapa de Corzo area participated in two citizen-science activities. Volunteers logged the litter they picked up in the Marine Debris Tracker app. This app is a tool that engages volunteers in community science, allowing large numbers of people to contribute to science and learn about environmental issues in their community. During both events, 3,980 pieces of litter were collected and logged in the Chiapa de Corzo area. See the top five items logged during the events below.



Top 5 Litter Items

from the Community Science Activities (Fall 2023)







Do you think there are differences

between the main types of litter caught in traps compared to the litter collected during cleanups or community science activities? Trash Traps catch litter floating in the water, while most of the material collected during community cleanups is picked up on land.



You are more than just a drop in the ocean: What can you do?

- Replace single-use plastic items by reusable options, whenever possible.
- Organize your own cleanup activity: You can find a step-by-step guide to organizing your own event in the CEC publication, Reducing Marine Litter Through Local Action.
- Check the <u>Last Stop</u>: The Ocean website for more information on marine litter and on how you can contribute to reducing marine litter in your community.



Log the litter you collect in the Marine Debris Tracker <debristracker.org> to contribute to the open dataset so researchers have access to the information needed to inform solutions.

This activity is part of a trinational project supported by the Commission for Environmental Cooperation to raise public awareness about the flow of litter downstream to the ocean. Litter capture devices have been deployed in streams in two other inland communities in Canada and the United States. For more information, please visit:

http://www.laststoptheocean.com/pilotCities



