

# WASTE NOT ASIA

THE QUARTERLY PUBLICATION OF GAIA ASIA PACIFIC



## COMMUNITY ACTIONS REAL SOLUTIONS



## FIRST WAVE

As the Earth drowns in plastic pollution, we are being inundated with stories about how big the problem is. We see disturbing images of plastic trash in oceans and of animals consuming them and dying. We read reports on the severity of the problem. We learn there is now plastic in the water we drink, and in the seafood we eat.

We are also flooded with false narratives and false solutions. In the global stage, Asia is still painted as the source of the problem—a narrative peddled by industry-supported research, and often picked up, repeated, and accepted without question. To some, the images of landfills and dumpsites, and trash in our streets and alleys are enough proof.

But we know this narrative is incomplete. There is a missing part—that in the very same countries tagged as worst polluters there are communities that are leaders in implementing Zero Waste. We have been repeatedly pointing this out, but that part of the narrative always gets dropped. Somehow, the thought that a country believed to be a source of pollution could also be a spring of solutions seems unfathomable.

But we know that indeed, solutions are coming from many of the countries tagged as sources of the problem. There are Zero Waste model communities in Asia, and there is active Zero Waste work in various countries in the region. We know, because we as a network have been working with communities.

That our work and solutions are missing in the discourse tells us that we need to tell our stories. As we promote and implement real solutions on the ground, let us also share our stories and celebrate our successes, big and small. It is only by sharing and amplifying our stories that we can successfully surface the missing part of the narrative in a way that it will be hard to miss.

That said, we humbly offer *Waste Not Asia* to be a platform for us to share our stories. In this maiden issue, we share the highlights of our biggest event of the quarter—the International Zero Waste Cities Conference held in Bandung, Indonesia last March. We also share some member stories and community actions that lead toward Zero Waste.

This issue is just the first wave of community stories. We hope to feature more such stories in our future issues. Let this serve as an invitation for you to share your stories with us to be featured in our publication.

We hope you'd find our first issue worth your precious time. And more importantly, that the stories of the featured members and communities will inspire you in your work and to keep you going.

You are not alone in this fight. We are all in this together.

In behalf of the GAIA Asia Pacific team,

**Sherma E. Benosa**  
Communications Officer



**ON THE COVER.** In this maiden issue, we begin highlighting the solutions coming from Asia in the hope that government leaders realize that the real solutions they have been looking for are already happening in their communities. Photos by Theeban Gunasekaran of Consumers Association of Penang (top and bottom left) and Horeb Moses of Citizen consumer and civic Action Group (bottom, right).

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## ALLIANSI ZERO WASTE INDONESIA HOSTS INTERNATIONAL ZERO WASTE CITIES CONFERENCE

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*“Enough is enough, we are shamed in the eyes of the world with images of rivers and seas filled with plastic waste as if we are not doing anything. We are working to reduce plastic waste through plastic bag charges and plastic bag bans, as well as developing Zero Waste programs at the district/city level. These actions prevent the leakage of plastic waste into rivers and seas in a real way.”*

*—Rahyang Nusantara*

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To support the “Three Months Trash-Free Movement” and commemorate the “National Waste Awareness Day 2018,” the Alliance of Zero Waste Indonesia (AZWI) in collaboration with the Directorate General of Waste Management, Hazardous Waste and Hazardous Materials–Ministry of Environment and Forestry, partnered with the West Java Provincial Government, Bandung City Government, Cimahi City Government, and Bandung Regency Government in hosting the International Zero Waste Cities Conference (IZWCC) on March 5-7.

The conference was attended by speakers and participants from 12 countries to talk about creating Zero Waste cities, where every single piece of trash produced in the city

biodegrades in nature or circles back to become raw material for production, so that very little trash is sent to landfills. It is also called the Circular City concept.

“One of the most important elements of a Zero Waste city is preventing the occurrence of plastic waste, especially single-use disposable ones, as they are mostly un-recyclable,” said Tiza Mafira, the Executive Director of the Indonesia Plastic Bag Diet Movement.

The problem of plastic waste, especially single-use plastics like plastic bags, needs to be resolved urgently. Indonesia has a target of 70% reduction in plastic marine debris by 2025 nationally but has not taken concrete action to prevent plastic waste.

Meanwhile, local governments have moved ahead of the central government. Banjarmasin City has enacted a plastic bag ban in June 1, 2016.

“We saw the opportunity presented by a trial to charge plastic bags in 2016, and took it a step further by banning plastic bags shortly afterward,” said Hamdi Bin Amak Hasan, Banjarmasin’s Deputy of Economic and Development. “This is one of the ways we are maintaining Banjarmasin City’s reputation as the ‘City of a Thousand Rivers.’ We want our rivers to be free of plastic waste,” he added.



The speakers during the opening session of the International Zero Waste Cities Conference together with representatives from the organizing committees.

In addition to the city of Banjarmasin, Bandung City, Cimahi City, and Bandung Regency have also pledged their commitment to reduce plastic bags.

“Currently, we are preparing regulations to require shops, such as supermarkets, to no longer use plastic bags,” said Mayor of Cimahi, Ajay M. Priatna, during the City Managers Forum event at Cimahi Technopark on 6 March.

The same thing was revealed by Dadang M Nasser, the Regent of Bandung, on IZWCC’s Village Managers Forum on March 7 at Gedung Sabilulungan, Soreang. “I would like all packaging in Bandung Regency to use materials derived from vegetable materials, such as cassava,” he said.

“Enough is enough, we are shamed in the eyes of the world with images of rivers and seas filled with plastic waste as if we are not doing anything,” said Rahyang Nusantara, National Coordinator of GIDKP, at the closing of IZWCC at Sabilulungan

Building on March 7.

“There are many things we are doing in districts/cities, such as in Bandung City, Cimahi City, and Bandung Regency. We are working to reduce plastic waste through plastic bag charges and plastic bags bans, as well as developing Zero Waste programs at the district/city level. These actions prevent the leakage of plastic waste into rivers and seas in a real way.”

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*“We want our rivers to be free of plastic waste.”*

*—Hamdi Bin Amak Hasan*

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The International Zero Waste Cities Conference was divided into different sessions held in various locations, at times simultaneously: Bandung City, Cimahi City, and Soreang City.

# ZERO WASTE: KEY TO ACHIEVING CIRCULAR ECONOMY

BY JED ALEGADO

**G**oing Zero Waste is the way to go for cities. This has been the conclusion of experts and practitioners in the recently held International Zero Waste Cities Conference in Bandung, Indonesia.

With the theme, “Breaking a ‘Linear’ City: Adopting Zero Waste Towards a Circular Economy,” the event gathered experts, local government leaders, and practitioners from key cities in Asia to discuss, learn, and share experiences in implementing Zero Waste programs.

During the opening plenary, Flore Berlingen of Zero Waste France highlighted the importance for local governments to invest in Zero Waste programs in order to achieve circular economy.

“In Europe, it is the municipalities, not the nations, that are leading the way to Zero Waste. Several hundreds of communities and cities in the EU have committed to Zero Waste and so they are moving very fast,” she said.

Zero Waste is a people-centered solution to the issue of waste. It is an approach to the use of our resources which ensures resource efficiency, resource recovery, and protection of scarce natural resources.

Berlingen also argued that incineration—or burning of waste—is not part of the solution to cities’ waste problems. “Incineration does not solve the problem of waste. We believe that the solution is moving towards circular economy—making our resources last longer,” she added.

Jack Macy of SF Environment, City of San Francisco, USA, echoed the need for local governments to invest in Zero Waste, citing examples from his city.

“Why do we have to go Zero Waste? Linear system is unsustainable; we need to move past beyond that. San Francisco has made a policy about Zero Waste. We need



*(Left) The speakers during one of the opening sessions of the International Zero Waste Cities Conference in Bandung, Indonesia; (Right) Flore Berlingen of Zero Waste France*

Zero Waste to manage waste on the landfill, to remove incineration, to promote the best use of waste management, and to increase the responsibility of consumers and producers,” Macy said.

Likewise, local government leaders from the Global South like the Philippines shared their experiences in implementing Zero Waste policies. Benedict Jasper Lagman, a city council member of the City of San Fernando in Pampanga, Philippines, shared the experiences of his city in enacting a plastic bag ban. The city has been hailed as a model city in implementing Zero Waste programs.

“We did baby steps to apply the policy on plastic bag ban. We educated the people on radio and TV. We started with Plastic-free Friday. Since 2015, we have totally banned the use of plastic bags. By now, 85% of the citizens are obeying the rules. Now we are aiming for plastic straw ban,” Lagman shared.

Currently, GAIA Asia Pacific member organizations BaliFokus Foundation, Citizen consumer and civic Action Group (CAG), EcoWaste Coalition Philippines, Consumers Association of Penang (CAP), Health Care Without Harm Asia (HCWH Asia), Mother Earth Foundation (MEF), Yayasan Pengembangan Biosains dan Bioteknologi (YPBB), Stree Mukti Sanghatana (SMS), War on Waste Negros Oriental (WoW Negros Oriental), and Thanal are implementing Zero Waste programs in key cities in the Philippines, India, Indonesia, and Malaysia.

Their project, Building and Supporting Zero Waste Cities: Developing Asia Pacific Models for Leading with Solutions at the Frontlines of the Plastics Pollution Crisis, or simply Zero Waste

Cities Project, is supported by the Plastic Solutions Fund (PSF). It aims at implementing Zero Waste practices in 16 cities; amplifying positive stories about Asian communities and activists involved in solutions-based organizing; and recognizing Zero Waste champions among partner city officials and waste workers.

PSF is an international funders’ collaborative that aims to turn the tide on plastic pollution in our oceans, rivers, land, and air. The Fund promotes innovative collaboration among individuals and institutions, support results-oriented grant making, and provide a trusted platform for new philanthropic investment in order to prevent plastic pollution.

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<https://bit.ly/2FRZb6c>

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*Incineration does not solve the problem of waste. We believe that the solution is moving towards circular economy—making our resources last longer.*

*—Flore Berlingen*

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## CORPORATIONS TOLD: OWN UP TO THE GLOBAL PLASTIC CRISIS

BY SHERMA E. BENOSA



**C**ompanies producing and earning from their problematic products should take on the responsibility for the global plastic pollution.

“It’s unfair for companies, who earn billions of dollars annually, to pass the burden and responsibility of managing the waste that their products create when cities and communities with limited resources are already burdened by it,” stressed Froilan Grate, regional

coordinator of GAIA Asia Pacific during the opening of the International Zero Waste Cities Conference in Bandung, Indonesia.

“Cities are already struggling to fund waste collection systems, and they are still left to address waste that communities can neither compost nor recycle,” he added.

In his presentation, Grate shared the results of waste and brand audits conducted in Philippine communities in 2017 showing that multi-nationals—Nestle, Procter and Gamble, Colgate-Palmolive, Unilever, Coca Cola—are among the top 10 plastic polluters in the country.

This finding is consistent with the results of a waste and brand audit conducted in 2017 by Philippine-based member organizations of the #breakfreefromplastic movement along the stretch of Freedom Island which showed the same companies in the top 10.

“The net income in 2016 of the top six multinational corporations polluting the Philippines is \$27 billion. As they rake in money for these problematic products, they are also making cities spend scarce resources to collect and manage this waste,” he said, citing the example of 17 Metro Manila cities spending \$87 million in 2012, an amount he said is better used to provide basic social services to the poor.

Grate likewise challenged the representative of the Indonesian brand, Danone, who was on stage as Grate made his presentation, to do more to get their company off the list of top 10 local brands that are polluting Indonesia. “While recycling should be pursued and recognized, we can never recycle our way out of the plastic problem. Companies must reduce the amount of plastic that they use and eliminate problematic products and packaging,” he stressed.

He also called on the government officials present to help them in demanding responsibility from these companies. “We hope cities would step up and be our partners in calling on these companies to take

responsibility for the products that they sell and the waste they create. They cannot pass the work of managing waste that you can neither compost nor recycle. So please join us as we call everyone to break free from plastic because that will all help us go for Zero Waste,” he said.

**NOTE**

In Indonesia, brand audits were conducted in three cities currently implementing Zero Waste programs, namely Bandung City, Cimahi City, and Bandung Regency. From the audit, a total of 8,101 plastic waste items were collected. These plastic items are considered as residual or other waste. The samples were taken from an eight-day waste assessment and characterization study (WACS). In the Philippines, brand audits were conducted in the cities of Malabon, Quezon City, and Tacloban. The audits, which were done in 2017, were part of the WACS carried out as preparatory activities to the Zero Waste Programs implemented in the said cities.

**AVAILABLE ONLINE**

<https://bit.ly/2FpVG6M>

*“It’s unfair for companies, who earn billions of dollars annually, to pass the burden and responsibility of managing the waste that their products create.*

*—Froilan Grate*

PAULA DE CASTRO



Summary of findings of brand audits conducted in Indonesia (left) and the Philippines (right) showing that multinational companies are among the top 10 producers of residual wastes in these countries

## IMPLEMENTING ZERO WASTE PROGRAMS CHALLENGING BUT DOABLE

BY SHERMA E. BENOSA

**A**s the world scrambles to solve the plastic waste crisis, two Asian cities stand tall for having made huge strides not only in waste management but also in waste reduction.

Trivandrum City in Kerala, India, and the City of San Fernando in Pampanga, Philippines, are hailed as Zero Waste model communities with their successful implementation of Zero Waste programs: compliance rate is high, so is their diversion rate from landfill.

But not too long ago, these cities were on the brink of a waste crisis. Landfills and dumpsites were filling up in their communities. Trash littered streets and clogged waterways. The problem was so huge that incineration was even considered as an option.

But instead of taking a disastrous step toward building waste incineration facilities, leaders of these model cities turned to more sustainable solutions. They partnered with non-government organizations (NGOs) which guided them in implementing Zero Waste programs.

Today, these cities are proof that indeed, Zero Waste is not only possible; it is the way.

### Changing the People's Mindset

With systems and policies already in place, implementing Zero Waste in both cities now seem less challenging. But leaders of these cities say that the road to get to that point was an uphill climb.

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*We left no stones unturned. We approached every possible segment of the society. We convinced people that waste is everybody's responsibility.*

*—Dr. K. Vasuki*

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"We met numerous challenges, especially at the start," shared Dr. K. Vasuki, former Executive Director of the Suchitwa Mission, an organization of the Government of Kerala responsible for evolving implementation strategy and providing technical inputs for sanitation and waste management projects.

"When I was new in the mission, there was no clear [waste management] strategy. There were few learning models but no clear strategy. The idea at the time was to move toward incineration. People did not have faith in the government. For the first six months, we did not even have a complete idea on how to go about it," she said.

To understand the problem, they partnered with Thanal, a public interest research, advocacy, and education organization based in Trivandrum with focus on environmental health and justice.

"We felt it was crucial to showcase models to demonstrate that Zero Waste works. But the mission only has an advisory role. We do not implement projects," Dr. Vasuki shared. "We invited people to implement, but there were no takers to the idea. There was no place to demonstrate."



PHOTO BY THEEBAN GUNASEKARAN



*In Trivandrum, households are mandated to manage their waste either through composting or anaerobic digestion. The city provides incentives to households in the form of subsidy on the price of composting units.*

According to Dr. Vasuki, it was a big challenge to convince people that doing away without disposables is doable. “People were resistant and critical about it. They thought it was impossible, impractical, and just not doable. So, we had to demonstrate that it was possible,” she said.

They partnered with the organizers of the 2015 National Games to implement a program they called Green Protocol. The aim was to reduce waste generation by, among others, banning the use of disposables in all sporting venues. They encouraged the use of reusable tableware and tumblers. With the help of 700 volunteers, the initiative prevented the generation of 120 metric tonnes of disposable waste.

With the successful implementation of Green Protocol at the event, people started believing that perhaps doing away with

disposables was possible, but they were still not convinced it could be replicated.

This, according to Dr. Vasuki, challenged them to step up their game. They built more models and strengthened their education campaign. They invited all stakeholders to take part in the initiative.

“We left no stones unturned. We approached every possible segment of the society—the schools, the church, the businesses... We convinced people that waste is everybody’s responsibility. We started the campaign, ‘My Waste, My Responsibility,’” she said.

Under the campaign, households were encouraged to manage their organic waste. They taught people how to compost. The government provided incentives in the form of subsidy on the price of the composting units. Today, the Green Protocol has become embedded in the people’s lifestyle.

“In Kerala, our biodegradable waste is 40-60%; because it is now managed at home, we are not at all concerned with this waste stream. Biodegradable waste is not a threat; it is a resource and is easy to compost at home. If we manage our biodegradable waste, we have addressed a big part of the problem,” Dr. Vasuki shared.

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*“When the people see the importance of the program, they follow”*

*—BJ Lagman*

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## Strict Law Enforcement

The Philippines, meanwhile, has a national law called the Ecological Solid Waste Management Act which decentralizes waste management down to the smallest unit of government: the barangay (village). The law requires at-source waste segregation, daily door-to-door segregated waste collection, and building of materials recovery facilities (MRF) for composting of organics and temporary storage of other waste.

While the national law is good on paper, many cities, including San Fernando back then, have a hard time complying with the law.

“There was resistance among local leaders in implementing the law,” shared Benedict Jasper Lagman, City Councilor of San Fernando. “They feared that if they would strictly implement it, they would turn away the voters.”

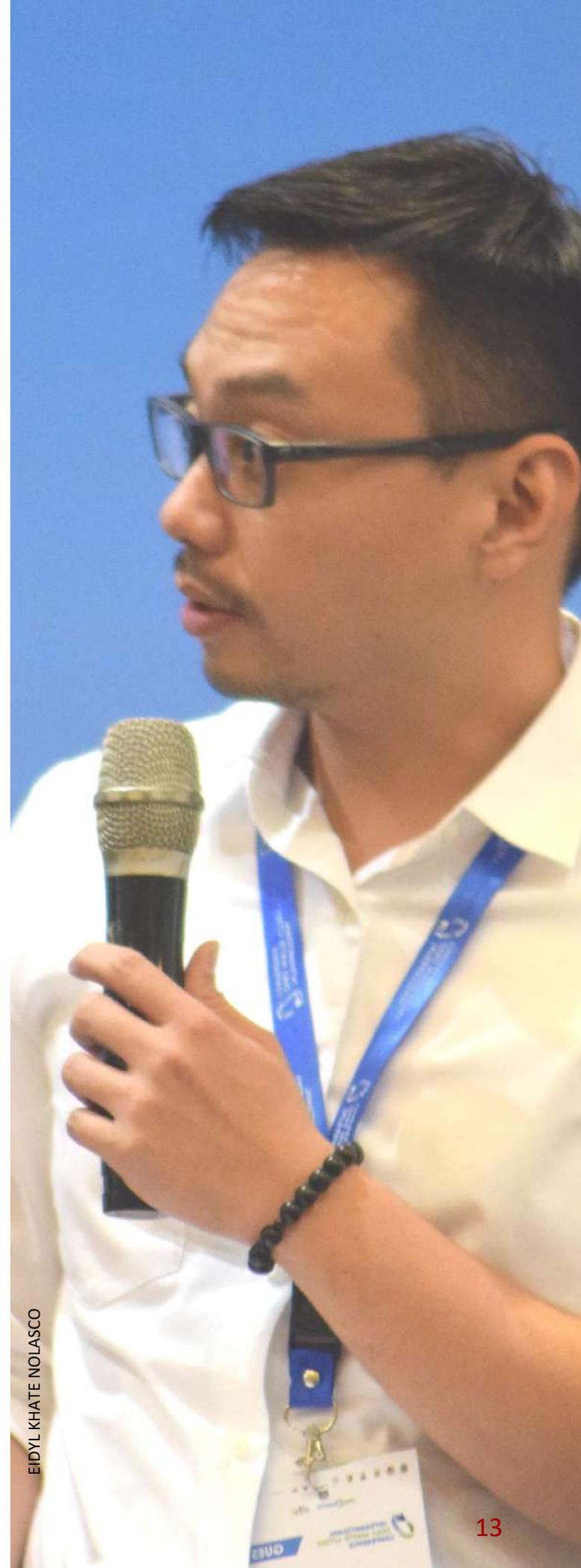
But Mother Earth Foundation (MEF), a Philippine-based NGO helping local government units in implementing Zero Waste programs in communities, was able to successfully convince then-mayor Oscar Rodriguez that Zero Waste was the way to go.

“So we implemented it,” Lagman said, adding that they were met with resistance when they started requiring households to segregate their waste.

Assisted by MEF and armed with MEF’s 10 Steps to Implementing Zero Waste Program in the Community, the city persevered. They conducted baselining, multi-stakeholder consultation, intensive house-to-house information and education campaigns, dry-run and eventually full implementation of daily door-to-door segregated waste collection. The city also gave grants to barangays to construct MRFs, and provided every barangay four tri-bikes to be used for waste collection.

Soon, the people not only became used to segregating their waste but also started embracing the program, having seen its benefits: reduced waste, resulting in huge savings from hauling and transport and tipping fees and jobs generated for waste workers.

“Instead of losing votes, elected officials who promoted the program actually had more votes the following election,” Lagman said. Among them was Lagman himself. Then a neophyte politician, Lagman was at the bottom of the winning councilors on his first term. When he sought re-election, he was at the top.



EIDYL KHATE NOLASCO

Following the successful implementation of their waste management program in San Fernando, Lagman authored an ordinance banning the production, distribution, and use of single-use plastic bags in the city, a measure that pitted him against local businesses who thought that the ordinance would be detrimental to their business.

“Nine thousand businesses including multinationals were to be affected by the ordinance, so we engaged with them,” Lagman said.

Eventually, a compromise was arrived at. “We agreed to stagger the implementation. We did baby steps. We educated the people on radio and TV. We started with Plastic-free Friday. Then, for the first three months, we banned the use of polystyrene as packaging of food product. Finally, in 2015, we totally banned the use of plastic bags. Now, 85% of the citizen are obeying the rules,” he said.

Like Dr. Vasuki, Lagman underscored the importance of political will and collaboration in implementing a crucial program like Zero Waste.

“There is no perfect law, but through the strong partnership of the government, NGOs, and the private sectors and the strong participation of the community, we were able to balance the economic progress and environmental sustainability for the benefit of the generations to come,” he said. “When the people see the importance of the program, they follow,” he added.

Dr. Vasuki agreed. “Changing people’s behavior is a slow process. We have to accept that. We have to be persistent. But what I learned is that, when we showcase models and make people understand the benefits of the program, they support it. People do change,” she said.

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<https://bit.ly/2KBo2xN>



*In San Fernando, Pampanga, organic waste is managed and other waste streams (segregated) are temporarily stored in materials recovery facilities. Top photos by Paula De Castro. Bottom photo by Sherma Benosa.*

# DAMAGING TECHNOLOGIES NOT NEEDED TO MANAGE HEALTH CARE WASTE

BY MA. PAZ OLIVA



**E**ighty-five percent of health care waste generated is categorized as general waste—paper and plastic—the same as household waste, according to the World Health Organization’s Health care Waste Fact Sheet.

“This waste stream can definitely be segregated properly, then either reused, repurposed, or recycled,” said Faye Ferrer, Asia Coordinator of Global Green and Healthy Hospitals (GGHH), a Program of Health Care Without Harm (HCWH).

“This means that waste treatment technologies such as waste incineration facilities are not necessary if proper waste management is employed by hospitals. Incinerators as a means for disposal does not really work with hospitals; it discourages segregation and will actually make hospitals produce more waste. Waste incineration also releases dioxin and furans that are proven to cause cancer and weaken the immune system,” Ferrer added.

Health care is a resource-intensive sector producing special wastes that are infectious. Wastes that are categorized as infectious, such as used-needles, syringes, soiled dressings, blood, chemicals, medical devices, and even body parts require special treatment; but still, incineration is not the response to it.

According to the World Health Organization (WHO), poor management of health care waste exposes not only health workers and medical waste handlers but also the general public surrounding a health facility to an array of harmful health conditions such as infections and injuries.

Ferrer made these statements during the Medical Waste Handling Without Harm workshop organized by Yayasan Pengembangan Biosains dan Bioteknologi (YPBB) and BioPharma. The workshop was held on the sidelines of the International Zero Waste Cities Conference 2018 in Bandung, Indonesia.

*Ma. Paz Oliva is the Communications Campaigner of Health Care Without Harm Asia.*

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<https://bit.ly/2riAoSL>

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*“Incinerators as a means of disposal does not really work with hospitals; it discourages segregation and will make hospitals produce more waste.”*

*—Faye Ferrer*

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# #YOUTHFORZEROWASTE

BY PAULA DE CASTRO

**T**he youth are a crucial force in Zero Waste implementation in the Asia Pacific region. And to highlight just how important their roles are, three youth-centered initiatives were given the spotlight during the recent International Zero Waste Cities Conference held in Indonesia: Mother Earth Foundation's Zero Waste Youth Pilipinas, Consumers Association of Penang's youth-focused education activities, and Trivandrum, Kerala's Green Army.

## **Zero Waste Youth Pilipinas: Signature Campaigns and More**

In the Philippines, the youth have been actively promoting Zero Waste, and in fact were instrumental in the declaration of the Zero Waste Month. In the Zero Waste Youth Festival held by Mother Earth Foundation (MEF) in October 2012 attended by more than 200 youth, a statement

encouraging then President Benigno Simeon Aquino III to declare a Zero Waste Month was initiated. In just a little more than a year, President Aquino issued Presidential Proclamation No. 760 designating every January as Zero Waste Month.

Consequently, on the first celebration of the Zero Waste Month, a Zero Waste Youth Caravan was organized in various schools across the country to educate high school students on waste issues. In that very first caravan, a signature campaign calling for the strict implementation of the Philippine law, Ecological Solid Waste Management Act of 2000, was launched. The campaign gathered more than 50,000 signatures.



*Youth camp is one of the major activities of the Zero Waste Youth Pilipinas. Photo courtesy of MEF.*

Aside from conducting signature campaigns, members of the Zero Waste Youth Pilipinas also implement environmental programs, hold Zero Waste Youth Camp and conduct information campaigns, such as:

- Bring Your Own Baunan (BYOB), and Oh my Glass (OMG!), where students are asked to bring their own reusable containers and tumblers for their break times;
- Shoot that Kalat, wherein there are huge bins in the school grounds where students just shoot the PET bottles that they have used;
- Monitoring of segregation to record the compliance rate of the students in segregation, and how much waste they produce per grade level.

According to Froilan Grate, president of MEF and Regional Coordinator of GAIA Asia Pacific, it is crucial that the youth are involved in Zero Waste. “Giving responsibility to the youth empowers them to help and contribute in solving the waste problem. It allows them to fully understand that

what they are doing is vital to the city’s Zero Waste goal,” he said.

### **The Youth of Penang: Starting Them Young**

In Penang, Malaysia, the youth, even those as young as children in kindergarten, are not confined to merely learning their ABCs and 123s, thanks to the Consumers Association of Penang (CAP).

According to Theeban Gunasekaran, Education Officer of CAP, it’s never too early to teach children about topics such as health and nutrition, farming, caring for nature, and even lifestyle diseases.

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*“Giving responsibility to the youth empowers them to help and contribute in solving the waste problem.”*

*—Froilan Grate*

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Through the youth camps, the young participants create a strong network, and they get to understand better the environmental issues that the world is facing, and how important their role is. Photos courtesy of MEF.



*Educating school-age children is a key strategy of the Consumers Association of Penang in advocating for Zero Waste lifestyle. Photos by Theeban Gunasekaran and Saraswathi Odian.*

“The youth are vibrant. Hence, they are the right target group to rouse to live a Zero Waste lifestyle and convey Zero Waste messages. Empowering the youth is crucial to making the world toxic-free and safe for all,” he said, emphasizing that the best way to reach out to the

youth is through schools and higher learning institutions.

“CAP has developed a close contact with the youth. Not a week goes in CAP without meeting a group of students,” he added.

In their lectures on health and nutrition, CAP shares vital information such as the amount of sugar in various types of drinks, the negative effects of smoking, e-cigarette and processed food,

and diseases caused by unhealthy eating and living. They also promote traditional practices such as using herbs which further leads to teaching children on how to grow their own herbs.

“Last year, we had a group of students making door-to-door visit to houses in certain parts of Penang distributing herbs and explaining their health benefits. Direct involvement of youth ensures effective participation and significant changes in the society,” said Theeban.

To ease the task of reaching out to the youth, CAP formed Consumers Clubs in schools in Malaysia. Through the clubs, CAP gathers teachers to discuss with them various consumer issues. This ensures commitment among teachers to impart consumer messages to their students and constant communication among teachers and CAP.

With the teachers' involvement, several schools have banned the sale of processed food in school canteens and reintroduced traditional food that are not only healthy but also come with less or no packaging.

CAP also conducts fora and learning sessions on plastic packaging, how wasteful it is and how much plastic we are being burdened with as a result of over-packaged foods. There are also sessions on urban farming, composting techniques using kitchen, garden and fish waste, and making soil enhancers using spoiled fruits.

To ease the seriousness of the topics, CAP Education Officers make their teaching sessions creative and hands-on, thus capturing the enthusiasm and unleashing the imagination of the young students.

### **Green Army: Youth for Green Protocol**

Green Army is a movement led by youth to educate children on Zero Waste and to make a toxic free future. It is a platform where individuals and groups with similar vision work together with students to educate them about segregated waste management, organic farming, and other sustainable living practices in an urban environment. Many NGOs, volunteering organizations, students,

working professionals, and retired officials form the mentors of Green Army. Members from organisations like Thanal, Sahridhaya, Make a Difference (MAD), Care Others Too (CO2), Prakruthi, Kerala Shasthra Sahithya Parishad, Save A Rupee Spread A Smile (SARSAS), Green Village, Indus Cycling Embassy, Recycle Bin (a group of Architects) and others volunteer as Green Army mentors.

There are more than 100 active Green Army volunteers in the city. Around 30 schools have been given basic orientation on segregated waste management, organic farming, green protocol, and disposable plastics. Many of them have started campaigning with residential communities neighboring their school. Green Army members from these schools came forward to implement Green Protocol and Plastic Arrest during major public events and celebrations such as Onam 2017, a weeklong celebration at Trivandrum (the annual harvest festival of Kerala), District Interschool arts and cultural festival, and several school celebrations.

Students took part in the Green Congress 2018 to present their projects and campaign ideas on the Green Action Plan. Volunteers have taken mentorship of various schools in the city to guide the respective Green Army units. Green Army members from all the 30 schools have initiated steps to implement Green Protocol and switch from disposable plastics

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*The youth are vibrant. Hence, they are the right target group to rouse to live a Zero Waste lifestyle and convey Zero Waste messages. Empowering the youth is crucial to making the world toxic-free and safe for all.”*

*—Theeban  
Gunasekaran*

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The Green Army is a great example of how collaboration among various stakeholders including the youth can make a great program like the Green Protocol fly. Photos courtesy of Green Army.

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*“The children are receptive and open to new ideas, so why not teach them about Zero Waste?”*

*—V. Nikhilesh Paliath*

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under the guidance of Green Army mentors in their schools.

Green Army is expanding its campaign to the other cities in India and also other countries. Green Army intends to make an impact in decentralised solid waste management at students' households, schools and neighboring community by linking waste management to urban organic farming.

“The children are receptive and open to new ideas, so why not teach them about Zero Waste?” said V. Nikhilesh Paliath, Zero Waste and Climate Action Program Coordinator of Thanal, “It’s like investing in the future.”

Babitha PS, a volunteer mentor, agreed. “We have the responsibility to inculcate knowledge, skills, and sustainable practices in children so that they grow up to be responsible adults who are not only aware, but also live in harmony with nature. The children are our only hope for reaching the goal of a clean, green, and safe future,” she said.

*With contribution from Suseela Nagappan for the section on Consumers Association of Penang and Dr. Ashin Mohan for the section on Green Army.*

*Paula de Castro is the Communications Officer of Mother Earth Foundation. Suseela Nagappan is Education Officer at Consumers Association of Penang. Dr. Ashin Mohan is a mentor of the Green Army.*

AVAILABLE ONLINE  
<https://bit.ly/2JN6tcM>

## AP COMMUNICATIONS GROUP UNDERGO WORKSHOPS

To help them become better storytellers, members of the Asia Pacific Communications Group underwent an intensive communications workshop in Bandung, Indonesia just days prior to the International Zero Waste Cities Conference (IZWCC).

The workshop zeroed in on Zero Waste issues and the false narratives being peddled by industry, developing communications strategy, telling

stories using different media (photography, video, social media), mainstreaming stories, and working with mainstream media. As practicum, the participants were tasked to cover the IZWCC. Outputs included articles about the conference, photos, and videos.

The Indonesia workshop is the second workshop given to the members of the Communications Group. Another workshop was held in Manila, Philippines in November 2017.

To know more about the Indonesia workshop, read a member's account by clicking these links: <https://bit.ly/2oLRwQk> and <https://bit.ly/2D7th3z>



## ZERO WASTE CITIES

## TACKLING THE GLOBAL WASTE CRISIS

BY KRIPA RAMACHANDRAN

In 2015, a report titled ‘Stemming the Tide’ commissioned by Ocean Conservancy, an environmental advocacy group based in the United States, claimed that five Asian countries—China, Indonesia, Philippines, Vietnam and Thailand—together account for between 55 and 60 percent of the total plastic waste leakage (Ocean Conservancy, 2015).

The report strongly recommended incineration technologies as one of the primary “solutions” to address plastics leakage. The report deserves to be condemned for its two-fold fiasco: for framing the global south as the problem site with limited evidence, and for proposing myopic and disastrous solutions.

Narratives like these not only frame an issue in a particular

way but also elicit responses that are often problematic. The report framed Asian cities as the epicentre of the leakage problem without a balanced appreciation of the frontline efforts in these countries. As the response of the Global Alliance for Incinerator Alternatives (GAIA) to this report pointed out, ‘it is alarming that it (the report) is recommending to increase incineration rates in the countries mentioned, when citizens of these countries already struggle with so much air pollution in their cities’ (GAIA, 2015).

Narratives such as these rapidly find their way into the popular discourse and become the basis of people’s opinions and evidence that informs public policy. More often than not, they reflect and serve to organise a particular understanding of the problem without taking into account the efforts of the organisations and cities that are working hard to promote local solutions to waste and wasting based on shifting mindsets (GAIA, 2015).

It is important to recognize that for any given issue, it is possible to identify multiple narratives, each suggesting different pathways to sustainability. Some exist, some are hidden, often deliberately and some are only, currently,



Representatives from the 10 organizations who are part of the Zero Waste Cities project pose after the formal signing of the memorandum of agreement.

imagined (Leach, 2010). Therefore, challenging these dominant narratives and pathways, and highlighting alternatives, including those reflecting the perspectives and priorities of poor and marginalised people in particular settings is more important than ever (Leach, 2010).

Asian countries that were censured by the aforementioned report have imaginative and positive responses to plastic pollution that deserve to be brought to the fore. Whether by an effective policy advocacy, grassroots organizing, or community education, communities in these countries are effectively mitigating the effects of this looming ecological disaster, whose source is often traceable to global businesses.

Yet, to vilify these countries and their people without a balanced assessment of the counteractive efforts is to undermine the efforts of some of the well-meaning and earnest local champions in these countries. These lesser-known stories deserve to be told urgently now, for these ecological solutions are important in not just turning around the issue of waste, but because a consolidated wisdom and experience of these countries can lead global efforts for sustainable, people-centred, and climate-appropriate responses to the waste crisis.

It is in this backdrop that efforts like the ‘Zero Waste Cities Collaborative’ (ZWC Collaborative) are important.

Making “cities and human settlements inclusive, safe, resilient and sustainable” is one of the most critical Sustainable Development Goals of our times, with Goal 11.6 aiming to “by 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality, municipal and other waste management.”

Fortunately, this transition towards building a ‘sustainable city’ has already begun in the global south, and the ZWC Collaborative is exemplary of select cities forging a way forward. The ZWC collaborative is a quintessential South and Southeast Asian effort of 16 cities in Indonesia, the

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*To vilify these countries and their people without a balanced assessment of the counteractive efforts is to undermine the efforts of some of the well-meaning and earnest local champions in these countries.*

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*To capacitate the organizations who are part of the Zero Waste Cities project, GAIA and Mother Earth Foundation conducted a Zero Waste Academy on Implementing a Zero Waste Program in a Community in 2017.*



THEEBAN GUNASEKARAN



AFRIDA NAZIBAH



SHERMA BENOSA

Decentralised waste management is crucial in the implementation of Zero Waste programs in communities. It involves, among others: segregated waste collection and management of biodegradable waste either through anaerobic digestion or composting. Leftmost photo shows segregated collection as done in Pampanga, Philippines by Mother Earth Foundation. Center photo: a bio-digester in a YPBB site in Indonesia. Rightmost photo shows Shibu Nair, Director of Thanal, giving a skillshare on pipe composting.

Philippines, Malaysia, and India that are working on local waste management policies in these cities.

The ZWC Collaborative amplifies and facilitates an exchange of knowledge about the actions that local organisations and activists take to shape public policy and implement strategies that are appropriate for their contexts. Such a global stage for the collective voices of these developing countries that are becoming increasingly active participants in global policy-making (Kaul, 2013) is the need of the hour.

The International Zero Waste Cities Conference (IZWCC, 2018) at Bandung, Indonesia on March 5-7, 2018 with its theme 'Circular City is the Future City' was one such

opportunity. Over these three days, policy-makers, bureaucrats, activists, grassroots organizers, social workers, and researchers gathered to share stories from their cities, barangays, kelurahans, and wards.

Whether it was robust grassroots education and training in the Philippines, as undertaken by Mother Earth Foundation, or low-cost, frugal technologies for composting, demonstrated by YPBB in Indonesia, or participatory action planning by Citizen consumer and civic Action Group (CAG) in India, or effective policy enforcement in Thiruvananthapuram City, India, there was no dearth of positive actions worth replicating from these regions.

A recurrent theme through the conference though, was the common understanding that cities and city governments bear the brunt of managing waste. Much of this waste is the result of poor product design and delivery by businesses, and it is they who must be made liable and accountable. But do city governments have the power and autonomy to resist and combat this financial and ecological burden in their own contexts? In India, for instance, it has been 25 years since the enactment of the 74<sup>th</sup> Constitutional Amendment, which

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*The ZWC Collaborative amplifies and facilitates an exchange of knowledge about the actions that local organisations and activists take to shape public policy and implement strategies that are appropriate for their contexts.*

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Biodegradable waste comprise more than 50% of the waste generated in developing countries in Asia. Biodegradable management is crucial in the Zero Waste program of the collaborators. The pictures above show some composting techniques from (left) Stree Mukti Sanghatana or SMS and (right) Citizen consumer and civic Action Group or CAG.

heralded decentralised governance. However, municipal governments remain mere creatures of state governments with neither the necessary strategic flexibility nor political legitimacy (Sivaramakrishnan, 2013). Similar contextual and implementational challenges in governance and democratic engagements were adduced by representatives from the Philippines and Indonesia.

A collection of these experiences by the cities and the different actors and stakeholders over these three days showed that solving this mammoth problem requires more than mere technocratic fixes. It is a part of the larger web of decisions that affect governance, public health, equity, power and at the heart of this lie, people and their realities.

While we may have more pressing issues and confrontational questions along the way, the collaboration has opened up opportunities for collective reflection on local initiatives and latest technological innovations, to redefine the relationship amongst actors contributing to urban waste management and the preservation and transformation of organizations and informal sectors, among other things. As they say, the secret of getting ahead is getting started and this start is as good as any, to create sustainable and just environments for everyone.

*KRIPA RAMACHANDRAN is researcher at the Citizen consumer and civic Action Group based in Chennai, India.*

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#### AVAILABLE ONLINE

<https://bit.ly/2rhNqka>

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*“The collaboration has opened up opportunities for collective reflection on local initiatives and latest technological innovations, to redefine the relationship amongst actors contributing to urban waste management and the preservation and transformation of organizations and informal sectors, among other things.”*

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## DUMAGUETE YOUTH TO LAWMAKERS: BAN PLASTIC BAGS NOW

BY SHERMA E. BENOSA

**H**undreds of Dumaguete youth added their voice to the ongoing youth-initiated petition urging the countries' lawmakers to pass a national ban on single-use plastics.

The call came during the 5<sup>th</sup> Zero Waste Youth Convergence held early this year at the Foundation University with nearly a thousand students from the local schools in attendance.

Started in 2017, the petition has thus far gathered nearly 40,000 signatures from students across the country.

"Plastic waste not only pollute the environment; they also pose health risks to humans and kill marine lives. Current estimates indicate that unless we act and change now, there would be more plastic than

fish in our seas and oceans by 2050," part of the petition reads.

The Dumaguete students likewise urged their local executives to implement the city's regulation on plastic use. Passed in 2012, the ordinance was authored by Councilor Alan Gel Cordova, Vice Mayor Franklin Esmeña, Jr. and Councilor Manuel Arbon. However, enforcement is wanting.

"We are concerned with the growing amounts of plastic bags in our waste, filling up our dumpsites, clogging our canals, littering our beaches, and polluting the ocean. Plastic bags take hundreds of years to breakdown," the students said in their petition.

In 2011, Philippine Senator Loren Legarda filed a bill calling for the prohibition of the use of plastic bags in groceries, restaurants, and other establishments and provision of corresponding penalties for violations thereof. The bill is still pending.

At present, hundreds of Philippine cities and municipalities have plastic bag ban or regulations,



but enforcement is lax. A nationwide ban is seen to strengthen implementation.

## Youth Taking Action

As they called for action from the local and national government, the youth have been busy doing their share in making Dumaguete a Zero Waste city.

Twelve-year-old Miguel Teves and his friends founded the Plastic Free Duma, an advocacy to stop using plastic. The group conducts beach cleanup on the shores of Dumaguete every Saturday. “We were on a vacation in Panglao Island (Bohol). Then I recognized the plastic. I decided to do something about it. [If we do nothing] when we get older the beaches would be full of trash already. So I decided to put a stop to it,” he said.

Today, more people, young and old, have been taking part in the initiative.

Natalie Angeles, meanwhile, launched with a friend the *Keep It Topless* initiative, a digital campaign that encourages people to not use the plastic lid of

their cups when they go for drinks.

“It is a campaign to encourage people to not use plastic lid in their coffee cups. It’s one small step to encourage people to live a plastic-free lifestyle,” Angeles said.

A group of students from Silliman University have also been doing their part to make the city plastic free. They have been campaigning to food establishments to ditch the straws. Through their initiative, some establishments in the city have gone straw-free, including the Silliman University Cafeteria.

“These steps may be small things, but if all of us do our part, we will become part of the solution,” said Teves.



# TAIWAN SOON TO BE PLASTIC FREE

BY XAVIER SUN

**T**aiwan was once famously known for having a big plastic production industry, especially the “Formosa Plastics.” But citizens’ mindsets have gradually changed: people are more aware about plastic pollution, the toxic materials embedded in plastic products, and the effects of marine plastic litter on the environment and human health.

Today, Taiwan is among the countries seriously fighting the production and use of plastic through bans. The following is a rundown of the bans that have just taken effect or are to take effect within 10 years.

## No Single-use Plastic Products by 2030

In 2017, eight grassroots environmental NGOs and the Taiwan Environmental Protection Administration (EPA) established a Marine Waste Management Platform with the purpose of phasing out single-use plastic products. The NGOs include Wild at Heart Legal Defense Association, Greenpeace Taiwan, Kuroshio Ocean Education Foundation, Taiwan Environmental Information Association, the Society of Wilderness, Ocean Citizen Foundation, Hi-in Studio, and Lee-zen Foundation.

The Marine Waste Management Platform is an equal platform between government officials and grassroots NGOs where departments of Taiwan EPA meet with NGOs regularly about top-ranking plastic marine litters—PET bottles and their caps, plastic bags, disposable utensils, plastic straws, and single-use take-away beverage cups.

After dozens of meetings, the Taiwan EPA and the eight NGOs came up with a timeline to reduce and eliminate single-use plastic products. The timelines of restriction and total ban of single-use plastic products are:

- Beginning January 1, 2019, major restaurants and coffee shops will not be allowed to provide plastic straws to customers inside their stores.
- Beginning 2020, all stores that required providing invoices cannot give plastic bags for free, and they also cannot provide plastic straws, disposable utensils, and disposable cups to in-store customers.



Xavier Sun shows the amount of microbeads present in a popular cosmetic product.

- Beginning 2025, ALL STORES in Taiwan cannot provide plastic bags, disposable utensils, straws, and single-use cups for free; customers all over Taiwan have to pay for these single-use plastic items.
- Finally in 2030, no single-use plastic items are allowed to be manufactured, imported, and sold anywhere in Taiwan, which means that Taiwan will be a single-use plastic-free country.

## Ban on Microbead-containing Personal Care Products

In 2014, Taiwan Watch Institute started to filter plastic microbeads in facial wash and body wash products. Although the media has published several times that microbeads are actually cheap plastics and have no exfoliating effect at all, it was only when the Research Associate of Taiwan Watch Institute isolated the plastic microbeads and compared it to the products' volume that customers felt shocked and finally took the issue seriously—because seeing is believing, and people and the media like images much more than just words.

After numerous media coverage and several press conferences, Taiwan Watch Institute and Wild at Heart Legal Defense Association finally got the chance to talk to the EPA officials, and introduced a ban on adding plastic microbeads in personal care products. No importation and manufacture has been allowed since January 1, 2018, and no sale and usage will be allowed beginning July 1, 2018.

Taiwan and Korea are currently the only countries in Asia that are implementing a microbead ban. To encourage and support similar measures in other countries, Wild at Heart Legal Defense Association's Zero Waste Researcher Xavier Sun is sharing experiences with NGOs in Bangladesh, India, the Philippines, and Indonesia to support

local campaigns against microbeads.

## Phasing-Down of PVC Production

Taiwan Watch Institute and Wild at Heart Legal Defense Association are currently discussing a phase-down timeline for PVC resins and products with the PVC manufacturing industry and the EPA's Department of Waste Management. Since PVC is harmful to the environment and human health from production to final disposal, the Department of Waste Management is planning a gradual phase-down of PVC production. In the next few months, consultations with citizens will take place, and the public will have the right to decide whether to ban the production of PVC or not. Wild at Heart is making communications materials such as infographics and documentaries about PVC, and hopefully when the public understands the dangers of PVC, they will vote for a quick phase-down of PVC resins and products.

*Xavier Sun is Zero Waste Researcher, Wild at Heart Legal Defense Association, Taiwan and is a member of the GAIA East Asia Regional Advisory Committee Member.*

**AVAILABLE ONLINE**  
<https://bit.ly/2rlbv8L>

## THE STORY OF WASTE INCINERATION

BY LEA GUERRERO

**T**he story of waste incineration doesn't start at the incinerator facility. Nor does it start the minute we throw something in the waste bin. The story of incineration starts with "stuff" (as *The Story of Stuff* would put it). More precisely, the story of incineration starts the moment stuff is produced.

When things are produced, 'waste,' somehow, gets into the picture. 'Waste' is anything we no longer need; things we discard or throw away. Some 'waste' is made during production. For example, the shirt you're wearing was cut out from a bigger piece of cloth and there are bits and pieces that didn't make it into the shirt. Sometimes, the things that are produced also become 'waste;' for instance, your old shoes which no longer fit or whose soles got unglued. A lot of times, too, things are packaged in material that becomes 'waste.' Think of the plastic shrink wrap and styrofoam packing which contained your cellphone, or the plastic fastfood soda cup or toothpaste tube, after you finished the contents.

The word waste is in single quotes in the previous paragraph because labeling something as 'waste' is relative. Not everything we discard or throw away is actually 'waste.' Some of the things we put in the bin can be recycled, such as

cardboard boxes or drink cans. Sometimes, old things (like shoes) we throw away can actually be repaired and reused. Other things can be put into another use, like cloth scraps which are turned into cleaning rags. And organic waste (vegetable trimmings, leaves, etc), can be composted.

But unfortunately, some of the other things we throw away were not created to be reused or recycled, like that plastic shrink wrap and styrofoam packaging, or that plastic fastfood soda cup and toothpaste tube. They're created to be disposed. And many times, too, things that can still be repaired, reused or recycled, don't. And while we're talking about things that can't be (or don't get) repaired, recycled, reused or composted, think about the sheer amount of these things that are being churned out—in the millions—day in and day out, in factories all over the globe.

People already throw away staggering amounts of 'waste'—and the amount is still increasing. A 2012 study by the World Bank estimated that in just one decade (from 2002 to 2012), waste thrown away by people in cities around the world doubled, from 0.68 billion tonnes in 2002 to 1.3 billion tonnes in 2012. The same study predicts that waste will increase more than three-fold, to 4.3 billion tonnes a year, by 2025.

Faced by mountains of 'waste,' people have coped by answering the question, "What do we do with all the waste?" In answer, human society has resorted to burying (in landfills), or burning (in incinerators), to keep waste out of sight. In the recent decades, incinerators have become an attractive option. The "logic" offered by incineration is that burning waste will make it "disappear," as opposed to landfills which take up massive amounts of space.

And because people are producing more and more waste every year, governments are building more and more incinerators *just to keep up*. Today's so-called "waste-to-energy" incinerators burn around 300 million tonnes of waste a year. If we peg the current

amount of waste produced in 2017 at 3 billion tonnes, *it would take 10 years for all these facilities to burn the waste produced in a single year*. By this logic, the world needs to keep building incinerators to burn the things we've thrown away—to start with, at least 10 times more the facilities we have today. And, we have to keep building hundreds more incinerators *every year*.

Incinerators are premised on a game of catch-up with ever-growing volumes of waste. Going down the waste incineration path means *never dousing the fires*. Imagine a world where thousands of incinerators guzzle resources and people's money while churning out toxic fumes 24/7—*every single day of our lives*. And yes, even after we die.

But do we even want to go there? Building incinerators is prohibitively expensive: it's the most costly waste treatment option, and as an energy plant, it's more expensive than coal or nuclear. They're also a major source of toxic pollution, particularly dioxins, among the most deadly and persistent chemicals known to science. Increasing the world's incinerator capacity means increasing the financial burden on cities and taxpayers and increasing the toxic load on this planet we call home.

It also means increasing resource extraction and production. A machine that was built to burn waste creates a demand for waste to be burned. The more and the bigger the machines, the greater the demand, justifying the need to produce more things that need to be thrown away and burnt. This just goes to show that burning isn't getting us anywhere to solve the waste problem. Instead of reducing waste, we're creating more of it.

Clearly, burning waste—and even in that fancy, shiny, new incineration facility—isn't an innovation. There is nothing technologically amazing about a world where thousands of furnaces keep burning

discards for as long as human beings live and breathe on the planet.

But how do we stop the burning? To stop the fire, we need to stop feeding it. The question shouldn't be "What do we do with the waste?" but "How do we reduce the waste we produce?"

To start with, if the stuff we produce and use is reused, recycled, or composted, there would be very little left to burn, or even bury. Many cities and municipalities around the world have taken this route and succeeded, showing the world they don't need incinerators, and that waste reduction is possible and practical. There are other measures that still need to be done: if manufacturers designed packaging to be reusable and durable, instead of disposable (think throwaway plastic bags, disposable cups and cutlery), and if municipalities and cities banned the use of these disposables, there wouldn't be anything left to burn.

In the end, the questions we ask define what we mean by success in 'waste' and resource management. Do we measure success in how efficiently we burn what we throw away? Or does real success lie in efficiently making use of our planet's limited resources, without turning them to ashes?

AVAILABLE ONLINE  
<https://bit.ly/2FHhJA5>

## COUNTERING THE TWISTED “PEOPLE’S BEHAVIOUR” NARRATIVE

BY DAVID SUTASURYA

**W**aste-to-energy (WtE) technology has a bad track record of implementation, so why is the government and even some quite prominent academicians retain their bias toward incinerators? I will try to uncover part of the story.

In his article on *Independent*, environmental activist Adam McGibbon wrote about the Earth Hour:

*The worst thing about Earth Hour is that it tricks people into thinking they’ve done something useful by turning off the lights for 60 minutes, and lets the real villains in the climate change story off the hook.*

*By focusing on individual behaviour, Earth Hour sends out the message that ordinary citizens are the ones to blame for climate change. It passes on the unhelpful message that all we need to do is change our light bulbs and do more recycling and everything will be fine. Every time someone says that environmentalists are nagging busybodies obsessed with making you turn your TV off or putting it on standby before you go to bed, Earth Hour has contributed to that.*

I agree with McGibbon. Even if people argue that the Earth Hour is a kind of symbolism, the problem is this narrative is

reinforced to the public consciously or subconsciously through repetition. Has there been any conversation about the role of the 90 biggest companies in the world that are responsible for two-thirds of all man-made carbon emission? About the palm oil, mining, and forestry companies that are causing most of land-use change related carbon emission from Indonesia? Has there been calls on divesting from these companies, and boycotting their products? Not that much.

The same kind of narrative is also happening in waste management discussions in Indonesia. In last year’s celebration of Hari Peduli Sampah Nasional (National Garbage Care Day), our Indonesia Vice President said that the waste management problem depends on people’s behaviour rather than on government regulation. He continued by saying that Indonesia already has many regulations on waste management, but they don’t seem to be working. He concluded that the main reason is people’s behaviour.

Sudirman, previous director of waste management at the Ministry of Environment and Forestry, shared the same view. At the height of the Supreme Court decision on the Presidential Decree about WtE, he reportedly said that Indonesia needs thermal WtE because the people lacked discipline.

“There is no other way around in Jakarta. How do you want to implement the 3R [re-use, reduce, recycle] program? The people aren’t disciplined enough,” Sudirman was quoted in *The Jakarta Post* as saying.

These kinds of narrative are also reflected in local laws and waste management practice. In Bandung and other cities in Indonesia, it’s clearly stated that the government is only responsible for transporting garbage from transfer stations to the final dumpsite. This leaves the communities to deal with garbage generated in their area without any legal mandate for the government to do any kind of managerial duties or even support for the communities.

Thus, basically there is no governance in that part of the waste chain, where most waste is generated. Therefore, if waste management in Indonesian cities is problematic,

that is just a logical consequence of the narrative and the system being practised.

Having left the communities to self-manage their garbage, how can the government expect that there will be no garbage in the rivers? An effective and efficient modern waste management system depends on at-source segregation. Waste management is a continuous process, so consistent monitoring and law enforcement, supported by strong institutional, long-term programs and sufficient financing are essential. Therefore, waste management is really about management, in this case governance, and not just technological fixes here and there.

Because of a heavy reliance on voluntary waste management by the communities, it is no wonder that waste management in many areas ranges from no management at all, where each household deals with their own garbage in whichever way they can, to what we in Indonesia call a 'collect-transport-dump approach,' which is in other words, 'transport your garbage to as far as possible from your home since it would not be possible to set segregated waste handling'.

Worse, the government is using the problematic waste management as a justification for costly and risky thermal technology projects. It is even preparing a big subsidy through feed-in tariff for a non-renewable energy project using taxpayers' money, saying that project is needed because the waste separation system mandated by the national law will take too long to realise or even impossible. In their mind, because the people are 'not disciplined enough,' WtEs which would destroy reusable materials are the only solution to our waste problem.

But are the people, who are the ones getting all the blame, truly the ones responsible for the mounting and hard-to-manage plastic problem? How about those who design and produce these problematic products and those who are making these products so artificially cheap?

In YPBB's education program, my colleagues and I teach that the 'waste problem' started only after we started using too much plastic. It was only then that we had all these 'mixed garbage,' toxic piles of garbage everywhere

that never 'disappear.' Too much plastic is one of the main causes of our waste problem, besides the growing population in cities.

We know that it is the products designed by industries that produce such hard-to-manage garbage. These industries need these to maximise profit for their mass production and widespread delivery business model, and of course to win branding competition. We know too that the government is also responsible in providing subsidies to these industries using taxpayers' money to enable the corporations to maximise the profit, in the name of 'investment' and 'job creation.'

Our waste problem clearly started with government policies that enabled such problematic products to enter our market and end in people's houses. The corporations that are benefitting from such a problematic policy thus have a large share of responsibility in waste management. Sustainable solutions should therefore start from corporate and government policies, rather than from putting the blame on the 'behaviour' of the consumers. Our waste problem will continue if the government does not do its job to change the system and the corporations do not change their destructive business model and product design.

And if because of the time needed for all the transition phases to

implement all these changes, the people shouldn't be left alone to deal with such a problem, and the government and corporations must take responsibility to manage the problems created by their policies and their products.

Indeed, we really need to clean up this narrative from people's minds, and from the government regulations and other policy documents, and transform all of it to a much more sustainable direction. If we understand the catastrophic impact of the existing amount of plastic, toxic substances and greenhouse gases accumulated in our biosphere, then we would realize that we need to work on it very quickly.

The Indonesian National Waste Management Law mentioned 'responsibility principle,' meaning that waste management is a government responsibility, as a legal consequence mentioned in our constitution, and so every person has the right to get good and environmentally friendly waste management services from the government. Unfortunately, how to translate this principle properly, especially in managing waste at the source, isn't clear. We can compare this with the Philippine waste management law which explicitly mentions that waste management at source is the responsibility of the barangay as the lowest government unit.

An important starting point is to create a working model where government really takes a role in managing waste at source, and at the same time constructing a legal framework for waste management at source. Waste management systems and regulation at source is intended to manage tons of mixed garbage we produce today as an urgent problem we need to solve. At the same time, it's also intended to lay out the foundation for future development towards holistic, sustainable and just waste management.

The 'blank,' ungoverned spot where waste is generated is a missing link between upstream and downstream waste management system. By making sure that government put their role appropriately in this spot, we will enable the full governance of our materials cycle. Implementation of source separation will make problematic materials become apparent. From this, many potential governance innovations can then be developed, including making sure corporations deliver their responsibility, that in long term will push fundamental changes upstream.

In Bandung, some NGOs and consultants have been working with the Bandung Environmental Agency since 2014 to improve local waste management laws to define more specific institutional responsibility of at-source segregation and related waste management duties. Since our national waste management law isn't clear about this, then we need to do this at the local level in each city and region.

The Zero Waste network in Bandung has also helped government to set up a program we called Zero Waste Zone as a way to implement a decentralized, at-source waste management. The progress of implementation was slow on the first year. Fortunately, I had the opportunity to see the models developed by Mother Earth Foundation (MEF) with barangays (villages) in the Philippines. This is the model of decentralised waste management governance that we dreamed to realize in Bandung, and given the similarity of socio-economic condition between the two countries, the potential for successful adaptation is very promising.

The key to adapting the MEF model in Indonesia is to transform the current model where the people have to self-manage their waste into a model where government really takes an active role to govern waste management at source. And unlike western countries, where populations are smaller and government resources are more abundant, in order to realise decentralised at-source waste management, we need to empower our lowest government unit (LGU). Working with local governments to develop a solid regulatory foundation to identify LGUs' responsibility, authority and resources is an important starting point.

With the support from Plastic Solution Fund and US State Department, we have set up projects to develop this model with six LGUs in Bandung City, 10 LGUs in Soreang City (Bandung Regency), and 15 LGUs in Cimahi City since the end of 2016. The challenge is complex; we need to build models and regulatory frameworks simultaneously. But by working with a change agent network of government officials and civil society, we are optimistic. The hard work will be worth it because we know the model would be a game changer in countering the narratives behind the current bias toward big thermal technology projects.

# TAKING RESPONSIBILITY FOR OUR OWN WASTE: IN RESPONSE TO THE CHINA BAN

BY ANGUS HO

OPINION

In July 2017, China announced the Sword Policy which aims to ban imports of 24 types of solid waste, including recyclable materials starting 2018. For years, countries have been abusing “recycling” and have been exporting their trash to China. It is therefore not difficult to understand why China has made such a move and will eventually stop all imports.

In Hong Kong, the government tried to respond to this new policy by asking people to recycle less. They want to only accept cardboard, newspaper and office paper, and plastics of drink containers and personal care products. They think non-bottle plastics and glossy paper are highly contaminated and will affect other recycling export. However, they are not willing to educate the public about clean recycling practices. This, while the whole world is talking about environmental protection, circular economy, and waste reduction.

It is ridiculous that the government responds like this, requesting the public to recycle less and not more. Hong Kong has very scarce land but its population keeps growing. The government has not managed to provide enough land for the recycling industry and everything either ends up in landfills or gets exported to China, but export is no longer an option.

After an outcry from environmental groups and media and meeting with the ministry, the government fine-tuned their policy but only in a few specific places. The message is very confusing now, discouraging people from recycling. We keep monitoring the government to make sure they have long-term vision to deal with our own waste, but town planning, EIA and building recycling plants take times; we cannot wait any more.

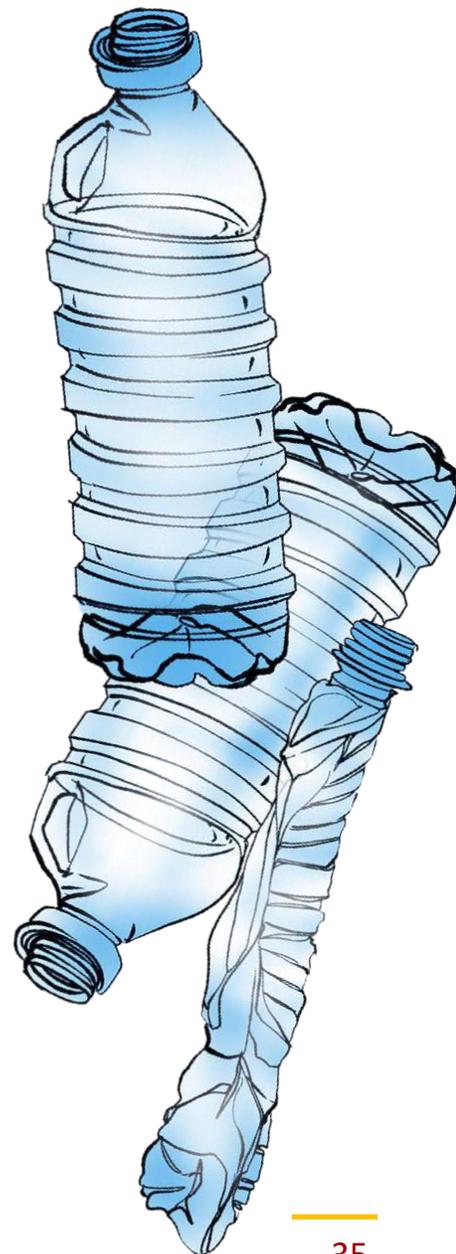
The Hong Kong experience is a typical example of how the China policy is impacting other places.

Many places have reported their recycling cannot find a way out and are piling up or have been even landfilled or burned. We have been taking the issue of waste for granted many years and this is the time every country, every government must take responsibility for their own problems and their own waste.

Let’s act now! Urge our government to deal with our own waste through reject, redesign, reduce, reuse and recycle, by practicing clean and proper sorting before recycling and by making sure that we can manage our own waste and not ship them to other developing countries— not Thailand, not Vietnam, not the rest of Asia.

Let’s not give the incinerator (waste to energy) industry fuel to burn those “non-recyclable” materials.

*Angus Ho is the Executive Director of Greeners Action, an environmental NGO based in Hong Kong. Angus has been working on waste reduction issues for over 20 years and successfully held No Plastic Bag Day, and which is precursor to plastic bag levy.*



## THE POLYSTYRENE ISSUE IN HA LONG-CAT BA COASTAL AREA

# MORE EFFORTS AND COOPERATION NEEDED

BY HOA TRAN

Only about 10% of all waste generated in Vietnam is recovered for recycling (Ministry of Resources and Environment). Some of the reasons for this include a lack of treatment facilities, lack of community participation in waste management and recycling practices, poor coordination between collection, transportation and treatment, and lack of regulation and enforcement (Pariatamby and Tanaka (eds.), 2014).

Plastic marine debris, specifically polystyrene, causes significant environmental issues, including injuring and killing sea-life, and public health concerns from the accumulation of persistent organic compounds in the food chain (Moore, 2013).

Vietnam has participated in international coastal cleanups (ICC) annually since 2003, especially driven by enthusiastic Vietnamese youth. The 2016 and 2017 results indicate around 50-70% of marine debris was polystyrene plastic, with the remainder being both recyclable and non-recyclable materials.

So far, GreenHub, the International Union for Conservation of Nature (IUCN), and partners

organized three coastal clean-ups in Ha Long beach. With the enthusiastic participation of more than 300 volunteers, tons of trash were collected from 3.9 km of beach (*See details of trash components in the figure.*)

After the first coastal clean-up, the Ha Long City People's Committee issued Decision No. 349/TB-UBND banning the use of polystyrene in floating structures in Ha Long Bay.

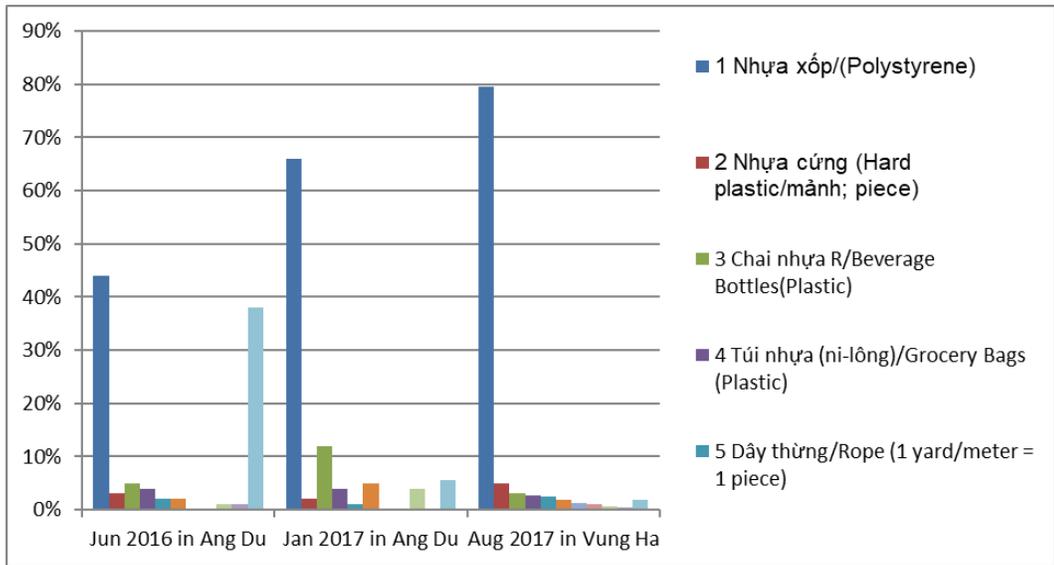
*"The Decision has been strictly enforced by the local authorities of Ha Long City. Currently, there are 55 floating structures in Ha Long Bay. Since the promulgation, 50% of individuals/households providing aquaculture and tourism services have replaced polystyrenes with sustainable materials. Out of 4,141 buoyancies, 3,520 used composite barrels instead of styrofoam. This shows the strong commitment of the Ha Long City People's Committee,"* said Pham Dinh Huynh, Deputy Director of Ha Long Bay Management Board.

However, action by Quang Ninh alone can't solve the problem. There is no boundary for polystyrene between Hai Phong and Quang Ninh. While Quang Ninh has acted to control polystyrene, floating farms in Lan Ha Bay continue to use polystyrene for buoyancy.

In Cat Ba, polystyrene accounts for more than 50% of all garbage, sweeping the World Biosphere



*The clean-up in January 2017 in Ha Long, Quang Ninh province, Vietnam*



reserve icon. As known, the main income of households living in those farms is from fish and mollusk culture, with a combination of polystyrene and plastic drums used within the farms for floatation (IUCN, 2016). Statistics report of Cat Ba Bay Management Board shows that in February 2016, there were 486 floating farms with more than 8,600 cages and 463 rafts mainly in Lan Ha Bay, Ben Beo, Cat Ba, Gia Luan and Tra Bau Bay in the Cat Ba Archipelago.

Polystyrene is known as a material for making floats used in fishing boats in Cat Ba. Floats made of this material are low cost and are very popular for use by residents here. However, this is also a serious environmental pollutant and affects human health as well as marine life, because the toxic components produced in it. Also, polystyrene in the environment can damage the aesthetics of the area since the foam from polystyrene drums is released to the environment and will blight the beauty of the bays and create a bad impression on tourists.



Cat Hai District People’s Committee has a plan to reduce the number of floating farms

to 150 by 2020 and ensure that these farms meet certain environmental standards to be allowed to operate. It is vital that Hai Phong, like Quang Ninh, ban the use of polystyrene in flotation devices. At the same time, more effort should be made to raise awareness of fishing communities and start to replace polystyrene with environmentally friendly materials.

*HOA TRAN is the Executive Director of Green Hub, an NGO based in Vietnam. She has a strong record with international organizations and managing development projects on natural resources co-management, livelihood development, waste management, and climate change adaptation.*

### PHILIPPINES

## THOUSANDS SIGN PETITION TO ENFORCE PLASTIC BAG REGULATION

**R**epresentatives of civil society organizations presented a petition to the Mayor and city council of Dumaguete, Negros Oriental, Philippines to re-implement and enforce Ordinance 231, regulating plastic shopping bags and Styrofoam offered or sold by establishments and vendors.

Signed by over 7000 people, the petition was spearheaded by War on Waste Break Free From Plastic



Negros Oriental (WOW-BFFP-NOr), Friends of the Environment Negros Oriental (FENOR), Kinaiyahan, Marine Conservation Philippines (MCP) as well as students and faculty from the city's universities, high schools and hospitals.

“We are facing a crisis with our dumpsite in Candau-ay which is now overfilled with waste, much of it plastic bags, Styrofoam, straws and other plastic waste” said Merci Ferrer of WOW-BFFP-NOr. “Re-implementing the ordinance along with segregation, recycling and composting will significantly reduce our residual waste as has been shown by cities practicing Zero Waste.”

The petition notes that plastic bags not only fill our dumpsite but litter our streets, contaminate our rivers, clog our canals, pollute our beaches, and threaten marine biodiversity.

“A study of coastal seas of Northwest Europe published this month shows that plastic bag regulations and behavioral changes could significantly reduce the problem of waste in the seafloor,” explained Esther Windler, President of FENOR.

“Plastic bags are not biodegradable” said Dr. Jorge Emmanuel, chemist, environmental scientist, engineer and researcher at Silliman University. “Plastics take decades to hundreds of years to break down into microscopic particles. Oxodegradable bags speed up fragmentation into microplastics. These microplastics, invisible to the naked eye, concentrate toxic chemical substances on their surfaces and will threaten marine life and ultimately humans who consume seafood for generations to come.”

WOW-BFFP-NOr urges consumers to bring their own reusable bags when shopping, including cloth bags and traditional native bags. The group is working with several barangays in the city to adopt Zero Waste principles.

## LOCAL ACTION AGAINST PLASTIC BAGS

**T**he Management Board of Cham Islands Marine Protected Areas (MPA) cooperated with the International Union for Conservation of Nature (IUCN)

Vietnam in organizing a meeting on Cham Islands to educate locals about the impact of plastic on the environment and especially on sea turtles. Representatives of the local committee and inhabitants had signed a petition for not using plastic bag. Cham Island MPA likewise gave the participants eco-bags and food containers.

—Thao Huyen



### BANGLADESH

## GOVERNMENT CONSENTS TO BAN MICROBEADS IN PERSONAL CARE PRODUCTS

**G**overnment decided to ban microbeads in all personal care products in Bangladesh. This significant success came out from the decision makers after two years of policy advocacy and awareness raising campaigns by Environment and Social Development Organization (ESDO).

The relevant agencies of the government such as the Ministry of Environment and Forests, Ministry of Industries, and the Ministry of Fisheries and Directorate General of Health Services agreed upon

the concern in an open forum arranged by ESDO in February.

Microbeads, a type of microplastic, are very tiny pieces of manufactured polyethylene plastic that are added as exfoliants to

health and beauty products, such as some cleansers and toothpastes. These tiny particles easily pass through water filtration systems and end up in oceans and lakes, posing threat to aquatic life.

Early this year, ESDO launched an online signature campaign to ban plastic microbeads. Prior to the launch of the signature campaign, ESDO conducted awareness campaigns on microbeads and microplastic pollution in several schools in Dhaka. To sign the signature campaign, follow:

<https://bit.ly/2HOYjiM> —Afrida Nazibah



## ACTION PACKED QUARTER

By CAIXUAN YUE | Translation by KAIZU ZHANG

### “Yiqifen” Waste Sorting Plan Launched

China Zero Waste Alliance (CZWA) launched the “Yiqifen” Waste Sorting plan towards the end of 2017. The plan attracted 51 social organizations concerned with community waste sorting. This year, those organizations are to start their promotion work on community refuse classification with the aid of the “Yiqifen” Waste Sorting toolkit. They will also have monthly theme activities about recycling on the ground. Toothpaste tubes, shampoo bottles, and other waste have been determined as the objects of the recycling activities.



Poster of the Waste Sorting Program

### Calls for Policy Improvements on Plastic Pollution

In January 2018, the National Development and Reform Commission (NRDC) extensively collected proposals on plastic pollution. CZWA members convened an offline and live connection seminar to discuss recommendations and suggestions on various plastic issues. We launched a joint signature of the public and environmental organizations.

As a result, five proposals submitted to the NDRC:

- Proposals on plastic waste pollution prevention and control strategies (with 90 signatures)
- Recommendations on cautious development of degradable plastic (with 353 signatures)
- Suggestions on prohibition of hotel disposable supplies (with 392 signatures)
- Proposals on prohibiting plastic micro beads in cosmetics (with 392 signatures)
- Abolition of renewable energy subsidies for plastic waste incineration (with 415 signatures)



Posters of calling on the public and environmental organizations a joint effort on policy recommendations

2018 is the 10th year that China has been releasing bans on free plastic bags.

However, the effect of the bans is limited. During the two sessions, NPC and CPNCC, CZWA submitted a proposal suggesting that the bans be upgraded. Several NPC members also submitted policy proposals on this issue, which led to a discussion of plastic restrictions.

In March, CZWA organized a survey team consisting of 11 groups to carry out a sampling survey on the implementation of plastic restriction orders in cities and rural areas of different administrative levels in different regions of China.

## China's Strategic Committee to Get Rid of Plastic Formed

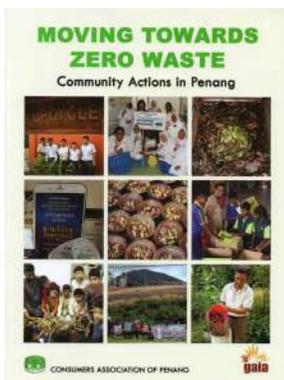
**C**ZWA led the formation of the Plastic Strategy Committee which just completed its first strategic planning meeting. Since the meeting, the core strategy of the committee has been preliminarily determined.



MALAYSIA

## NEW ZERO WASTE BOOK OUT NOW!

**E**arly this year, Consumers Association of Penang (CAP) launched their new book: *Moving Towards Zero Waste: Community Actions in Penang*. The book features community-led Zero Waste initiatives in Penang.



In his speech during the book launching, CAP President, S.M. Mohamed Idris, underscored that Zero Waste is not just about waste management, but more importantly, about waste reduction.

“The road to Zero Waste is more than diverting waste from landfills or incinerators. Our mission is to prevent waste from being generated in the first place by changing consumption culture,” he said.

“Consumers have become disconnected from where products come from, the raw materials needed, the processes involved, the waste generated. We are literally destroying the planet,

whether knowingly or unknowingly,” he added.

He called on everyone to practice mindful consumption and to push for change. “We need to be mindful consumers and, at the same time, demand that manufacturers and retailers become more conscious, ethical and change for the better. If we continue business as usual, we will move closer to collapse of civilization,” he said.

PHILIPPINES

## RESEARCH UNDERWAY

**G**AIA ASIA PACIFIC has signed a partnership agreement with the University of Santo Tomas and Mother Earth Foundation to conduct research on the socio-economic benefits of adopting Zero Waste in cities, compared to other waste treatment methods.



## PHILIPPINES

### GREEN GROUPS TO STARBUCKS: DITCH DISPOSABLES

**P**hilippine-based green NGOs participated in a global action calling out Starbucks for its yet to be fulfilled commitments to curb plastic pollution. The campaign is calling on Starbucks to address its plastic pollution in five specific ways:

- Create a 100% recyclable paper cup without a plastic lining.
- Reduce plastic pollution by eliminating single-use plastics like straws.
- Promote reusable cups and encourage customers to change their habits.
- Recycle cups and food packaging in all stores worldwide.
- Report publicly on the type and amount of plastics used in packaging.



"Each minute, the equivalent of a garbage truck full of plastic ends up in the ocean, and by 2050, there is projected to be more plastic in the ocean than fish by weight. Starbucks needs to take immediate steps to #breakfreefromplastic before our global plastic pollution problem overwhelms our oceans and marine life," said Von Hernandez, Global Coordinator, Break Free From Plastic.

### PHILIPPINE HOSPITAL SOON TO BE ZERO WASTE



In February 2018, management of the Calcutta Medical Center, a state-of-the-art hospital in Pampanga, Philippines, signed a Memorandum of Agreement (MOA) on Sustainable Healthcare Waste Management with Health Care Without Harm Asia. The MOA signing aims to strengthen the ties between HCWH, GGHH and the Calcutta Medical Center in implementing hospital waste management that is not harmful to the planet and to the patients.

## INDIA

### WASTE, A BIG CONTRIBUTOR TO AIR POLLUTION

Waste is a much greater contributor to air pollution than we realize. This was pointed out by a panel comprising of Dr. Arvind Kumar, Doctor at Lung Care Foundation, Balendu Shekar, Advocate at MoEFCC, Dr. Suneel Pandey, Director of Environment and Waste Management Division at TERI, Rahul Choudhary, Advocate at LIFE, Dr Kamyotra,

Ex CPCB, Ms. Manwara, Vice President of Safai Sena and Ms. Prarthana Borah, India Director of Clean Air Asia during a discussion early this year in Delhi, India.

Not only is open burning of waste a significant source of pollution, but so are landfills, construction and demolition waste, incinerators for sanitary towels in schools, and waste-to-energy plants.

One of the issues brought up was the challenge of measuring pollution. “What is the meaning of measuring dioxin when it is so expensive and done just 3-4 times a year? In most developing countries, it’s measured 24 x 7. It has no meaning. You just have to stop all manners of burning,” pointed out Bharati Chaturvedi, Director of Chintan.

Meanwhile, Manwara Begum, representing Safai Sena, an association of wastepickers, mentioned that air would continue to be polluted till every citizen segregated his or her waste.

“Think of us who pick your waste,” she pointed out. “We do it for our children. But what are you doing for your children? When you don’t segregate your waste, you pollute the air—that’s what you are giving to your children.”

Prartha Bohra of Clean Air Asia, added: “It is essential to mainstream air pollution in other areas. It is not a stand-alone issue.” Several audience members talked about the lack of authority to complain to, and a break down of governance.

“We don’t have any one accountable,” claimed Radhika Kapoor, mother of an 11-year-old.

The panel concluded with the plan to take the discussion ahead as a citizens’ movement that would support each other to eliminate air pollution from waste.

## INDIA

### WASTEPICKERS RECEIVE MASKS

**E**arly this year, Chintan, in partnership with Safai Sena, marked India’s 69<sup>th</sup> Republic Day by distributing over 200 masks to wastepickers working on the Bhalaswa landfill in North West Delhi, one of the three biggest and most polluting garbage dumpsites in Delhi. This marks the conclusion of the ‘Help Waste-pickers Breathe’ campaign, a large part of which was crowd funded by citizens of India.



Landfills are significant contributors to air pollution with the Bhalaswa landfill always spewing fire and emitting toxic fumes due to greenhouse gas emissions from waste decomposition. It is these dangerous landfills that wastepickers scale every day to segregate and recycle waste. This marginalized group also live near the landfills and this proximity further makes them susceptible to the effects of air pollution.

## #WAYSTOZEROWASTE COMPETITION TOP ENTRIES

To commemorate the Zero Waste Month celebrated in the Philippines every January, GAIA Asia Pacific launched an online competition dubbed #waystozerowaste2018 which encouraged nationals in the Asia Pacific region to share their Zero Waste stories through photographs. Here are the top three winners and their stories.



TOP WINNER (Top photo, left)  
**PRINCESS DEL CASTILLO**

“Bringing my own utensils, refilling water in my bottle, switching to bamboo toothbrush, wiping with a handkerchief, shopping with a tote bag and making my own laundry detergent. I embarked on my zero waste journey in 2016 because I wanted to lessen my

carbon footprint. I thought I was only doing it for the environment, but I realized that going Zero Waste also developed me to make good choices that benefited my health and well-being.”

FIRST RUNNER UP (Bottom photo)  
**MA. PAZ OLIVA**

“Lunchtime in the Philippines means buying takeout food in the carinderia to be packed in plastics and be taken to the office's pantry. My [#hcwhasia](#) colleagues taught me that if you want to [#GoForZeroWaste](#), a PIMBRERA is a brilliant idea. Now, this is how lunchtime at work looks like :) Perfect for [#WaysToZeroWaste2018](#).”

SECOND RUNNER UP (Top photo, right)  
**CARMEE TOLENTINO**

“Back to basics. Women unconsciously and unintentionally contribute too much waste, especially during “that time of the month.” Thank goodness for alternatives like these [#washablepantyliners](#) and [#washablenapkins!](#) They're economical, hygienic, convenient, and eco-friendly! There are limitless [#waystozerowaste!](#)”

## SHARE YOUR STORIES

**O**ur work is rife with stories—of struggles and successes, of hope and empowerment. In the work we do, we get to touch people and change lives. There are struggles and challenges. But there are also victories. There is hope. And there is empowerment. We witness transformation. We bring about change.

Share with us your stories, so that we may be inspired by them. Talk about your successes, so we could celebrate with you. Tell us about your struggles, that we can stand with you.

Let our quarterly be a venue for us to share our stories and learn from each other. Please email your stories to [sherma@no-burn.org](mailto:sherma@no-burn.org) for consideration.

The stories should be 400 to 800 words. Whenever possible, please accompany your stories with captioned photos, preferably with the photographer's name for proper acknowledgement. Photos may be about project site, people (e.g., waste workers) at work or in action. People posing for photos may be used, but discouraged. We reserve the right to edit contributions for clarity and brevity.

### WORLD ENVIRONMENT DAY

June 5 | Waste and Brand Audits | Various sites in India

### ZERO WASTE ACADEMY

July 2018 | Dumaguete City, Philippines

### PLASTIC FREE JULY

Worldwide



## YES, WE'RE SOCIAL



GAIA members are active on social media. Since we

created our social media accounts, we have been actively promoting our member stories. Follow us:

FACEBOOK: [GAIA Asia Pacific](#)  
INSTAGRAM: [@gaia.asiapacific](#)  
TWITTER: [@ZeroWasteAsia](#)



Kuppai Matters is an initiative to protect our society and the environment by reducing waste and improve handling of discards. It is a platform of residents, workers' organisations, educational institutions, environmental groups and social associations.

FACEBOOK: [Kuppai Matters](#)



Green Army is a movement led by youth to educate children on Zero Waste scheme and to make a toxic free future.

FACEBOOK: [Green Army International](#)



Humans of Zero Waste is

an online platform that aims to tell the stories of people and communities that are for Zero Waste managed by Mother Earth Foundation.

FACEBOOK: [@hzw.mef](#)  
INSTAGRAM: [@humansofzerowaste/](#)

# BASIC CONCEPT

## WHAT IS ZERO WASTE?

**Z**ero Waste replaces the current one-way model with a more sustainable cyclical system, emphasizing chains of connectivity and responsibility, and focusing on waste prevention. Zero Waste is about “designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them.”

Zero Waste is both a goal and a plan of action. The goal is to ensure resource recovery and protect scarce natural resources by ending waste disposal in incinerators, dumps, and landfills. The plan encompasses waste reduction, composting, recycling and reuse, changes in consumption habits, and industrial redesign.

Just as importantly, Zero Waste is a revolution in the relationship between waste and people. It is a new way of thinking that aims to safeguard the health and improve the lives of everyone who produces, handles, works with, or is affected by waste—in other words, all of us. In a Zero Waste approach, waste management is not left to politicians and technical experts; rather, everyone impacted—from residents of wealthy neighborhoods to the public, private, and informal sector workers who handle waste—has a voice.

Practicing zero waste means using all materials to their utmost potential and integrating the needs of people—workers and communities—into production and reuse systems that minimize impacts on the environment. It is much like establishing zero defect goals for manufacturing, or zero injury goals in the workplace.

Zero Waste is ambitious, but it is neither unachievable nor part of some far-off future. In small towns and big cities, in communities rich and poor, in the global North and South, innovative plans in place today are making real progress toward the goal of Zero Waste.



Zero Waste also strives to reduce the toxicity of products and manufacturing processes, reduce waste at source, maintain a sustainable level of consumption, and redesign products to allow for easy and safe reuse. Taken together, these approaches ensure that eventually a community with a Zero Waste plan will be able to phase out waste disposal in landfills and incinerators.

Zero Waste can be implemented in a town, a city, a province/state or a country, as well as in a school, a university, a business, and a neighborhood. Government support in coordinating efforts related to resource management is key, because it can facilitate cooperation across multiple decentralized Zero Waste actions and programs in a community. In addition, the interests of residents, businesses, industry, and workers should be represented in any Zero Waste plans.

## Is Zero Waste Practical?

In the past, the idea of Zero Waste has been dismissed as impractical or even idealistic. But just as manufacturers set goals of zero defects and workplaces aim for zero injuries, communities adopt Zero Waste goals to signal a commitment to continuous system improvements. By adopting Zero Waste as a goal and backing it up with policies and programs, community efforts can align with a vision against which all actions can be evaluated and progress can be measured. Zero Waste is a long-term strategy that can bring about substantial waste reduction, while using comparable or fewer resources than would be needed to design and build landfills or incinerators.

From *On the Road to Zero Waste: A Practical Guide* (GAIA Publication)

# NOURISH THE EARTH THAT FEEDS US

## COMPOSTING RETURNS NUTRIENTS TO THE EARTH

About **40-65%** of the average waste generated globally is composed of organics or biodegradables. An act as simple as composting yields huge environmental, economic, social and climate benefits.

**40-65% ORGANICS OR BIODEGRADABLES**

## COMPOSTING IS CLIMATE-FRIENDLY

Composting helps combat climate change by replenishing the Earth's topsoil, helping it store carbon more efficiently. Healthy soils store more than **4 trillion tons of carbon**. In comparison, forests store 360 billion tons and the atmosphere stores 800 billion.

**4 trillion tons of carbon**

## COMPOSTING SAVES RESOURCES

Proper organics waste management through composting and anaerobic digestion (biogas) can lead to huge savings for local governments through reduction in collection costs and hauling/tipping fees.

In the City of San Fernando-Pampanga, source separation of waste and increased composting and recycling have resulted in huge savings: CSFP now only spends PHP 12M on hauling fees compared to PHP70M in previous years.

## COMPOSTING IS TOXIC-FREE

Composting supports sustainable and organic agriculture. Compost is an economical and ecological alternative to chemical fertilizers. Adding compost to agricultural land helps replenish nutrients lost during harvest, helps the soil hold more water, promotes higher yields of agricultural crops and suppresses plant diseases and pests. Composting also utilizes farm waste after production and harvest, preventing waste burning and dumping.

**SUSTAINABLE SAFE ORGANIC ECONOMICAL**

## COMPOSTING SUPPORTS DISASTER RISK REDUCTION EFFORTS

Compost has been proven to prevent erosion and silt. Adding compost to areas prone to landslides and siltation helps better soil retention. In addition, adding compost to flood-prone areas helps rejuvenate the soil, helping it retain more water and replacing nutrients washed away by flood waters.

**COMPOST HELPS PREVENT EROSION AND FLOODING**



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Barangay Central, Quezon City  
1101 Philippines  
PHONE: (+63 2) 436 4733  
WEBSITE: [www.no-burn.org](http://www.no-burn.org)

GAIA is a worldwide alliance of more than 800 grassroots organizations and individuals in 88 countries, whose ultimate vision is a just, toxic-free world without incineration. The network's two-part strategy is stopping unsustainable practices and advancing solutions. Since GAIA's founding meeting in South Africa in December 2000, we have grown to support major civil society movements on every continent. Our greatest strength lies in our membership, which includes some of the most active leaders in environmental health and justice struggles internationally.

FACEBOOK: [GAIA Asia Pacific](#) | TWITTER: [@ZeroWasteAsia](#) | INSTAGRAM: [@gaia.asiapacific](#)