

Confronting the plasticine: promise in a world wrapped in plastic



As we poured water into a jug to be added to the ashes in the bucket, Maria (not her real name) asked in Spanish, “Why does making soap have anything to do with plastic?” Maria and another 50 or so Indigenous women from her village, in the highlands of southeastern Guatemala, had gathered ashes from their home fires and filled water jugs to bring to their community centre for a workshop with a local craftswoman on soap making; the first step of which is mixing ash with water and letting it sit. “That’s a long answer” I thought, struggling to think of how to express myself in Spanish. “Too much plastic everywhere, in the ground, air, water—chemicals in the plastic—bad for our health and for animals” I said in Spanish. “¡O, los químicos de plástico! ¡Sí, son malos!” she agreed, as we finished our task. Outside, women were talking together, and you could feel their excitement—they wanted to learn something useful that might also garner additional income. This highland village had selected making soap, among many options, that might rebuff the environmental pollution that surrounds them. This first workshop seemed a success.

I first came to Guatemala in 2015 to join a long-standing Guatemalan-US-based research team working on clean air interventions and their benefits, such as clean gas cookstoves to reduce household air pollution and its effects on pregnant women and young children. Now, we are applying environmental sciences, nursing, anthropology, epidemiology, and implementation science to a new research project to reduce the amount of plastic waste burned in household cooking fires. Plastics are inundating rural communities, and where sanitation services do not exist, communities are left with little else to do but to burn household waste. Our study, known as ECOLECTIVOS (NCT05130632), applies a dynamic working group model. This model adopts a co-development approach for working with community members to determine desirable practices that might effect change, in this case, for reducing burning of plastics in indoor and outdoor household fires. Why plastic has become such a burden requires a longer answer that I could not find the words to tell Maria.

This longer answer conveys the historical truth, absent both in my reply to Maria and in how we generally think about ecological problems and justice. A shorter answer is that we have a burden of plastic that is killing our planet, something that is a result of multinational corporations’ massive reach and too little investment in infrastructure. In Guatemala, as in many parts of the world, there is a confluence of problems driven by corporate-colonial interactions. First, there is the promotion of plastics for everything, which results in plastic detritus everywhere. Almost no paper, glass, or metal is used for consumable packaging, only plastic. Then, there is the restructuring of products as single-use plastics, popular often because this form is cheaper and convenient. The small plastic bag with ice and a flavoured syrup made by your neighbour who has ice costs less than a soda in a bottle. The single-use shampoo in a shiny sachet, and the powdered laundry soap in the small plastic bag, also costs less today than a bigger container, even if the larger volume containers are ultimately cheaper. Around the rivers in these Guatemalan mountain villages, as in communities all over the world, people wash their clothes in natural sources of water, and now there are mounds of single-use plastic laundry soap bags littering the river shores everywhere. Near the community centre where the workshop was held, the discarded plastics cover the riverbanks, reminding me of foam on the ocean’s shoreline, but, unlike the foam, it will remain for years to come.

The book *Pollution is colonialism*, by Max Liborion,¹ begins by calling attention to a moment in 1956, when the editor of the magazine *Modern Packaging* reported at a conference that the “future of plastics is in the trash can—it is time to stop thinking about ‘re-use’ packages and concentrate on single use”. This prediction is borne out by data showing that plastic production increased from 2 to 380 metric tons from 1950 to 2015, with estimates that by 2050 there could be 12 000 metric tons of plastic in the natural environment or in landfill sites;² enough to cover the earth in a layer of plastic.

The impact of this huge expansion in plastic production can be seen in the villages that we are

working with in Guatemala, and in many other villages globally that do not have sanitation services, recycling, and other means of disposal, and are now inundated with plastic waste. Their agrarian farmed and forested communities had previously been self-contained for disposal. Now, organic materials are less a part of their lives, and with no disposal infrastructure, people dump, bury, or burn waste. Burning also serves to start cooking fires, but at the same time releases toxic fumes, microplastics, and solvents into the air. This is part of why we are visiting Maria's village, to study the impact of plastic burning on air quality. The other part is to offer technical support for plastic-reducing strategies to the communities. Working with a few communities at a time, ECOLECTIVOS is helping to set up practices along the reduce, reuse, recycle framing, such as soap making and repurposing plastic bags as filling for cushions.

"My grandmother used to make soap", an older woman comments in Spanish during the workshop, and others nodded. The people of this village do not want clogged rivers. They want to feel free of plastic waste. Some villagers told me that they used to eat off of ceramic plates. Now, instead, they use disposable plates, because water is a scarce resource during many months of the year and droughts are now more extreme. "We could go back to those ways", she added and there were more nods.

It is easy to be tempted to just get involved in immediate person-level support for this community, and concentrate on supporting these women in their local pursuits, rather than focus on the upstream drivers of these issues. But we must not lose sight of the market forces that have driven the expansion of disposable plastics use globally and continue to creep up into even these remote areas. To see these extensive plastic wastelands reminds me of new phrases I am seeing that reflect the environmental truths, such as petrotyranny and slow violence, which both emerge to characterise neoliberal policies that place short-term plastic product marketing and profit over long-term reckoning with the waste plastics leave behind. And the new meaning of the word plasticine evokes the epoch-like nature of plastics pollution and how, for example, the ways plastic will become part of future deposits on earth.

But the truth of community resourcefulness and environmental justice is undeniably present here and beyond the workshops. There are innovators all across

these hillsides, as there are everywhere. Enter the successful coffee cooperative that only purchases coffee from families certified as plastic-free, garnering a higher purchase price and secure contracts, or the mayor of a village on Lake Atitlan, Guatemala, who introduced a plastic bag ban. These are both examples in long-view thinking and action. After the workshop, several of our team travelled to the lakeside village to hear the mayor's story, which also succinctly summed up a case study in how neoliberalism's ugly face showed up in a lakeside village and was outmanoeuvred. During our meeting, as if on cue, the mayor told us in Spanish, "Well, if there was any money to be made from the trash, someone would have privatised it by now, so I had to figure out how to make some money first, to afford the plastic ban". He walked us through the steps. First, he created solar energy for his municipality, through which he could save on electricity costs to allow him to purchase a truck and fund garbage workers, trash pickup, and purchase land for a recycling centre. Once trash was managed, he could then restrict the use of plastic bags and track what was happening in the community, because trash disposal was a collectively managed municipal activity. The community also makes money from selling recycled goods, which helps to cover the costs of the recycling team. Gathered at the so-called good dump, outside the Lake Atitlan village, we met local community upcyclers who were showing off creatively repurposed cast-off items.

So-called plastification is everywhere, but it can be countered. However, it should not be up to the mayors, soap makers, recyclers, and repurposers like those we met, and those in adjacent economies like the coffee producers, to solve the global plastic pollution problem. Globally, governments and goods producers need to work to reduce the supply. We also collectively need to change the way we think about the inevitability of the lifestyles we lead and ways to counter these assumptions with actions. We need to think about the intersecting forces that led us to where we are, and the inequities created (such as how communities of colour are disproportionately burdened with pollution). Looking at the struggle and success that the Huaorani people of the Amazonian region of Ecuador have made that resulted in a change in the constitution in Ecuador,³ or new laws in California in the USA ensuring the responsibility for plastic recycling infrastructure is

on the producers,⁴ we could find some better footing. In his book *On tyranny*,⁵ historian Timothy Snyder warns of the “politics of inevitability”, describing how societies since the 20th century have allowed a belief to dominate—one that claims the status quo is the future, and that nothing can really change. We need to address the landscape of how we have come to see our so-called plasticine as inevitable. We have enough plastic to last an eternity and plenty of policy options, and creative micro-economies, to try to move it into a sustainable and less omnipresent place in our lives. Let us unwrap the plastic that coats our world and put it away.

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