

BRANDED: THE SACHET SCOURGE INASIA

Exposing the Top Sachet Polluting Companies with Brand Audits

#BreakFreeFromPlastic

#BrandAudit2023 #QuitSachets

Executive Summary

Four countries. Over 33,000 sachets. **One dismal picture.**

The world's plastic emergency continues to escalate driven by a relentless increase in plastic production. At the heart of this crisis is single-use plastic packaging that panders to misquided notions of convenience and easy consumption. A particularly egregious example of this is sachets. Sachets are widely used across Asia to sell very small quantities of everyday products such as instant coffee, shampoo, condiments and detergents. They usually consist of multilayered plastic and other materials, such as metal or paper. An estimated 855 billion sachets are sold globally each year, contributing significantly to plastic pollution. Their small size and non-recyclability facilitate their escape from waste treatment processes. Although prevalent worldwide, sachet pollution is most evident in Global South countries where the availability of small-format packaged products appeals to individuals who might otherwise hesitate to purchase larger product portions due to cost considerations. In places where big corporations have gained a market foothold, the prevalence of and new reliance on plastic sachets have translated to widespread damage to ecosystems and human life.

33,467 sachets, 807 volunteers, 50 locations, 4 countries

The Global Break Free From Plastic Brand Audit, now in its sixth year, continues to highlight the scale of plastic pollution and the grim realities experienced by communities and biodiversity around the world. This regional, collaborative, sachet-specific report complements the <u>2023 Global Brand Audit</u> <u>Report</u>, which documents the brands found on plastic waste globally to help identify the corporations responsible for producing/ manufacturing plastic pollution. Using data gathered by a coalition of BFFP member organizations across India, Indonesia, the Philippines and Vietnam, this sachet brand audit report delves into the prevalence, types and producers of sachet pollution found in these four countries in mainland and maritime Asia. The sachets were classified according to a standardized methodology jointly developed by the participating organizations, and the resulting data was analyzed by a plastic pollution data science expert using standard statistical tools. The regional sachet brand audit yielded a total of 33,467 sachets which were collected, cataloged, and analyzed from October 2023 to February 2024.

This report centers on plastic sachets as a major component of the global plastic crisis. 33,467 sachets were collected from 50 locations across India, Vietnam, Indonesia, and the Philippines. Our analysis reveals that sachets from packaged food items constituted an overwhelming 86% of the sachet waste collected in our sample.



Sachets are widely used across Asia to sell small quantities of products like chips, tea, coffee, condiments, and instant noodles, among other consumables.

Household items and personal care products, along with other uncategorized packaging (such as smoking products) comprised the other 14%. Three quarters of the sachets collected were 52.5 × 74.25 mm - roughly the size of a standard pack of Kleenex - or smaller. Most importantly, this report finds that across the four countries, the following corporations are the top regional sachet polluters: (1) Unilever, (2) Wings, (3) Mayora Indah, (4) Wadia Group, (5) Balaji Wafers Private Limited, (6) Procter & Gamble, (7) Nestlé, (8) Yes 2 Healthy Life, (9) JG Summit Holdings, and (10) Salim Group.

This report also outlines how national governments are responding to the plastic crisis. People, communities, and organizations are taking the lead at the grassroots level through initiatives and movements that push back against plastic pollution. It is high time for national governments to step up more decisively by enacting legislation that actively reduces plastic production. Laws and policies must focus on stricter regulations and more robust accountability mechanisms for corporations, while encouraging transitions to more sustainable practices and strengthening informed consumer choices.

In this report, we put significant pressure on big corporations to cut back on their production of single-use plastic packaging. If corporate promises to tackle plastic pollution are to be believable, companies must immediately phase out the use of sachets wherever possible for the health of people and the planet.



This report is a testament to the shared vision and relentless drive of Break Free From Plastic members towards a plastic-free world.

Dedication & Acknowledgements

Dedication

We are proud to dedicate this report to informal waste pickers across the globe - resilient individuals who unjustly bear the disproportionate burden of waste management. In unwavering solidarity, we join them in demanding accountability from corporations profiting from the ongoing plastic pollution crisis.

Acknowledgements

We extend our deepest gratitude to the following participating organizations:

INDIA









PHILIPPINES



These twenty-five organizations, through collaborative leadership, were instrumental in: developing a detailed brand audit methodology focused on plastic sachets; organizing brand audit events in their respective countries; recording and submitting original data; interpreting the data analysis; and writing this report.

We are thankful for the foundational work of Break Free From Plastic core members - Mother Earth Foundation, GAIA Asia Pacific, Greenpeace, and Citizen consumer and civic Action Group (CAG) - for designing the original framework of the brand audit.

A heartfelt expression of gratitude goes to **807 volunteers from 50 locations in 4 countries** whose dedication and tireless efforts formed the backbone of this report. Your selfless commitment to the cause was evident in the meticulous organization of cleanups, the documentation of brands, and the submission of crucial data. Your contributions are the cornerstone of this report, and we sincerely appreciate the impact of your unwavering commitment. Through your invaluable participation, you have enriched the content of this report, bringing depth and authenticity to the findings.

The Break Free From Plastic team, represented by Sybil Bullock, Devayani Khare, Miko Aliño, and Emma Priestland, played an exceptional role as facilitators in bringing together diverse contributors for this report. Plastic pollution data scientist Dr Win Cowger helped bring this data to life through his expert analysis. Together, these dedicated leaders were instrumental in creating a collaborative and inclusive environment. We sincerely thank the team for their efforts in ensuring this movement's success and global impact.

Introduction

Each year, thousands of volunteers around the world go out into their local environment to collect plastic waste. They document the brands whose logos mark that waste, and the data is collated into a global brand audit report revealing the world's top plastic polluters - the companies polluting the most places with the most plastic waste. The 2023 Break Free From Plastic (BFFP) **global brand audit** revealed a concerning picture: a staggering **537,719 plastic waste items** were collected across 41 countries, with <u>Coca-Cola and PepsiCo</u> <u>leading the list of top corporate polluters</u>.

One major contributor to this crisis is the ubiquitous single-use sachet, particularly prevalent in developing economies across Asia. To develop a better understanding of which companies are responsible for the sachet pollution that is blighting Asia, a coalition of environmental NGOs and members of the Break Free From Plastic movement came together to develop a new form of brand audit - one that looks at a specific type of plastic pollution: sachets. This resulting Break Free From Plastic (BFFP) Asia Pacific sachet brand audit report, focusing on Indonesia, Vietnam, the Philippines, and India, paints a stark picture. Southeast Asia alone consumes nearly half of the global share of sachets, with projections reaching a staggering 1.3 trillion sachets sold annually by 2027. This reliance on single-use plastics has devastating consequences. The difficulty of processing these tiny packages in waste management systems means these sachets end up in landfills, rivers, and beaches, harming ecosystems, wildlife, and ultimately, human health and livelihoods.

Corporations have long touted affordability as the reason why sachets are irreplaceable. This 'pro-poor' argument is repeated whenever criticism of sachet pollution and related demands for corporate action are raised. However, sachets are not more affordable when external costs - such as the costs of waste treatment, flood control and clean ups - are factored in. An alternative to sachets is to look at other ways products are sold in small quantities by using reusable, refillable containers. This is a tradition in the Philippines known as Tingi culture that goes back generations. <u>A new report by Greenpeace</u> <u>Philippines</u> examining *tingi* culture found that customers who bought products by refilling small containers at their neighborhood stores had massive savings compared to purchasing the equivalent amount packaged in sachets. By investing in the reuse economy, we can create a future where **affordability and environmental responsibility go hand in hand**.

The global plastic crisis looms large, with the **OECD report** predicting a tripling of plastic usage by 2060. Addressing the sachet issue is crucial for tackling this wider challenge. Many major consumer goods companies have made public commitments to make 100% of their packaging reusable, recyclable or compostable by 2025 - and yet they have made no visible attempts to shift their business models away from unrecyclable single-use sachets. Manufacturers, policymakers, and consumers must collaborate to eliminate sachet pollution. Key steps toward solving the scourge of sachets include: implementing EPR policies, single-use plastic bans, and policies supporting reuse systems; investing in waste management infrastructure; and promoting responsible consumption habits. It is also crucial to acknowledge the vital role of waste pickers in waste collection and recycling, and address their current exclusion in existing EPR policies to ensure a just and sustainable future for all.



Regional Context

Pervasiveness of Sachet Packaging in Asia

Across Indonesia, the Philippines, Vietnam, and India, a vibrant tapestry of singleuse sachets has flooded the landscape of everyday commerce. This sachet economy offers a wide range of products, transforming personal care products like shampoo and soap, and consumables like instant coffee and powdered food mixes, into pocketsized individual portions. The justification offered by companies for this packaging type is affordability. They claim sachets are empowering lower-income consumers and reaching those in rural communities who often purchase necessities in smaller, daily quantities. The distribution network is a grassroots affair, woven through a network of small shops, bustling markets, and street vendors, ensuring these tiny packets penetrate every corner of society.

Overall, this data highlights how smallpackaged, single-serve food products contribute to sachet waste across these countries.

This phenomenon likely occurs due to <u>sachets' affordability</u>, offering smaller portions accessible to low-income consumers. They also promote convenience and portion control, aligning with concerns about <u>healthy portion</u> <u>sizes</u>. <u>Extensive distribution networks enable</u> <u>sachets to reach remote areas</u>, and their format integrates seamlessly with Asian culinary traditions by providing pre-portioned condiments and sauces.

However, the convenience of sachets comes at a cost, posing significant challenges to environmental, social, and economic sustainability. With hundreds of millions sold daily, and due to their often non-recyclable materials, <u>sachets end up as significant</u> <u>contributors to plastic pollution in these</u> <u>countries</u>. Sachets polluting the landscape, waterways and beaches are highly visible across Asia. They are so pervasive and



The range of packaging sizes that meet the definition of sachets, and represent the variety of products sold in these problematic single-use formats. Image credits: Ezra Acayan, on assignment for Break Free From Plastic.

unmanageable that <u>some industries use</u> <u>sachets to fuel fires</u> needed to produce tofu and other products, generating terrible air pollution for communities living near these production facilities. Tests in these areas even found <u>highly toxic dioxins</u> in free-range chicken eggs, most likely from burning plastic.

Across India, Indonesia, the Philippines and Vietnam, a similar story of overflowing landfills and struggling waste management systems unfolds. Overburdened landfills, often lacking proper infrastructure, <u>threaten the</u> <u>environment</u> with leachate contamination, air pollution, and <u>uncontrolled fires</u>.

The human health hazards are also concerning. Leaching of chemicals from sachet packaging and potential contamination when improperly stored pose risks, and sachets degrade to create microplastics, <u>whose impacts scientists</u> <u>are only just beginning to understand</u>. It is also important to note that plastic pollution begins with the extraction of fossil fuels from the ground and persists throughout its life cycle, harming people and contributing to the climate crisis whether it is discarded in landfills, left in the environment, or burned in incinerators. As global plastic production is projected to quadruple by 2050 and as more facilities are built, 'fenceline' communities, i.e. those that live near plastic manufacturing plants, are exposed to even greater health risks. Lastly, while sachets might appear to save money for individual consumers, <u>they</u> <u>actually add to long-term economic burdens</u> as governments and communities grapple with the cost of waste management and environmental cleanups.

Limitations of Current Solutions

The four countries featured in this report face similar challenges with weak policy implementation, limited infrastructure, and low public awareness. There have been attempts to make the sachet problem go away by introducing technological fixes like <u>CreaSolv</u> and waste incineration, but so far these 'solutions' have only resulted in more problems like microplastic leakage and air quality issues.

CreaSolv technology sought to revolutionize plastic waste recycling by tackling sachet waste through a chemical recycling approach. However, its inability to handle the complex multilayered nature of most sachets, coupled with logistical and economic constraints, <u>ultimately led to its failure</u>. This case underscores the **crucial need for multifaceted and adaptable solutions** that go beyond technological innovation. Companies must take the lead in developing alternative ways of delivering small quantities of products without using sachets, thus removing sachets from the market.

The majority of the burden of waste collection and sorting falls on the shoulders of waste pickers and other informal waste collectors, including itinerant buyers who collect and sell to petty shop scrap dealers or aggregators for recycling. Waste pickers prefer collecting discards with a higher market value, such as scrap metal or PE, as opposed to sachets and other plastic flexibles which have no value in junk shops. However, it must be noted that in several cities, where waste pickers have been organized (e.g. Pune and Bengaluru), sachets and plastic flexibles are collected as part of the door-to-door collection of dry waste.

Several corporate schemes aiming to tackle

sachet waste have paid waste pickers to collect sachets, but this ignores the backbreaking labor required to collect small, dirty sachets in the quantities required for the waste pickers to be paid. Relying on the labor of often marginalized people to tackle this pollution problem is not a solution.

With no safe and economically-viable options, collected sachets end up in landfills or turned into <u>fuel for cement production</u>. To make matters worse, governments in these four countries have enabled these false solutions through <u>flawed EPR regulations</u> and questionable partnerships with cement companies.

Reuse

Addressing this complex environmental issue requires a holistic approach that combines effective regulations, robust infrastructure, a just transition for all impacted workers, and strong public awareness and engagement. This includes promoting and incentivizing the use of reusable alternatives, such as refillable containers and bulk purchasing, to significantly reduce the reliance on single-use sachets and their detrimental environmental impact.

Collaboration is crucial to promoting reuse and refill systems. Governments can work with businesses, create a level playing field through regulations, incentivize them to adopt standardized, good-quality packaging, and bring them together to develop solutions. Businesses can then shift towards reuse models for distribution. Communities can participate in these efforts and raise awareness, while individuals can embrace reusables in their daily lives. Additionally, supporting informal waste pickers strengthens the existing value chain for reusable and sustainable packaging scrap, closing the loop on the waste management system.

Here are some examples for effective reuse collaborations:

- Indonesia: <u>Koinpack</u> (now Alner), a venture created by Enviu, provides reusable bottles as an alternative to single-use plastic sachets. Customers receive a cashback for returned bottles.
 <u>PlasticDiet's reuse protocol</u> for events promotes reusable containers for food and drinks, eliminates single-use plastics, and mitigates waste generation.
- India: <u>The 7 to 9 Greenstore</u>, a zero-waste store in Kerala, uses social media to spread awareness about zero-waste practices. They also distribute product samples to show consumers the quality of their products. Mumbai's 125-year-old <u>Dabbawala system</u> is a zero-waste lunch delivery network that relies on reusable tin tiffins.
- Vietnam: <u>Refillable Hoi An</u>, a zero-waste store in Vietnam, works with suppliers to implement plastic-free delivery systems. <u>PlastiNOvation</u> competition fosters community solutions to plastic waste, highlighting initiatives like VietCycle's dispensers and One4One's refill stations.
- **Philippines**: The <u>Kuha sa Tingi</u> project is an initiative of Greenpeace Philippines in partnership with RIPPLEx, and the local governments of San Juan City and Quezon City, introducing refill systems in sari-sari stores. Thanks to the project's success, Quezon City plans to <u>expand to</u> <u>5,000 more sari-sari stores</u> to reduce sachet use.

To further encourage reuse, a <u>supportive</u> <u>policy framework</u> is essential. This framework should establish clear <u>safety and quality</u> <u>standards</u> for reuse/refill businesses, define roles for stakeholders, and utilize existing reuse scheme standards.

By implementing these combined efforts, countries can achieve a cleaner future. This approach not only reduces plastic waste but also creates new jobs, fosters fair competition, supports local producers, and paves the way for a more sustainable future.



Caption: Glass jars of tea leaves line up the Refillables store in Hội An, Vietnam - an initiative dedicated to promoting reuse, to avoid packaging reaching landfills.

Methodology

Overview and Methodology Development

The methodology used to audit sachet waste for this report was co-developed by BFFP member organizations from India, Indonesia, the Philippines, and Vietnam over a series of consultations held from September through October 2023. BFFP's data scientist, Dr. Win Cowger, was also consulted during this process. These consultations led to the development of a detailed 10-page methodology guide, which can be viewed <u>here</u>.

At each of the locations selected for a sachet audit, a team of volunteers gathered waste. Plastic waste was first separated from the non-plastic waste. Once the plastic waste was segregated, the volunteers used the <u>BFFP 2023 Asia Pacific Sachet Brand Audit Data Submission Sheet</u> (or the <u>printed data card version</u>) to record data on all plastic waste collected in this location. For any items within this sample that fell under the definition of sachet, additional details were recorded in the extra section of this data submission sheet. Within this extra section, there were required and optional data points to enter.





Sachet Definition and Standards

We established a consistent definition of sachets across the participating countries to accommodate regional differences. Sachets were defined as sealed, flexible plastic packaging, designed for single-use, with any number of layers, no larger than A4 (210 × 297 mm) at most. A printable Size Measurement Tool was developed to help volunteers determine what size category to label each sachet, with A4 measuring 210 × 297 mm. This inclusive and practical definition embraced the diverse environmental and cultural contexts of each country.

Figure 2. Size Measurement Tool

Recruitment and Training

In the 2023 BFFP Sachet Brand Audit, volunteers were recruited through targeted social media initiatives and outreach via community networks in India, Indonesia, the Philippines, and Vietnam. The focus was on garnering participation from diverse sets of volunteers, representing a range of community perspectives. Training modules, carefully designed and contextually adapted to each country's specific requirements, provided guidance on the brand audit methodology. Visual guides and instructional videos were made available in several local languages to help volunteer teams understand and execute the data gathering. Specialized training sessions were also conducted to educate volunteers about sachet waste characteristics, environmental impacts, and the importance of accurate data collection.

Site Selection and Event Preparation

The 2023 BFFP Sachet Brand Audit involved strategic site selection, prioritizing urban and island areas noted for significant plastic pollution. Selection criteria were based on factors like accessibility, safety, and potential diversity in waste profiles. Preparatory steps included securing necessary permits, ensuring site safety, and organizing logistics such as determining the size of the waste collection area and the duration of the clean-up activities. A significant focus was placed on aligning with local waste management practices and adhering to a zero waste hierarchy.

Sachet Brand Audit Locations



Figure 3. Sachet Brand Audit Location Map.The map(s) / images included in this report are for illustrative purposes only and do not depict precise or definitive political or geographical boundaries of any region, territory, area or sea. Any depiction of boundaries is not intended to be a representation of any legal or official position concerning the status of any region, territory, area, or sea.



Multiple Audit Locations

Waste Collection and Segregation

Audit volunteers followed pre-determined protocols for waste collection and segregation. A minimum sample size of 10 kilograms of plastic waste per audit location was set to ensure standardized sampling of data representation¹. Plastic waste was then categorized into sachets and non-sachets.

Data Recording

The data was recorded via a standardized Data Submission Sheet, available in both digital and printed forms. A designated section on the sheet was allocated for detailed recording of sachet-specific data, including brand names, descriptions, product types, materials, layers, and sachet-specific metrics like size, volume, weight, and reusability features. To complement this, photographs of each sachet type, capturing both front and back views, were collected.

Data Analysis

The data analysis phase employed advanced statistical software (R) and methodologies to examine the data thoroughly. Data was cleaned up by matching brand names to company names using a previously established methodology. Other data fields were confirmed by setting data to lowercase and removing leading and trailing whitespace. Currency values were normalized to USD using an available online value conversion as of March 2024. Country names were standardized for each country. Continents were inferred from country names when missing. Sachet sizes were categorized according to the methodology and using exact size measurements where possible. Data was validated using automated techniques to ensure fields were the correct type and conformed to standardized values. Trend analysis and frequency distribution tools were used to identify patterns and prevalence of different sachet types and brands. This indepth analysis provided critical insights into the most common forms of sachet pollution as well as regional differences, thereby facilitating the development of targeted strategies to address sachet pollution. Top sachet types, in most cases, were assessed using the count of sachets of that type.



Volunteers from Wahana Lingkungan Hidup Indonesia (WALHI) hard at work sorting sachets gathered at the Muara Angke port in West Jakarta, Indonesia.

Waste Handling and Post-Audit Management

Post-collection and segregation waste handling adhered strictly to local environmental guidelines. Biodegradable waste was sent for composting, and recyclables were processed through appropriate facilities. Non-recyclables were managed by local waste systems, typically involving landfill disposal.

Data Submission and Management

The audit concluded with a rigorous data submission and management phase, ensuring the integrity and accuracy of the data. Participants meticulously reviewed their data, cross-referencing it with the audit's photographic records to rectify any inconsistencies. This structured data management approach was pivotal in maintaining the audit's data integrity.

¹ A small number of collections did not reach the 10 kg minimum, due to their audits taking place in areas where regular cleanups occur, resulting in less waste available onsite. We made a few exceptions to still include these groups' data.

Trash Hero Indonesia volunteers sorting sachets by size as per the brand audit methodology, in Nagekeo, Nusa Tenggara Timur, Indonesia.

Study Limitations

One of the primary limitations was the reliance on volunteer-based data collection, which may introduce variability in data quality and accuracy. Different levels of training and experience among volunteers across regions could lead to inconsistencies in waste categorization and data recording. The methodology's focus on specific urban and island communities for site selection might not comprehensively represent the sachet pollution profiles in other types of environments or regions, which may skew or bias our understanding of the sachet problem.

The sachet definition, while standardized, had to accommodate a wide range of sizes and types, leading to a broader interpretation of what constitutes a sachet. This could affect the uniformity of data collected across different countries. Lastly, the data submission and management process, while rigorous, was subject to the inherent challenges of handling large datasets, including the potential for human error in data transcription and digital processing.





Top 10 Regional Polluters

PARENT COMPANY	TOTAL SACHETS
Unilever	1851
WINGS	1565
MAYORA	1548
THE WADIA GROUP	1352
BALAJI	1291
P&G	1194
Nestlé	1171
YES2HEALTHYLIFE	1028
JG SUMMIT HOLDINGS, INC.	714
Schim	683

Figure 4. Top 10 Regional Polluters, according to Sachet Brand Audit Data

Summary of Results

Between October 2023 and February 2024, 807 volunteers organized brand audits in 50 locations in four Asian countries: India, Indonesia, the Philippines, and Vietnam. Together these volunteers from 25 organizations collected 33,467 sachets, which were traced to 2,678 different brands. Our analysis of the data reveals that the top regional sachet polluters in our sample are (1) **Unilever**, (2) **Wings**, (3) **Mayora Indah**, (4) **Wadia Group**, (5) **Balaji Wafers Private Limited**, (6) **Procter & Gamble**, (7) **Nestlé**, (8) **Yes 2 Healthy Life**, (9) **JG Summit Holdings**, and (10) **Salim Group**. "Top regional sachet polluters" are defined as the parent companies whose brands were found polluting all four countries with the most sachet waste, according to our brand audit data.

Three of these companies are Indonesian (Mayora Indah, Wings, and Salim Group), two are Indian (Wadia Group and Balaji Wafers Private Limited), one is Filipino (JG Summit Holdings), and one is Singaporean (Yes 2 Healthy Life). The remaining three are from outside the region, headquartered in the US and Europe (Unilever is based in the UK, Nestlé is in Switzerland, and Procter & Gamble is from the USA). All ten companies are in the business of selling fast-moving consumer goods, primarily processed food and beverage manufacturing, as well as some personal care products.

In line with these findings, sachets from food packaging constituted 86% of the sachet waste collected in our sample. **Over one third of all food packaging sachets came from the top ten regional sachet polluters**, responsible for 12,096 sachets recorded in the brand audits. Common food products included powdered beverages, instant noodles, and condiments. The remaining 14% of the sachet waste represented primarily household products and personal care, at ~7% and ~3.5%, respectively.

SACHET SIZES			
Extra Large			
2604			
Large			
7335			
Medium			
12765			
Small			
8492			
Extra Small			
2269		9, 0, 19L	

Figure 5. Sachet Sizes

Medium sized (52.5 × 74.25 mm) sachets - approximately the size of a standard pack of ¹⁷ Kleenex tissues - made up the largest fraction of the sample at 35%, followed by small (26.25 x 37.125 mm) sachets at 34%, large sachets (105 × 148.5 mm) at 14%, extra small (13.125 × 18.5625 mm) sachets at 11% and extra large (210 × 297 mm) ones at 6%.

Multilayer sachets made up a drastic 57% of the total sample, while single-layer packaging composed 41% of the entire sample for this region. This is significant because the multiple layers of different materials make recycling of sachets impossible. And yet, the audits found a significant number of mono-material sachets, which in theory should be easier to recycle. However, collection of mono-material sachets will continue to be challenging for two reasons - small size makes it hard for collection, and reduces the monetary value of the packaging.

Top 10 Most Common Product Types



Figure 6. Top 10 Most Common Product Types

The Proliferation of Sachet Brands Across Asia

COUNTRY	TOTAL BRANDS
India	380
Indonesia	1212
Philippines	784
Vietnam	395
All	2678

Figure 7. Sachet Brands Recorded in Brand Audits in India, Indonesia, the Philippines, and Vietnam

Top 10 Polluting Companies per Country

PARENT COMPANY	COUNTRY	TOTAL SACHETS
Balaji Wafers Pvt. Ltd.	India	1291
Wadia Group	India	1235
ITC Limited	India	618
Unilever	India	608
Arusuvai Masala And Foods Private Limited	India	618
Vimal Group	India	282
Tamil Nadu Cooperative Milk Producers Federation Limited (TNCMPFL)	India	253
PepsiCo	India	248
Amul - The Taste of India	India	204
Tirumala Milk Products Pvt Ltd.	India	166
Wings	Indonesia	1251
Salim Group	Indonesia	672
Mayora Indah	Indonesia	629
Unilever	Indonesia	603
PT Santos Jaya Abadi	Indonesia	454
Perfetti Van Melle	Indonesia	219
Danone	Indonesia	204
CV Dwi Tunggal Jaya	Indonesia	188
Ajinomoto	Indonesia	187
PT. Garudafood Putra Putri Jaya	Indonesia	147
Yes2HealthyLife	Philippines	1028
Mayora Indah	Philippines	902
Procter & Gamble	Philippines	889
Nestlé	Philippines	771
JG Summit Holdings	Philippines	673
Unilever	Philippines	598
Wings	Philippines	301
DXN Industries	Philippines	276
Alliance Global	Philippines	260
Monde Nissin	Philippines	250
International Dairy Joint Stock Company (IDP)	Vietnam	328
TH Milk Food Joint Stock Company	Vietnam	175
Nestlé	Vietnam	164
Vinamilk	Vietnam	130
Acecook Vietnam Joint Stock Company	Vietnam	102
ThaiBev	Vietnam	78
Bibica Corporation	Vietnam	73
Orion Food Vina Co,. Ltd	Vietnam	68
CJ Cau Tre Foods Joint Stock	Vietnam	64
FrieslandCampina	Vietnam	64

Figure 8. Top 10 Polluting Companies per Country, according to Sachet Brand Audit Data

Sachet Vital Statistics

MOST COMMON TYPES OF SACHET MATERIALS



SINGLE LAYER MATERIAL VS MULTILAYERED MATERIAL



Figure 10. Layers recorded in Sachet Brand Audit

sachets with layers category left blank

sachets with unclear number of layers

India Summary

Percent of total num collected sachets:	ber of 29%
Number of sachets:	9,730
Volunteers:	169
Total Brands:	380
Audit Locations:	4

India's contribution to the study in this region accounts for 29% of the total number of collected sachets. A total of 9,730 pieces were collected from four different audit locations across the country: Pune, Chennai, Veraval, and Ahmedabad. The top ten polluters in these samples were Balaji Wafers Pvt Ltd (1291 sachets), Wadia Group (1235), ITC Ltd (618) Unilever (608), Aru Suvai Masala and Foods Pvt Ltd (533), Vimal Group (282), Tamil Nadu Co-operative Milk Producers' Federation Ltd (253), PepsiCo (248), Amul the Taste of India (204), and Tirumala Milk Products Pvt Ltd (166).



A group of eager volunteers celebrating before undertaking the sachet brand audit methodology, organized by the Kashtakari Panchayat, in Pune, India.

TOP 10 POLLUTING COMPANIES IN INDIA

PARENT COMPANY	TOTAL SACHETS
Balaji Wafers Pvt. Ltd.	1291
Wadia Group	1235
ITC Limited	618
Unilever	608
Arusuvai Masala And Foods Private Limited	533
Vimal Group	282
Tamil Nadu Cooperative Milk Producers Federation Limited (TNCMPFL)	253
PepsiCo	248
Amul - The Taste of India	204
Tirumala Milk Products Pvt Ltd.	166

Indonesia Summary

Percent of total num collected sachets:	ber of 29%
Number of sachets:	9,698
Volunteers:	476
Total Brands:	1,212
Audit Locations:	34

In Indonesia, civil society organizations conducted sachet brand audits in 34 locations, collecting a total of 9,698 sachets. The top five sachet polluters were found to be Wings (1251 sachets), Salim Group (672), Mayora Indah (629), Unilever (603), and Kapal Api Group (454). Wings and Unilever primarily focus on personal care and household products, while Salim Group, Mayora Indah, and Kapal Api Global specialize in packaged food and beverages.

Among these top polluters, only <u>Unilever</u> and <u>Danone via PT</u> <u>Tirta Investama</u> have started waste reduction projects, in compliance with the MOEF Regulation No. 75/2019. Overall, the producers demonstrate a lack of commitment to reducing single-use plastic packaging, particularly sachets, within their waste reduction roadmap.



The task of recovering sachets from the garbage piles at Tuban beach, Indonesia, is fraught with challenges for the young volunteers of the ECOTON Foundation.

TOP 10 POLLUTING COMPANIES IN INDONESIA

PARENT COMPANY	TOTAL SACHETS
Wings	1251
Salim group	672
Mayora Indah	629
Unilever	603
PT Santos Jaya Abadi	454
Perfetti Van Melle	219
Danone	204
CV Dwi Tunggal Jaya	188
Ajinomoto	187
PT. Garudafood Putra Putri Jaya	147

Philippines Summary

Percent of total num collected sachets:	ber of 32%
Number of sachets:	10,801
Volunteers:	130
Total Brands:	784
Audit Locations:	6

Brand Audits in the Philippines were conducted from October to December 2023, across the following locations: Metro Manila, Malabon City, Dasmarinas City, Davao City, Iloilo City and the municipality of E.B. Magalona. A total of 10,801 pieces of sachets were gathered and examined to determine the top five sachet polluters: Yes 2 Healthy Life (1028 sachets), Mayora Indah (902), Procter & Gamble (889), Nestlé (771), and JG Summit Holdings (673). Similar to assessed regional data, the majority of the collected sachets were packaging for food and household products.

In the Philippines, none of the top 10 have invested in upstream solutions like reuse and refill systems at scale. Producers such as Nestle and Procter and Gamble recently faced consumer <u>complaints for false recyclability claims</u>. Many fast-moving consumer goods companies like them are still adamant in pursuing recycling and false solutions such as co-processing in cement kilns and plastic credits as the answer to the plastic crisis.



Volunteers with the Mother Earth Foundation, Philippines sorting the sachets by size to analyze them for the brand audit.

TOP 10 POLLUTING COMPANIES IN THE PHILIPPINES

PARENT COMPANY	TOTAL SACHETS
Yes2HealthyLife	1028
Mayora Indah	902
Procter & Gamble	889
Nestlé	771
JG Summit Holdings	673
Unilever	598
Wings	301
DXN Industries	276
Alliance Global	260
Monde Nissin	250

Vietnam Summary

Percent of total num collected sachets:	ber of 10%
Number of sachets:	3,238
Volunteers:	32
Total Brands:	395
Audit Locations:	6

The sachet pollution audit in Vietnam presents a nuanced picture, with notable variation across different settings. In rural areas of Da Nang, sachets are particularly prevalent, averaging 130.54 per kilogram of plastic waste. In contrast, Da Nang's beaches have a sachet density of 42.31 per kilogram, with open city areas showing a lower average of 15.36 sachets per kilogram, and indoor areas seeing about 93.14 sachets per kilogram. Hoi An's outdoor and indoor areas feature 89.1 and 73.63 sachets per kilogram, respectively. This disparity underscores the necessity for targeted waste reduction strategies within Vietnam to combat sachet pollution effectively.

Leading the list of sachet producers is the International Dairy Joint Stock Company (IDP), with a significant count of 328 sachets, mostly from their KUN Fruit Milk Guava Flavor. TH Milk Food Joint Stock Company is second with 175 sachets, known for products like TH True Milk. Coming in third is Nestlé Vietnam with 164, followed by Vinamilk (130), Acecook Vietnam (102), ThaiBev (78), Bibica Corporation (73), Orion Food Vina (68), CJ Cau Tre Food Joint Stock Company (64), and FrieslandCampina (64).



Enthusiastic, young volunteers being trained by the Center for Adaptive Capacity Building Research (CAB), Vietnam to conduct a sachet brand audit to measure the impact of these single-use packets in the country.

TOP 10 POLLUTING COMPANIES IN VIETNAM

PARENT COMPANY	TOTAL SACHETS
International Dairy Joint Stock Company (IDP)	328
TH Milk Food Joint Stock Company	175
Nestlé	164
Vinamilk	130
Acecook Vietnam Joint Stock Company	102
ThaiBev	78
Bibica Corporation	73
Orion Food Vina Co,. Ltd	68
CJ Cau Tre Foods Joint Stock	64
FrieslandCampina	64

Chapter 1

Single-Use Plastic and Sachet Situation

Sachet pollution has emerged as a significant environmental concern in India. Rapid economic growth and increasing urbanization have led to increased consumption of products such as shampoo, oil, detergent, and condiments often packaged in small, nonbiodegradable sachets. Fast moving consumer goods (FMCG) brands claim that sachets can provide essential goods at low prices, often selling for as little as INR 1. However, this practice contributes significantly to plastic pollution and environmental degradation, while posing challenges for waste management systems.



Volunteers from the Kashtakari Panchayat, Pune, India, sorting their brand audit sachet samples.

According to a <u>government report</u>, India 25 generates an estimated 26,000 tonnes of plastic waste daily, with sachets constituting a substantial portion of this waste stream. In India, <u>a recent study</u> revealed troubling numbers: "three out of four FMCG units sold in the country are in small formats (below 50 g or 50 ml in size), and nearly half of these small formats (48%) are sold in the form of sachets (below 10 g or 10 ml in size)."

Sachet pollution poses grave threats to terrestrial and aquatic ecosystems, with adverse impacts on biodiversity and human well-being. Despite regulatory efforts in India such as the <u>Plastic Waste Management</u> <u>Rules 2016</u> - which includes <u>Guidelines for</u> <u>Assessment of Environment Compensation</u> for violation offenses - enforcement challenges and inadequate waste management infrastructure exacerbate sachet pollution across urban and rural areas.

How the Government is Tackling Plastic Pollution

FROM BANS TO PHASE-OUTS TO RECATEGORIZATION

The <u>Plastic Waste Management Rules of</u> <u>2016</u> (PWM Rules 2016) <u>set restrictions on</u> <u>manufacturers</u> for storing, packing, or selling gutka (chewing tobacco), tobacco and paan masala in sachets made of plastic materials in any form including vinyl acetate, maleic acid, and vinyl chloride copolymer. It placed the primary responsibility for the collection of used multilayer plastic sachets or pouches, with the producers, importers and brand owners who introduce the products in the market. This directive was reiterated in October 2020, as a response to the widespread flouting of the older legislation and the environmental threat posed by littered plastic sachets and pouches.

The PWM Rules 2016 also marked a significant milestone by instituting mandatory measures for plastic producers, importers, and brand owners (PIBOs) to develop methods for plastic waste management under the principles of Extended Producer Responsibility (EPR). A noteworthy feature of the EPR rule was its ambitious goal to eliminate non-recyclable plastics from production within a mere two years, which should include sachets. However, the rule lacked a roadmap for the phaseout.

In 2018, the Union Ministry of Environment, Forest and Climate Change <u>made a significant</u> <u>change to the EPR regulations</u> regarding plastic waste. They replaced the term "nonrecyclable plastics" with a vague criterion -"plastic which is non-recyclable or non-energy recoverable with no alternate use". This dilution led to a shift from a supposed phaseout to various disposal methods like waste-to-energy and plastic-to-roads. Clearly, it was a missed opportunity to tackle the root cause of the problem: plastic production.

CONCERNS REGARDING ENVIRONMENTAL IMPACT

The new EPR rules are problematic because they do nothing to stop the production of plastics. They not only ignore the growing problem of too much plastic but also encourage disposal methods that are harmful to human health and the environment. These end-of-life processes almost always release a <u>plethora of toxins</u> in the <u>atmosphere</u>. Certain chemicals, such as dioxins, phthalates, and furans, are recognized as among the most toxic synthetic substances produced by humans. These chemicals can significantly <u>impact health and longevity</u> across multiple generations.

Before the EPR, non-recyclable and low-value plastics were primarily sent for dumping or burning. EPR implementation provided a framework for the PIBOs to potentially collect such waste. However, due to the nature of these plastics, the only available waste treatment options are co-processing (where plastics are incinerated at high temperatures in cement kilns), and road construction, in which plastic waste is mixed with paving materials.

ISSUES WITH EPR LAWS IN INDIA

A key challenge with the EPR regulations is that the producer organizations or 'PIBOs' do not cover the entire cost of collecting and treating waste. Currently, as per the EPR laws, there is no minimum financial responsibility for PIBOs to ensure that non-recyclable plastics such as sachets are collected and disposed off properly. Hence, PIBOs are unwilling to front the actual costs of collection, sorting and processing this waste. For example, in India, some companies pay for the collection of Multi-Layered Plastic (MLP) waste. As most sachet waste falls under this category, actual collection costs are substantially higher than the rates paid. Rates must be negotiated through an intermediary, and as such informal waste pickers or workers employed by municipalities lack access to the PIBOs. However, these rates prove uneconomical when considering transportation costs and the physically demanding nature of waste collection. The recent amendment to the EPR laws converted the EPR into a geographyneutral policy. This has exacerbated the implementation of EPR in remote areas like

Andamans, Lakshadweep, and the Himalayas, as PIBOs now prioritize locations with minimal costs.

The government has demonstrated a clear commitment to addressing plastic waste. Yet corporate interests have overshadowed the need for truly long-term and grassroots level solutions. The voices and experiences of those actively involved in waste collection, such as those of waste pickers, are often ignored in policy and they are not involved in stakeholder consultations.

A key element of successful EPR regulations is that <u>the cost of an EPR certificate should</u> <u>accurately reflect the cost of environmentally</u> <u>safe collection and material processing</u>. It should also create employment and ensure fair compensation for all individuals engaged in the sector. This would ensure EPR regulations align with both environmental sustainability and social equity values, and foster a more balanced and inclusive perspective in tackling the plastic waste challenge.

Solutions

TRADITIONAL PRACTICES

The Indian sub-continent has several cultural and traditional practices which are truly circular in nature and thus do not produce waste. Such practices also encourage reuse of items.

1 Use of homemade and locally available products for personal care

Traditionally in India, natural materials have been used to bathe, wash clothes, and as other cleaning agents. Examples include soapnut, salt, homemade vinegar, different kinds of flours (for bathing), powdered forms of plants such as neem, turmeric, amla/ gooseberry, twigs of trees such as babool (acacia), and guava for cleaning teeth. The synthetic chemical industry has disparaged local products as inefficient or indicative of low social and financial status, leading to a decline in their use. Yet, there is a promising resurgence in communities embracing this traditional lifestyle.

2 Mindful buying and use of clothes made from natural materials

The rise of synthetic clothes, crafted from plastic polymers, is a recent phenomenon. These cheap fibers pose risks of chemical leaching into the body and contribute to microplastic pollution during washing. Factory production of synthetic garments has led to the decline of traditional artisan communities. Before synthetics, people appreciated the labor involved in transforming plants into fabric, reserving new clothing purchases for festivals and special events. Clothes were of higher quality and often passed down through generations.

3 Sale of household items in *kirana* stores

A *kirana* store, a local shop selling daily grocery items like cooking essentials, traditionally offered goods without packaging. Customers would bring their own containers such as cloth bags or dabbas, which minimized plastic waste. The proliferation of cheap polybags driven by advertising has largely dismantled this system, and promoted a heavy reliance on plastic packaging, but thankfully many still operate under a "bring your own bag" scheme and use old newspapers to wrap small-sized products.

4 Use of traditional foods and materials for sale of ready-to-eat food

Ready-to-eat food once consisted of locally made delicacies like samosas, chaat, and pani puri, served on sustainable plates and in containers made of steel, leaves, clay, and glass. These materials were compostable or long-lasting. However, the rise of plastic packaged fast food has displaced these low-impact local foods and containers, sourced locally and with minimal climate impact.

Sachets from waste picker's perspective:

Vidya Naiknaware, a waste picker with the SWaCH Cooperative said, "We consistently encounter an issue with these tiny wrappers and sachetsthey cannot be composted or recycled due to their negligible value. Their size makes them practically impossible to collect. We urge companies to produce packaging which we can pick up and send for recycling, or which can be composted. Furthermore, we appeal to the government to involve us in drafting plastic regulations, as these policies directly impact our livelihoods and environment."



Volunteers from Paryavaran Mitra, Ahmedabad, Gujarat, gathering sachet samples from a nearby landfill for their brand audit study.

Top 10 Polluting Companies in India

PARENT COMPANY	TOTAL SACHETS
Balaji Wafers Pvt. Ltd.	1291
Wadia Group	1235
Unilever	608
Arusuvai Masala And Foods Private Limited	533
ITC Limited	618
Vimal Group	282
Tamil Nadu Cooperative Milk Producers Federation Limited (TNCMPFL)	253
PepsiCo	248
Amul - The Taste of India	204
Tirumala Milk Products Pvt Ltd.	166

Figure 10. Top 10 Polluting Companies in India, according to sachet brand audit data

Chapter 2 INDONESIA

Introduction: The Plastic Quandary in Indonesia

Indonesia generates a staggering amount of waste annually, producing <u>almost 18 million</u> <u>tonnes of waste in 2023</u>. While the country has been developing its solid waste management infrastructure, in parallel with new regulations, a significant amount still pollutes its land and water bodies. Nearly a third of Indonesia's solid waste goes unmanaged, in part because of the widespread use of single-use sachets for everyday products like coffee, condiments, and shampoo. Leading companies have heavily relied on such packaging, leading to a concerning presence of these sachets in coastal areas, rivers, and even inland environments.

Brand audits conducted across various provinces identified these companies' products as major contributors to plastic pollution, particularly in regions lacking proper waste management infrastructure. Based on brand audits in 36 locations across 11 provinces, five brands account for over 30% of the identified pollution: Wings, Salim Group, Mayora, Unilever, and PT Santos Jaya Abadil. Moreover, their products were also found in all brand audit locations in Indonesia.

Because they have a ubiquitous presence in daily life, many of these products are found in coastal, inland, and river environments. This raises a significant concern particularly in regions with limited waste management infrastructure, such as the Eastern Indonesian provinces of Maluku and Nusa Tenggara Timur. Many areas lack essential facilities like final disposal sites (TPAs) or landfills, leading to environmental contamination through factors like waste leakage, open burning, and incineration. These practices pose significant threats to public and ecological health.

Highlighting the urgency of addressing improper waste management practices, <u>over</u> <u>30 landfills in Indonesia caught fire in 2023</u>. The fires not only affected air quality in these locations but also disrupted vital services such as flight operations. This widespread issue emphasizes the need for improved waste management strategies across the country.

Navigating the Maze: Regulatory Responses

The Indonesian government has attempted to address this issue through legislation. The Law on Solid Waste Management (UU No. 18/2008) and the Government Regulation on Management of Household and Household-like Waste (PP No. 81/2012) outline producer responsibility requirements, including participation in waste reduction, recycling, and reuse activities. UU No. 18 sought to improve solid waste management in Indonesia, and even outlined the closure of all open dumpsites by 2013. The Ministry of Environment and Forestry (MOEF), however, found that there were still 167 open dump sites in operation, according to an 2018 SIPSN report.

The Ministry of Environment and Forestry (MOEF) introduced <u>Regulation No. 75/2019</u> in the <u>Roadmap to Waste Reduction by Producers</u>, establishing a more robust framework for Extended Producer Responsibility (EPR). This law mandates that industries - including manufacturers, retailers, and food and beverage services - develop a roadmap to reduce 30% of the waste from their products and packaging within a decade. It also outlines a ban on single-use sachets under 50 ml by 2030.

Additionally, producers are required to submit their waste reduction roadmap documents to the MOEF. Despite these regulations, implementation remains a significant hurdle. As of June 2023, <u>only a fraction</u> (42 out of over 5,000) of obligated producers have submitted their waste reduction roadmaps, with even fewer (16) actively implementing them. Additionally, concerns exist regarding the transparency and accessibility of these roadmaps.

Unsustainable Solutions: A Flawed Approach

Companies worldwide face the challenge of operating sustainably, encompassing not only economic profit but also considering their environmental and social impact. However, certain unsustainable practices persist in some companies in Indonesia. One example is the promotion of plastic recycling as a solution. Only 2% of plastic is truly "effectively recycled" In Indonesia, this is practiced through networks of bank sampah (waste banks), in coordination with communitylevel waste segregation programs. However, treatment options like incineration and chemical recycling are often promoted, despite their inherent issues. Incinerators contribute to air pollution, while chemical recycling requires significant energy and can generate hazardous waste.

In 2017, Unilever Indonesia introduced the CreaSolv Process - a waste recycling technology developed in collaboration with the Fraunhofer Institute in Germany. The company claimed that this technology will help unlock the recycling and reuse potential of multilayer plastic packaging waste, such as sachets. It opened its pilot facility in 2018 in Sidoarjo, East Java, claiming that the technology can



Volunteers with Ecoton Foundation had to sift through a massive landfill in Mojokerto, Indonesia, in search of sachets. recycle polyethylene (PE), a key material used as one of the layers in many multilayered sachets. The CreaSolv project, however, <u>was</u> <u>quietly terminated</u> after only two years of operation. GAIA <u>cited logistical difficulties</u> of sachet collection, as well as the low pay offered to waste pickers. Other stakeholders along the chain, especially bank sampah, also took a hit following the closure of the Sidoarjo plant, forcing some operators to burn collected sachets that are taking space in their facilities.

Under <u>Presidential Regulation No. 35/2018</u>, Indonesia initially sought investments to build waste-to-energy (WTE) facilities to treat up to 64 million tons of waste per year. The Corruption Eradication Committee, however, <u>advised authorities to halt their</u> <u>WTE plans</u> because of the financial burden it will pass onto local governments. According to estimates from the Ministry of Energy and Mineral Resources, the government would <u>require USD 1.16 billion</u> in investments to build WTE facilities in 12 cities.

The anti-corruption agency recommended exploring less expensive waste disposal options, hence the emerging trend of using <u>plastic waste as refuse-derived fuel (RDF)</u> in the cement industry. Under this scheme, cement companies replace coal with RDF as alternative feedstock for their operations. They have used agricultural waste from oil palm, coconut, rice husks, and corn. The government, however, saw the potential of utilizing the country's 34 cement factories as offtakers of RDF materials made from municipal waste. PT Solusi Bangun Indonesia Tbk (SBI), one of the top cement companies in the country, has established RDF projects in partnership with FMCG companies like Unilever. According to SBI, two of its RDF projects in Narogong and Cilacap can potentially process 30,000 tonnes of plastic waste annually.

Indonesia and many other emerging markets face collection and recycling challenges with regard to sachet waste, further worsening the plastic crisis. In one study, tofu in Tropodo, East Java, were found to be contaminated with 565 microplastics. ECOTON believes that these microplastics are possibly fragments from sachet packaging materials. In another case, a recycling company in Mojokerto used rejected sachet materials as feedstock for its operations. In addition, they found small plastic fragments from the Mojokerto facility were spreading in the environment, posing a potential health risk to workers and residents. Furthermore, workers have complained about the strong smell coming from the recycling process.

These examples highlight the need for companies to move beyond promoting unsustainable solutions, and to embrace responsible practices throughout their operations.

Embracing a Sustainable Future: Recommendations

Addressing the plastic pollution crisis in Indonesia requires a multi-pronged approach, encompassing both government regulations and responsible actions by corporations and individuals.

Recommendations for the Government:

- Strengthening regulations and banning single-use plastics: Enforce the existing ban on single-use plastics, including sachets, outlined in MOEF Regulation No. 70/2019. This regulation should be actively enforced to ensure compliance and accelerate the transition away from single-use packaging. Indonesia is on the right track: more than 100 cities have already enacted bans on single-use plastics, particularly shopping bags.
- 2 **Building a robust refill ecosystem:** Implement policies that encourage and facilitate the development of refill businesses.

This can be achieved by:

- Adapting existing regulations: Build upon existing regulations like <u>BPOM No.</u> <u>12/2023</u> and the <u>PR3 Standards</u> to create a robust framework for safe and reliable refill businesses.
- *Supporting existing businesses:* Provide support to existing refill businesses like <u>Kecipir</u>, <u>Allas</u>, and <u>Balikin</u>, showcasing the potential of this approach.
- **3 Promoting local production and job creation:** Banning single-use plastics creates opportunities for local production of reusable alternatives. This can be facilitated by:
 - *Promoting local producers:* Encourage and incentivize local businesses to manufacture and distribute reusable alternatives.
 - *Creating a level playing field:* The shift away from single-use plastics should create a fair market environment for local businesses to compete with multinational companies.



Greenpeace volunteers auditing sachets from the Cika-Cika, Cikapundung River in Bandung, Indonesia.

Recommendations for Corporations:

- **1 Shifting distribution systems:** Move away from the reliance on single-use packaging by exploring alternative distribution models. This can involve:
 - Collaboration: Partner with refill businesses and companies like <u>Saruga</u> and <u>Siklus</u> to explore technology and information exchange.
 - *Innovation:* Investigate and implement innovative solutions like reusable packaging and deposit schemes.
- 2 **Transparency and accountability:** Increase transparency by publicly disclosing waste reduction roadmap documents and progress reports. This allows for public scrutiny and holds companies accountable for their environmental commitments.

- **3 Investing in sustainable practices:** Invest in research and development of truly sustainable solutions for plastic waste management, moving beyond methods like incineration and chemical recycling.
- **4 Supporting refill businesses:** Partner with refill businesses to create a comprehensive network of refill options for consumers.

Leveraging Global Collaboration:

Active participation in the Global Plastics Treaty led by UNEA is crucial to:

- **1 Building global commitments:** Encourage ambitious global goals on plastic reduction and support the development of reuse and refill systems to replace single-use plastics.
- **2 Pressuring multinational companies:** Work with other governments to hold multinational companies accountable for their environmental impact and encourage them to adopt sustainable practices globally.

Top 10 Polluting Companies in Indonesia

PARENT COMPANY	TOTAL SACHETS
Wings	1251
Salim group	672
Mayora Indah	629
Unilever	603
PT Santos Jaya Abadi	454
Perfetti Van Melle	219
Danone	204
CV Dwi Tunggal Jaya	188
Ajinomoto	187
PT. Garudafood Putra Putri Jaya	147

Figure 11. Top 10 Polluting Companies in Indonesia, according to sachet brand audit data

Chapter 3 PHILIPPINES

Sinking in Sachets

The Philippines is inundated with plastic pollution in part due to the prevailing sachet economy driven primarily by corporations. Every day, a staggering 164 million plastic sachets are used and discarded, building up to a yearly estimate of 59.8 billion pieces. This figure is enough to bury the entire Metropolitan Manila area under a foot of plastic waste. At least 62% of these plastic sachets are multilayered, commonly used for liquid products and powdered drinks.

This sachet-dependent economy began when corporations hijacked the oncesustainable Filipino practice of *tingi*, or purchasing small quantities of products. In the *tingi* culture, consumers carry reusable containers to purchase their basic commodities. Businesses capitalized on this trend by creating a system of tiny plastic packaging under the pretense of convenience and ease of consumption. This strategy has led to substantial profits, resulting in the proliferation of consumer goods packaged in disposable, non-recyclable sachets.

However, these small sachets pose significant problems, constituting approximately 52% of the plastic waste stream. This contributes to various socio-environmental challenges, including blocked waterways, biodiversity loss, health risks, exacerbated social injustices, livelihood disruptions, and intensification of the climate crisis.

Deeper in the Plastic Pit

For a disaster-prone country like the Philippines – ranked highest on the World Risk Index – the negative impacts of single-use plastics on the environment and society are even more palpable. A 2023 Resource Futures report shows that around 218 million people in the world's most vulnerable communities are at risk of more severe and frequent flooding due to plastic pollution. This poses a greater risk for the Philippines, which bears the brunt of some of the world's strongest extreme weather events.

Recent studies have revealed the ubiquity of plastic pollution in the Philippines. Microplastics were detected in Metro Manila's air as well as in the surface water of Laguna de Bay, the country's largest freshwater lake. Microplastics were also found in several fish species particularly bangus (milkfish), a common food for Filipinos. Plastics have also contaminated various water sources including the Panigan-Tamugan Watershed in Davao City, a vital source of potable water for urban and rural communities in the region. The proven presence of microplastics in food and water sources highlights the high possibility of Filipinos ingesting plastic particles harmful to the human body.

Plastic pollution also aggravates existing social injustices. Marginalized and low-income communities bear a disproportionate burden, magnifying the inequities they are already suffering. In 2022, together with Filipino consumers, a number of community fisherfolk filed a complaint against some of the biggest corporations in the country for dangerous plastic packaging and false 'recyclable plastic' ads, citing the detrimental effects of plastics, including sachets, damaging small fishing boats and polluting mangrove ecosystems. Plastic pollution has led to the destruction of fishing grounds and marine habitats, ultimately causing a decline in fish catch.

It is important to note, however, that plastic pollution begins with the extraction of fossil fuels from the ground and persists throughout the plastic life cycle, harming people and contributing to the climate crisis whether it is discarded in landfills, left in the environment, or burned in incinerators. Locally, residents near a petrochemical plant in Batangas have reported dizziness, stomach aches, and vomiting; they describe the chemical stench from the facility as similar to burning plastic.

Surface-Level Interventions and the Myth of Recycling

Despite their proven harmful impacts, sachets generally remain unregulated in the Philippines. According to the National Solid Waste Management Commission, around 489 local government units have legislated policies addressing single-use plastics. However, these ordinances are mostly focused on plastic bags and polystyrene; even in the more comprehensive regulations, plastic sachets and packaging have been largely excluded.



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It is worth noting that several local governments like <u>Quezon City</u>, El Nido, Batangas City, <u>Palawan</u>, San Fernando, <u>Pampanga</u>, and <u>Siquijor</u> have been more proactive in addressing plastic pollution, with their respective ordinances also covering water bottles, straws, utensils, and other plastic containers, in addition to the common plastic bags. The popular island of Boracay, in its bid to become a more environmentally friendly tourism hotspot, <u>passed an ordinance banning an expanded list of single-use plastics</u> that dining establishments and hospitality businesses are required to follow. This list includes toothpaste tubes, cups, cutlery, toiletries, and sachets of coffee, sugar, creamer, shampoo, and conditioner.

Corporations have responded to the plastic crisis, albeit inadequately. Despite their public commitments to plastic waste reduction, many <u>big brands have failed to scale down their</u> <u>plastic production</u>. In the Philippines, a number of these corporations resort to downstream solutions such as cleanups, waste recovery, incineration in cement kilns, and recycling, without acknowledging that relentless plastic production is the root cause of plastic pollution. Nestle Philippines, for example, relaunched its "Plastic Drop PH" program headlined by an information drive in <u>major media networks</u>, and set up various <u>plastic collection points</u> across the country, but has not taken action to reduce production. Similarly, Unilever Philippines' sachet collection program, <u>"Misis Walastik," incentivizes plastic waste collection among communities</u>.

Waste recovery, however, is an intermediate step, and the bigger question lies after sachets are collected. Nominally, corporations claim that the collected single-use plastics are "recycled" but in reality, these plastics are "downcycled" in a process that converts them to another type of product that is lower in quality and functionality and often can't be recycled again. Recycling becomes a stop-gap solution that merely delays waste generation, the benefits of which are not often applicable to sachets given their low resource value. In reality, <u>less than 10% of all plastics ever produced have been recycled globally</u>. In addition, <u>recycled plastics are found to contain higher levels of chemicals</u> toxic to people, including flame retardants, benzene, and other carcinogens.

Recycling is not the only toxic endgame corporations resort to in disposing of the collected plastic waste. Waste-to-energy facilities, and co-processing in cement kilns are on the rise, but dangerous to human and environmental health. Co-processing is used for "plastic neutrality" efforts by some of the biggest FMCG companies in the country, with partners such as <u>Republic</u> <u>Cement</u>, and <u>Holcim Philippines</u>. These thermal treatment processes release toxins such as ash and wastewater. <u>Pollutants</u> generated from the burning of plastics include carbon monoxide, dioxins and furans, particulate matter, and volatile organic compounds.



Volunteers from Greenpeace-Philippines sorting sachet waste in the Iloilo province in the Philippines.

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Call for Incisive Legislation

The Extended Producer Responsibility (EPR)

Act of 2022 was initially envisioned to be a milestone in addressing the deluge of singleuse plastics overwhelming the Philippines. While a meaningful step, the law lacks ambition as it only mandates waste recovery targets for businesses. It only requires plastic producers to collect and recycle plastic waste without compelling them to find ways to reduce plastic production and use. The EPR Act lacks bans and plastic reduction targets, and this gap only allows corporations to continue their relentless plastic production. In addition, the law permits recovered plastics to be burned or melted for other uses, creating more harm than good.

The proposed Single-Use Plastic Packaging

Products Regulation Act filed in the Philippine Congress, if strengthened, can address the gaps in the current EPR Act. To effectively address the plastic crisis, it must solidify upstream and midstream interventions by (1) enacting a national ban on single-use plastic products and packaging like sachets, (2) excluding offsetting schemes and harmful technologies, and (3) cultivating an environment that will enable reuse and refill systems to flourish.

Communities around the country are also doing their part in tackling this growing problem through reuse and refill-based initiatives, reclaiming the once sustainable tingi culture and making sustainability more accessible to the common Filipino. "Kuha sa *Tingi*", for example, is a project by Greenpeace Philippines and RippleX in partnership with local government units, initially with San Juan City and Quezon City. Refill stations were installed in *sari-sari* stores (community variety stores) where consumers can bring their reusable containers and conveniently purchase basic commodities at an affordable price. Mother Earth Foundation's "JuanaZero" project aims to transform sari-sari stores into zero waste stores in marginalized and low-tomedium income communities. It offers common kitchen products and basic condiments such as soy sauce, vinegar, fish sauce, and cooking oil in packaging-free and reusable packaging. Most of these products are locally produced to support the local economy of the community.

Towards a Plastic-Free Philippines

The scourge of sachets to people and the planet outweighs any form of convenience that corporations promise. The sheer volume of sachet packaging waste is putting a massive burden on the Philippines' already overwhelmed waste management system. The country's plastic crisis demands urgent, decisive, and comprehensive action. The unregulated and irresponsible production of sachets, along with other single-use plastics, has not only polluted the environment but also aggravated social injustices and health risks, especially for marginalized and vulnerable communities. While some progress has been made at the local level with initiatives targeting plastic regulation and promoting reuse and refill systems, so much more needs to be done.

Legislations such as the Extended Producer Responsibility Act and the proposed Single-Use Plastic Packaging Products Regulation Act are steps in the right direction but must be strengthened to include ambitious targets for plastic reduction and a ban on single-use plastic products like sachets. The <u>Ecological Solid Waste Management Act's list of Non-Environmentally</u> <u>Accepted Products and Packaging (NEAPP)</u> must likewise be implemented. Corporations need to take responsibility by reducing plastic production and investing in truly sustainable solutions beyond mere waste recovery. Communities have paved the way towards reuse-based systems, and it is time for businesses and corporations to immediately follow suit.

Top 10 Polluting Companies in the Philippines

PARENT COMPANY	TOTAL SACHETS
Yes2HealthyLife	1028
Mayora Indah	902
Procter & Gamble	889
Nestlé	771
JG Summit Holdings	673
Unilever	598
Wings	301
DXN Industries	276
Alliance Global	260
Monde Nissin	250

Figure 12. Top 10 Polluting Companies in the Philippines, according to sachet brand audit data

Chapter 4 VIETNAM

Single-Use Plastic and the Sachet Situation

In Vietnam, the dilemma of handling plastic packaging, such as sachets, plays a major role in the plastic pollution crisis impacting land and sea environments alike. Per capita plastic consumption in the country has increased 10.96% annually from 1990 to 2017, reaching 63 kg. With a population of more than a 100 million, this country now generates about 570,000 tonnes of mismanaged plastic waste yearly, or 0.34 kg per capita each day. Investigations into the country's waste composition reveal that takeaway food packaging, predominantly consisting of sachets and similar single-use plastics (SUPs), dominates the waste stream, representing 94% of items by number and 71% by weight. Despite this, only 20% of plastic waste undergoes recycling, indicating a significant gap in effective waste management and recycling practices. The recycling rate for sachets and thin-film plastic bags is notably low, reflecting the challenges in processing these materials and the need for improved waste management strategies to address the proliferation of non-biodegradable packaging in Vietnam.

Government Policies

Vietnam is at the forefront of addressing the environmental challenges posed by sachets and plastic packaging, leveraging a comprehensive array of corporate initiatives and government policies. The cornerstone of Vietnam's efforts is the Environmental Protection Law of 2020, which sets the stage for stricter regulations and responsibilities concerning plastic waste management. The law includes specifics on reducing, reusing, recycling, and processing plastic waste, as well as combating plastic waste pollution in the ocean (Article 73). The government issued Decree No. 08/2022/ND-CP establishes a timeline to restrict the production and import of single-use plastics, effectively phasing out certain non-biodegradable packaging after 2030. The ban includes small-format packaging with a dimension of 50 cm x 50 cm, and thickness less than 50 microns. Effective 2025, single-use plastics will no longer be available for distribution in commercial centers, supermarkets, hotels, and tourism areas.

Restrictions on the use of sachets and plastic packaging in food services and tourism, as well as environment-friendly alternatives, are also outlined in Resolution No. 36-NQ/TW. This plan is aligned with the ASEAN Regional Action Plan for Combating Marine Debris (ASEAN RAP), focusing on three strategic pillars: reducing the entry of plastics into ecosystems, bolstering waste management frameworks to minimize leakage, and encouraging the valorization of waste through enhanced recycling and reuse practices. The ASEAN RAP has the potential to become a regional platform for sharing best practices in addressing plastic pollution. Ideally, the platform presents an opportunity for Vietnam to learn more about reuse models in Indonesia and the Philippines, or Singapore's proposed deposit-return scheme for drinking containers. The roadmap suggest reducing the influx of non-biodegradable packaging by addressing the most commonly identified culprits, such as sachets. The roadmap's policy proposals encompass a blend of regulatory measures, economic incentives, and outright bans on certain types of non-biodegradable packaging, aiming to shift consumer and producer behaviors toward more sustainable options.

These policy measures are designed to ensure a smooth transition away from reliance on non-biodegradable packaging, aiming to mitigate economic impacts while fostering environmental resilience. Vietnam's proactive stance and strategic planning in reducing non-biodegradable packaging not only exemplify its commitment to environmental protection but also serve as a model for other nations grappling with similar challenges. This holistic strategy highlights the importance of meticulous planning, robust regulatory frameworks, and international cooperation in addressing the global crisis of plastic pollution.

Additionally, Directive No. 33/CT-TTg

emphasizes the importance of managing, reusing, recycling, processing, and minimizing plastic waste. While the end goal is to complete the phaseout by 2031, the government has encouraged phased implementation in coastal areas and tourism destinations. GAIA, for example, has documented how <u>Hoi An</u> - home to a UNESCO World Heritage Site - managed to incorporate zero waste practices and single-use plastic regulations amid high tourism traffic.



Volunteers with the Center for Adaptive Capacity Building Research (CAB), Vietnam, sorting the sachet waste by size and brand, to help identify the top corporate polluters in their country.

i) National Resolutions and Action Plans: In the National Action Plan for Management of Marine Plastic Litter by 2030, Vietnam seeks to reduce marine plastic litter by 50 percent by 2025, and by 75 percent by 2030. While the action plan mainly addresses marine debris and environmental leakage, it has outlined reduction measures such as phasing out plastic bags by 2026, and other singleuse plastics by 2031. Resolution No. 36-NQ/ TW sets forth the Sustainable Economic Development Strategy for Vietnam's maritime economy, including goals to prevent, control, and significantly reduce marine environmental pollution by 2030. The National Action Plan for Management of Marine Plastic Litter by 2030 aims to dramatically decrease plastic waste discharge into the ocean.

ii) Financial and Tax Policies: To drive 41 consumer behavior towards sustainable choices, environmental taxes and fees on non-biodegradable packaging have been introduced, underlining economic incentives as a pivotal component of Vietnam's environmental strategy. Taxes are defined under the Law on Environmental Protection Tax (LEPT) No. 57/2010/QH12, Decree No. 67/2011/ND-CP and Resolution No. 579/2018/UBTVQH14 on Environmental Taxes.

iii) Distribution Restrictions: There are also restrictions on the distribution and use of non-biodegradable sachets and packaging in critical sectors like food services and tourism, with a mandate for eco-friendly alternatives, following the trajectory set by <u>Resolution No.</u> <u>36-NQ/TW</u>.

Zero Waste Solutions and Reuse

In Vietnam, the <u>reuse revolution</u> is reshaping the landscape of production and commerce, championing circular economy practices like never before. The country's <u>groundbreaking model</u> not only provides a blueprint for businesses to embrace circularity but also unveils the essential elements of circular business strategies. There is a greater recognition for such models, especially in key cities and tourism destinations in the country, coupled with the phased bans on single-use plastics. <u>Refillables Hoi An</u>, for example, is the first refill store in Central Vietnam, but has since caught the attention of similar businesses in the tourism town of Hoi An. Hotels, restaurants and coffee shops such as <u>Nourish Eatery</u> and <u>Urban Fresh</u> get their refills of soap and dishwashing liquid from the store.

Zero waste efforts have spread to educational institutions as well. The "<u>The Zero Waste School</u>" initiative focuses on reducing plastic waste by avoiding single-use plastics, recycling organic waste into compost, and repurposing items like milk cartons for classroom decorations. Despite these efforts, a waste audit revealed a significant amount of daily waste is still produced, mainly organic. The education center held a workshop to explore further waste reduction strategies, including using larger milk containers, making homemade yogurt, and encouraging the use of reusable containers. These discussions highlighted the staff's commitment to environmental sustainability and the challenges of integrating these practices into their routines, aiming for a healthier and cleaner future.

Meanwhile, Vietcycle Corporation has <u>introduced vending machines</u> in Hanoi called CyclePacking. The company plans to install these CyclePacking units in shopping malls, supermarkets, residential areas, and traditional markets. The vending machines allow customers to refill their own containers with various cleaning products. And in Central Vietnam, Evergreen Labs <u>has set up Glassia</u> - a decentralized glass water bottling model that provides drinking water in reusable containers. While its current operation is limited to Da Nang, Glassia plans to expand in Ho Chi Minh City and later scale their model nationwide.

Top 10 Polluting Companies in Vietnam

PARENT COMPANY	TOTAL SACHETS
International Dairy Joint Stock Company (IDP)	328
TH Milk Food Joint Stock Company	175
Nestlé	164
Vinamilk	130
Acecook Vietnam Joint Stock Company	102
ThaiBev	78
Bibica Corporation	73
Orion Food Vina Co,. Ltd	68
CJ Cau Tre Foods Joint Stock	64
FrieslandCampina	64

Figure 13. Top 10 Polluting Companies in Vietnam, according to sachet brand audit data

Conclusion

The prevalence of plastic sachets across Asia represents a dire environmental challenge, deceptively marketed as affordable, single-use convenience. Sachets have co-opted and replaced

the traditional and long standing practice of buying small quantities in reusable containers. Our research uncovered a staggering 33,467 sachets from 2,678 brands across four countries, illustrating the widespread adoption of this polluting packaging format.

Multinational corporations, through the Ellen MacArthur Foundation's (EMF) Global Commitment, have voluntarily pledged to transition to recyclable, reusable, or compostable packaging by 2025. However, they have made little progress in achieving their targets, let alone addressing the issue of sachets. EMF acknowledged that most signatories will likely miss their 2025 goal. Solutions to the sachet issue cannot solely rely on improved waste management services. This is because sachet materials are typically not recyclable, rendering waste collection ineffective. Even if sachets were made from recyclable materials, their small size presents challenges to the already overburdened waste management infrastructure, not to mention risks associated with both incineration and environmental leakage from landfill. These risks underscore the urgent need for action to address the environmental impact of sachet packaging.

FMCG executives <u>have even publicly</u> <u>acknowledged</u> that sachets have no value in waste markets and cannot be recycled. Yet questionable initiatives involving plastic waste burning, chemical recycling, collection schemes and plastic-to-roads feature in both government and corporate plastic roadmaps around the world.

Urgent and systemic action is needed. National governments have <u>responded to</u> the challenge of tackling plastic pollution by pursuing a legally binding global plastics treaty. Corporations - some of whose brands were identified in this study - have also supported the negotiations, by forming '<u>The Business</u> <u>Coalition for a Global Plastics Treaty</u>.' The alliance has called on government delegates to prioritize a reduction in plastic production and scale up reuse systems, and even to <u>prioritize</u> <u>phasing out problematic products</u> that have a high chance of leaking into the environment. Yet people impacted by the sachet economy continue witnessing a barrage of false solutions promoted by the same companies producing these sachets in the first place.

The top sachet polluter Unilever carries a huge responsibility to act on this issue. As a company that touts their sustainability initiatives in marketing and on the international stage, it is time they put their money where their mouth is. Unilever has pioneered terrible false solutions to give the public the impression they are tackling sachets, while the ex-CEO openly admits that sachets need to be gotten rid of. It's time for Unilever to commit to urgently phasing out sachets, and replace them with inclusive, accessible reuse and refill systems. Multinational companies are experts at influencing consumers to change their behaviors in favor of purchasing decisions now is the time for them to use this expertise to lead the shift away from single use sachets and towards sustainable reusable practices.

Likewise, regional corporations such as Mayora Indah, ITC, Wings, and JG Summit have no excuse to remain on the fence, continuing business-as-usual practices while waiting for their multinational counterparts to make the first move towards phasing out sachets. With the Global Plastics Treaty looming ahead, these regional corporations can get ahead of the game by quitting sachets and choosing reuse.

The Break Free From Plastic movement calls for innovative solutions that prioritize sustainability over convenience, and hold corporations accountable for their packaging choices. Consumer goods companies are urged to:

- Corporations must take immediate action to phase out or quit sachets, to effectively address the environmental, social and economic impacts of these single-use plastics.
- 2. **Reveal their plastic use** by providing public data on the type and quantity of packaging used in different markets, and the chemicals in that packaging.
- 3. End support for false solutions such as burning plastic and chemical recycling. Sending sachets and other plastic packaging to cement kilns isn't recycling.
- Redesign business models away from single-use sachets and other single-use packaging of any type - including novel materials such as bio-based or compostable plastics.
- 5. Invest in accessible, affordable reuse, refill or packaging-free product delivery systems in all markets, while ensuring a just transition for all relevant workers.

This report serves not just to identify the region's top sachet polluters, but also to inform the essential next steps toward catalyzing real change in the fight against plastic pollution.

In shining a spotlight on these corporations with this report, we would like to not only hold them accountable for their environmental impact, but also send a clear message to the FMCG industry at large, and compel companies to reassess their production practices and prioritize sustainable alternatives over singleuse sachets.

We hope this report also empowers consumers to make informed choices, encouraging them to support companies that prioritize environmental stewardship.

Through targeted action and collaborative efforts between stakeholders, together we can drive meaningful progress towards a future free from plastic pollution.



Volunteers from the ECOTON foundation advocate for a ban on single-use sachets after their brand audit at Tuban, Indonesia.

BRANDED: THE SACHET SCOURGE IN ASIA

Exposing the Top Sachet Polluting Companies with Brand Audits

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