

## Plastic Pollution Policy Country Profile: Philippines

Jonathan Schachter and Rachel Karasik

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### Key Takeaways\*

- The Philippines is the third-ranking contributor to plastic pollution in the world, with estimates ranging between 2.7 and 5.5 million metric tons generated each year, 20% of which leaks into the environment.
- With no interventions, mismanaged plastic waste could reach 9 million metric tons by 2040 and 11 million metric tons by 2060.
- A major source of plastic pollution is leakage from open landfills.
- The heavy use of single-use plastics, notably sachets have exacerbated the problem in recent years.
- Many municipalities have implemented policies targeting single-use plastics, notably bags. However, as of 2017, five of the 18 cities in Metro Manila, the National Capital Region of the Philippines, and the most densely populated region of the country, have yet to implement regulations or bans on plastic bags.
- The implementation of these policies varies widely, as does their effectiveness. While some cities have only seen a 4% decline in total plastic and polystyrene trash after policy implementation, others have seen compliance of up to 90%.

\* These are based on a review of literature published and policies enacted before December 2021

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## INTRODUCTION

This document outlines: 1) the nature of the plastic pollution problem in the Philippines, 2) available information about the national, subnational, and to a smaller extent, international policy landscape guiding government approaches to the plastic pollution problem in the Philippines, and 3) what, if any, information exists about the effectiveness of these policy approaches. This document is written using a basic literature review process and with support from the [Plastics Policy Inventory](#), as outlined in the Appendix (below), and is not exhaustive. It contains the most up-to-date information at time of publication, but this information may eventually be less relevant as the policy landscape continues to evolve. The authors were not able to get expert review for this case study, to ensure the information gathered aligns closely with what experts and practitioners are observing and experiencing on the ground. If conducting research on the plastic pollution crisis in the Philippines, we recommend you use this document as one of many resources available to better understand the problem and its solutions.

## PLASTIC POLLUTION IN THE PHILIPPINES

According to Ocean Conservancy and McKinsey (2015), the Philippines is the third-ranking contributor to plastic pollution in the world, with at least 2.7 million metric tons of plastic waste generated every year (Braganza 2017). Of this plastic waste, 20% is estimated to leak into ocean environments (Braganza 2017; Ocean Conservancy and McKinsey 2015). About 74% of plastics that leak into the ocean were initially collected but escaped from open landfills that are located near vulnerable waterways (World Wildlife Fund [WWF] 2018). Likewise, the proliferation of the sachet economy, where many consumer goods are imported, packaged, and sold in single-use containers that are difficult or impossible to recycle (Galarpe et al. 2021; Posadas 2014), has exacerbated the plastics pollution problem in the Philippines. Reports estimate that almost 60 billion sachets are used per year in the Philippines (SEA Circular 2020; GAIA 2019).

To better understand global plastic waste generation and disposal, Lebreton and Andrady's 2019 study projects scenarios of mismanaged plastic waste based on country-level data on population and waste management and distribution. This global study clarifies the extent of current and future plastic pollution problems in each country, including the Philippines. In 2015 alone, the study estimated that the Philippines created nearly 5 billion kilograms (5 million metric tons) of mismanaged plastic waste. With no additional interventions, the amount of mismanaged plastic waste in the Philippines is expected to almost double to 9 billion kilograms (9 million metric tons) by 2040 and reach well over 11 billion kilograms (11 million metric tons) by 2060.

Plastic pollution has had major consequences on the Philippine environment. Waterways and drainage systems quickly become clogged by waste runoff, threatening the livelihood and sanitation of residents (Braganza 2017), particularly during heavy periods of rain. Boracay, a popular tourist island in the Philippines known for its pristine beaches and water activities, was closed for six months in 2018 to allow a period of rehabilitation from high levels of pollution (SEA Circular 2020). According to government projections, there was an 18–20 billion Philippine peso (\$360–400 million USD) loss of potential gross revenue due to this closure (Iglesias et al. 2018). In terms of employment, an estimated 36,000 jobs were lost as a result of the closure (Domingo 2018).

Unlike other countries with significant plastic leakage, plastic-waste leakage in the Philippines primarily originates from local consumption, not outside markets (McKinsey Center for Business and Environment 2015). In fact, the Philippines was a significant exporter of waste to China prior to its plastic waste import ban (McKinsey Center for Business and Environment 2015; Liang et al. 2021).

The informal waste-picker economy plays a major role in the mitigation of plastic pollution in the Philippines after leakage and exposure to the environment. While not as high as those for metals, high-residual-value plastic products (like PET water bottles) have recovery rates at around 90% (McKinsey Center for Business and Environment 2015). This is due in part to legislation like the Ecological Solid Waste Management Act of 2000

that does not have any direct plastic pollution mitigation instruments but empowers local government units to collect waste at their own discretion. Unfortunately, the majority of plastic products do not have a high enough residual value and are not frequently collected in the informal market. This contributes to an overall recovery rate of well below 50% (Liang et al. 2021).

In the Philippines, ocean and marine industries are vital to the economy. In 2016 alone, coastal and marine tourism contributed close to \$3 billion USD, nearly 2%, of total GDP in the Philippines, and employed close to 900,000 people (SEA Circular 2020). Likewise, fisheries and aquaculture generated over \$2.3 billion USD, approximately 1.5% of the GDP, with 260,000 people employed in this sector. Finally, the ports and shipping industries contributed \$1.4 billion USD, nearly 1% of GDP, and employed 700,000 people. Tourism and fisheries are dependent on an environment free from plastic pollution, creating an incentive for the government to address the issue of plastic pollution in the Philippines.

According to Greenpeace, Southeast Asia is the most vulnerable region of the world and least prepared for the impacts of climate change (Braganza, 2017). Assessments of major cities in the Philippines have revealed no or limited waste segregation nor recycling practices in several markets, though solid waste management plans started being developed and implemented in 2001.

## **POLICIES TO ADDRESS PLASTIC POLLUTION**

As of 2021, there is no explicit national policy approach addressing plastic pollution, despite numerous attempts by legislators and activist groups. However, a number of Philippine cities and provinces (mapped [here](#)) have implemented ordinances to manage plastic bags and other single-use plastics within their jurisdiction, described in the following sections. Review of these laws indicates that many of the major cities and municipalities in the Philippines have adopted regulations that vary widely in the ways in which they target single-use plastic use and misuse and enforce compliance. Overall, these subnational ordinances work more so to regulate the use and sale of plastic bags and other single-use plastics, rather than comprehensively regulate all plastic types at all stages of the life cycle.

As of 2017, five of the 18 cities in Metro Manila, the National Capital Region of the Philippines, and the most densely populated region of the country, have yet to implement regulations or bans on plastic bags (Braganza 2017). One of the cities yet to implement any regulations, Valenzuela City, notably has over 200 plastic and rubber manufacturing companies operating within the city. This poses a particular challenge to policy makers to develop, pass, and implement strong plastic regulation.

Three cities in Metro Manila—Manila City, Taguig City and Pateros—have poorly documented or unclear regulations on single use plastics that could not be confirmed. Manila City signed Ordinance 8282 in 2012 to prohibit the use of plastic bags on dry goods and regulate their use on wet goods. Polystyrene was also banned as part of the ordinance. However, no official documentation could be found on the ordinance. In fact, news articles from the Philippines from five years later reveal that the ordinance was never actually implemented. In addition, according to academic literature (Braganza 2017) an Ordinance No. 59-11 exists in Taguig City, but no official government documentation nor news clippings exist for the policy. A similar result occurred for Municipal Ordinance No. 2011-10 for the municipality of Pateros.

Ten of the 18 cities in Metro Manila, however, have well-documented plastic bag regulations. These regulations are briefly described below.

### **Makati City: Ordinance No. 03-095 (2003)**

Makati passed a waste management ordinance in 2003 that outlines proper disposal and collection methods for residents and establishments in the city. However, at the end of the ordinance, the local government gives all restaurants, supermarkets, and other similar food establishment nine years to completely dispose of all plastic

products, including Styrofoam. It orders a gradual reduction in stocks of plastic and Styrofoam products with a 5% reduction every year for the first five, a 20% reduction for the next three, and a 15% reduction for the last year. All included establishments are required to deliver a yearly update on stocks to the Makati City Solid Waste Management Office.

#### **Muntinlupa City: Ordinance 10-109 (2010)**

Muntinlupa City was the first city in Metro Manila to regulate the use of plastic bags. With Ordinance No. 10-109 (2010), Muntinlupa prohibited the use and sale of plastic bags on all dry goods (goods that do not require refrigeration) and also prohibited the use of Styrofoam. For wet goods (products that require refrigeration or freezing), the ordinance prohibits establishments from using plastic bags as a secondary packaging material (materials that add convenience to the handler in addition to primary packaging materials). Likewise, as established by the ordinance, the city of Muntinlupa must conduct information and education campaigns and promote biodegradable packaging in lieu of single-use and non-environmentally friendly packaging. To ensure compliance and enforcement, the City Environmental Sanitation Center is tasked with monitoring effective implementation of the ordinance. They are also required to prepare quarterly reports on the implementation progress.

#### **Pasig City: Ordinance No. 9, s.2010**

The next city in the Philippines to implement plastic pollution regulations was Pasig City. With this ordinance, the city bans the use of any plastic on dry goods and regulates the use of plastic on wet goods very loosely. The use of Styrofoam is also banned for use on food, produce, and other goods. Fast-food restaurants that utilize plastic cutlery and kitchenware are exempt.

#### **Las Piñas City: Ordinance No. 1036, s.2011**

Las Piñas adopted an ordinance to ban the distribution of thin-film, single-use, plastic carry-out bags as well as polystyrene foam for individual and commercial consumption. Establishments that violate this ordinance will be subjected to a 1,000 Philippine peso (\$19.86 USD) fine for the first offence and up to a 5,000 Philippine peso fine (\$99.28 USD), imprisonment of up to six months, and loss of operation license for a year for subsequent offences.

### ***Quezon City Initiatives***

Quezon City has passed four ordinances that regulate the use of plastic bags. The first, Ordinance No. SP 2103 s.2011, passed in 2011, mandates that businesses that use plastic bags display the message “Save the environment, bring your own recyclable/reusable bags” to promote use of non-single-use plastic bags when shopping,

In 2012, Quezon City passed Ordinance No. SP 2127 s.2012, which prohibits the use of plastic, Styrofoam, and other nonbiodegradable packaging in government buildings in the city. As directed by the ordinance, plastic bags in government buildings can only be used on the packaging of wet goods.

Ordinance No. SP 2140 s.2012 (also known as the Plastic Bag Reduction Ordinance) prohibits the distribution of plastic bags lower than 15 microns in thickness. The ordinance also mandates a Plastic Recovery System Fee of two Philippine pesos (\$0.04 USD) on consumers who need a plastic carry out bag at the point of sale. The proceeds of this green fund scheme go towards environmental programs in the city. However, consumers can avoid the fee by exchanging a used plastic bag for the new one. The only type of plastic bag that is exempt from this regulation is “labo” plastic that is commonly used for wrapping unpacked fresh foods as a primary packaging unit. The ordinance also encourages stores to provide reusable or recyclable bags for a minimal fee.

The city went a step further in 2019 with Ordinance No. SP 2876 with bans the distribution and use of single-use plastics in Quezon City. This would affect items such as plastic cutlery, cups, plates, straws, stirrers, and Styrofoam, among others. Hotels were also prohibited from using and distributing personal hygiene items for their patrons in single-use containers.

Figure 1. Quezon City Government Plastic Ban Flyer (Quezon City Government 2019).



#### Marikina City: Ordinance No. 18, s.2012

Much like the ordinance put into effect in Muntinlupa, this ordinance prohibits the use of plastic bags for the primary packaging of dry goods as well as Styrofoam. However, this ordinance does not prohibit plastic as a secondary packaging material for wet goods; it just encourages customers to bring and use reusable containers. The ordinance does, however, establish a gradual phase-out of the use of plastic bags and Styrofoam that took full effect six months after the approval of this ordinance.

The Marikina City Environment and Management Office is required promote a public awareness campaign with the help of the Public Information Office and private sector industries to ensure effective implementation of this ordinance.

#### Caloocan City: Plastic and Polystyrene Regulation Ordinance of 2013

This ordinance in Caloocan prohibits the sale, provision, and use of nonbiodegradable materials for secondary packaging like polystyrene and plastic bags. Bags must be clearly labeled as “oxo-biodegradable,” “degradable,” or “biodegradable” and printed with the Plastic Coding System logo so they can be properly disposed of. All retail establishments are also required to have a “Plastic Recovery Bin” at entrances and exits so patrons can dispose of plastic products.

Caloocan also launched an information campaign as part of the provisions of this ordinance to better educate residents on the benefits of using biodegradable and reusable products instead of single-use and non-biodegradable materials.



The Environmental and Sanitation Services are tasked with monitoring and enforcing the implementation of the ordinance.

#### Mandaluyong City: Ordinance No. 523, s.2013

The city of Mandaluyong was the next to follow suit with their ordinance on the regulation of plastic bags and Styrofoam in commercial and business establishments. For the first year of the ordinance (April 2012–April 2013), the use of all plastic bags and Styrofoam became prohibited just on Mondays and Wednesdays. For the second year (April 2013–April 2014), the use of these items became prohibited on Monday through Friday. Finally, for the third year and all years after (April 2014-onwards) plastic bags and Styrofoam became prohibited. Penalties for not abiding by this prohibition schedule are a fine of between 500 and 5,000 Philippine pesos and revocation or suspension of business permit or license or imprisonment for between one and three months (or both). The Mandaluyong City Environment Management Office is charged with enforcement and monitoring of the ordinance.

#### Pasay City: Resolution No. 4873, s.2019

In 2011, the government of Pasay City passed an ordinance (No. 4647, s.2011) meant to regulate the use of plastic carry-out bags and promote use of recyclable and reusable bags. This was amended by a later ordinance (No. 5981, s.2019) that totally banned plastic carry-out bags in Pasay. Because of a lack of strict compliance with Ordinance No. 5981, Resolution No. 4873 was introduced and adopted later in 2019. It calls on the Pasay City Environment and Natural Resources Office to better facilitate the two aforementioned ordinances in Pasay. The ordinance requests better prescription of penalties to enforce the total banning of plastic carry-out bags in Pasay City. The penalties, however, are not actually included in the language of the ordinance.

#### Paranaque City: Ordinance No. 40, s.2018

The Parañaque ban on the use of single-use plastic for dry goods and distribution of plastic products like bags, straws, cutlery, cups, stirrers, and Styrofoam goods took effect in 2020.

**Figure 2. Parañaque City Plastic Ban Flyer (Parañaque City Environment and Natural Resources Office 2018).**



#### POLICY EFFECTIVENESS

By 2014, the Plastic Monitoring Task Force (PMTF) of Makati discovered that 90–92% of all businesses were complying with Ordinance No. 03-095, with only 366 of 4,519 establishments in violation of the ordinance (GMA News 2014). Another inspection was completed the year prior, and just under 90% were in compliance. One possible reason for the high compliance was the city's complementary advocacy programs for a plastic-free Makati, which included holding workshops with barangay personnel on the plastic-free agenda (Calleja 2014)

Since the implementation of Ordinance 10-109 in Muntinlupa City in 2011, 1,400 establishments received fines for violations, and seven were permanently shut down for consistent noncompliance (HubPages 2018). In 2010, prior to the implementation of this ordinance, Muntinlupa observed an average of 131 tons per day of daily waste collection. This was reduced to 127 tons per day by 2011, resulting in an average of almost 1,500 less tons of

waste within the span of a year (Earthjustice 2019). The local government of Muntinlupa estimates that 90% of establishments in the city comply with the law. There are no available updated figures on compliance in Muntinlupa.

Since passing Ordinance No. 1036, Las Piñas has witnessed a 4% decline in total plastic and polystyrene trash (HubPages 2018).

The effectiveness is heavily dependent on how strict the implementation of the policy is, not necessarily how strict the policy itself is. Plastic bag regulations with strict implementation have produced dramatically lower plastic bag use (GAIA 2019). Therefore, the simple existence of an ordinance does not necessarily convert to reduced use. Despite the volume of plastic wastes being “significantly reduced” in Quezon City a year after the implementation of the Plastic Bag Reduction Ordinance (Razon et al. 2015; Braganza 2017), it still found to be the third biggest plastic bag user among surveyed areas by the Global Alliance for Incinerator Alternatives (GAIA) (2019).

These policy initiatives aim to curb use and disposal of single-use plastics on a local level. But they are no match for the rate at which sachets are produced and consumed. Few options exist in the country to access consumer goods like shampoo, conditioner, detergent, and many other products than in single-use containers produced by multinational companies. Additionally, many other types of plastic pollutants that are not single-use plastic items enter the environment.

## CONCLUSION

While a number of cities have approached plastics pollution using both regulatory and information based instruments, overall, waste management remains a problem and plastic waste generation remains high. Likewise, the national response to the problem is limited, and there is therefore likely insufficient capacity and support to target plastics more comprehensively. It will be important to continue to observe the effects of these policies and for continued investment into solid waste management and capacity given the regions vulnerability to climate change and the impact plastic waste can have on storm drainage systems.

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## APPENDIX – METHODS

To start off the search for policy documents, researchers referenced the Nicholas Institute’s Plastics Policy Inventory for any relevant national or subnational policies in the Philippines. At the time this case study was initially drafted, there were no policies from the Philippines in the Inventory.

Researchers then searched for academic and grey literature relating to plastic pollution and relevant policies in the Philippines. This search was mostly done through Google Scholar. Search terms included, but were not limited to, “Philippines plastic,” “Philippines plastic pollution,” “Philippines plastic pollution policies,” “Philippines plastic bag ban,” “Philippines single-use plastic,” and “Philippines plastic use.” Six main articles were found, and all were screened for inclusion. The inclusion criteria were that the articles described the plastic pollution problem in the Philippines, described relevant policies in the Philippines, or they described the effectiveness of relevant policies. They were then read through and relevant information that could aid this case study was extracted. When citations referenced additional literature that seemed relevant, those papers were subsequently screened for inclusion as well. An additional six papers were discovered and used for material through this method. This is the primary method in which the background information was collected.

All of this scholarly literature referenced specific subnational Philippine policies (because no major national legislation exists to date). To find the policy documents that were not originally in the Plastics Policy Inventory, the policy names found in the literature were either entered in a Google search or searched for in local legal information systems if available. This is how the specific language of the policy documents was discovered and analyzed. The policies which demonstrated an intent on behalf of policy makers to address plastic pollution were then entered into the Plastics Policy Inventory.

Once the secondary literature had been exhausted for relevant policies, researchers then moved the search to InforMEA and ECOLEX to see if any more policies could be found that were not referenced in the literature. No new policies were discovered in this round of the search.

Finally, to better understand the effectiveness and implementation of the aforementioned policies, policy names (or the name of the city plus “plastic ban”) were plugged into a normal Google search string. Here, researchers were looking for recent news articles referencing policies that were included in the literature to check their progress. Although news articles were not found for every policy mentioned in the literature, the articles that were found did give more breadth to the effectiveness of specific policies in their local jurisdictions. As a result, tertiary sources were added to the background information.