# Halo-Halo Ecologies

## The EMERGENT ENVIRONMENTS behind FILIPINO FOOD



Edited by ALYSSA PAREDES
and MARVIN JOSEPH F. MONTEFRIO

# Halo-Halo Ecologies




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This series showcases new works focused on food in the Asia-Pacific (FAP) region and its diasporic iterations, highlighting the commonalities that the area and cultures might bring to the subject. Books under this series are disciplinarily diverse, drawing from the fields of geography, sociology, anthropology, history, globalization studies, gender studies, science and technology studies, development studies, ethnic studies, and cultural studies. The Asia-Pacific region evokes particular global relationships and domestic infrastructures—center-periphery, postcolonialism, imperialisms, and politicized imaginaries. The goal of the series is to bring food to bear in considering these relationships and infrastructures. We see a regional focus—including the inherent mobility of transnational flows, migration, and global capitalism therein—as a productive element, rather than as a reifying limitation. By bringing together books that have a general topic (food) and an area focus (Asia-Pacific), the FAP locates mobility itself as the framework from which scholarship may enrich our understanding of this complex, globalized world.

# Halo-Halo Ecologies

## THE EMERGENT ENVIRONMENTS BEHIND FILIPINO FOOD

*Edited by*
Alyssa Paredes and
Marvin Joseph F. Montefrio



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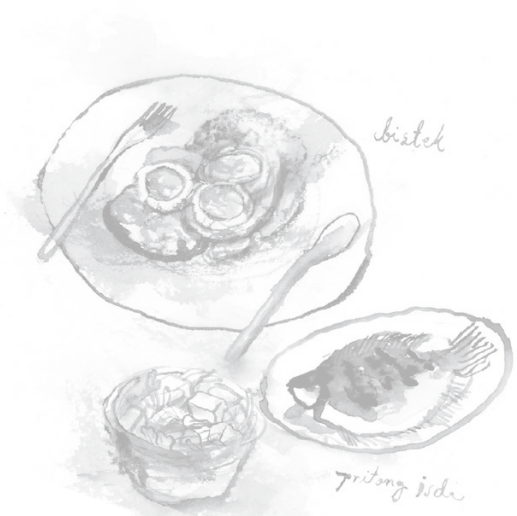
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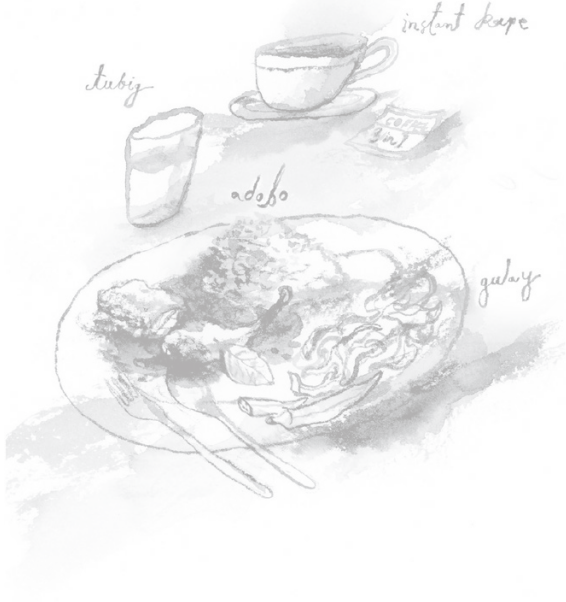
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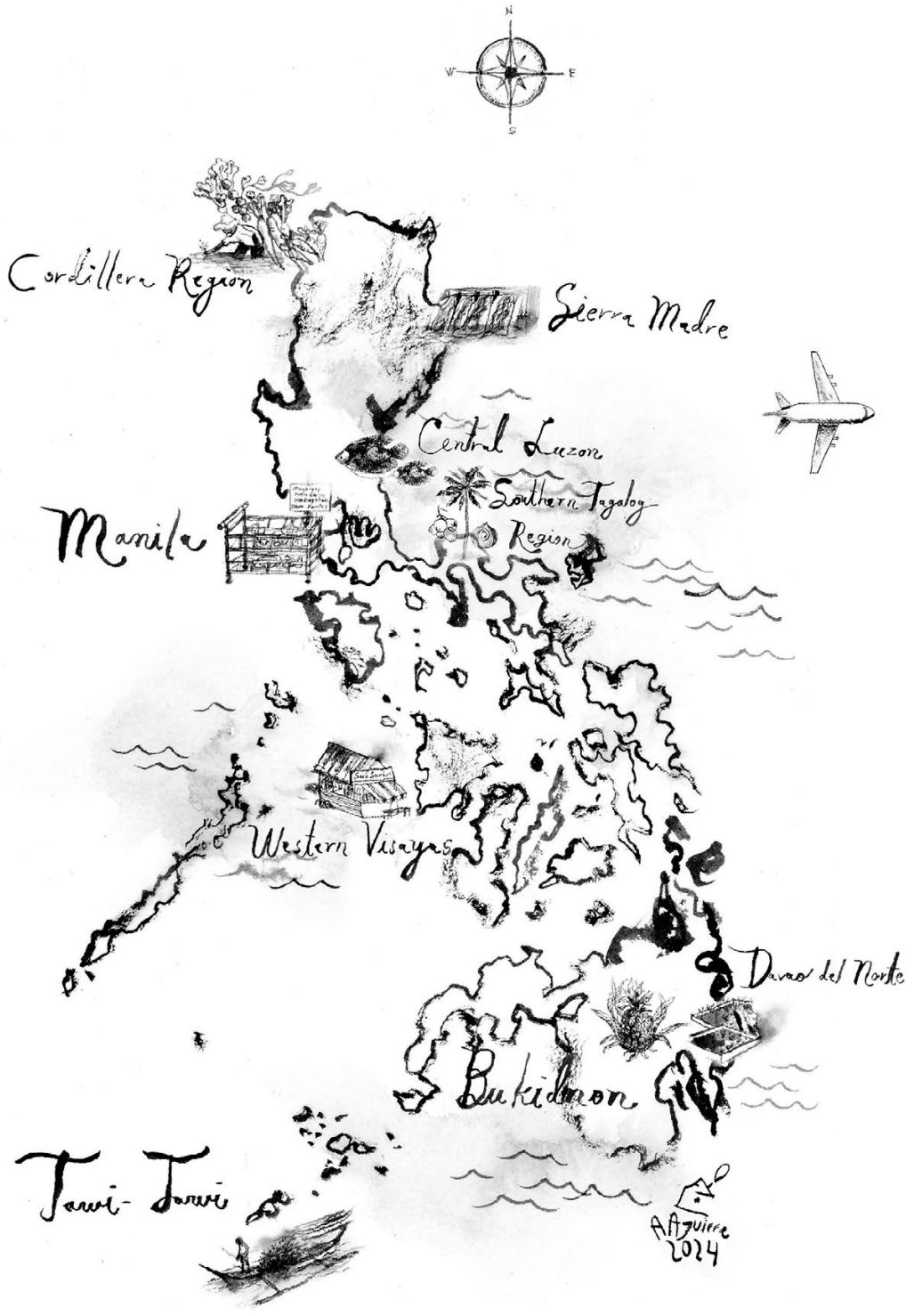
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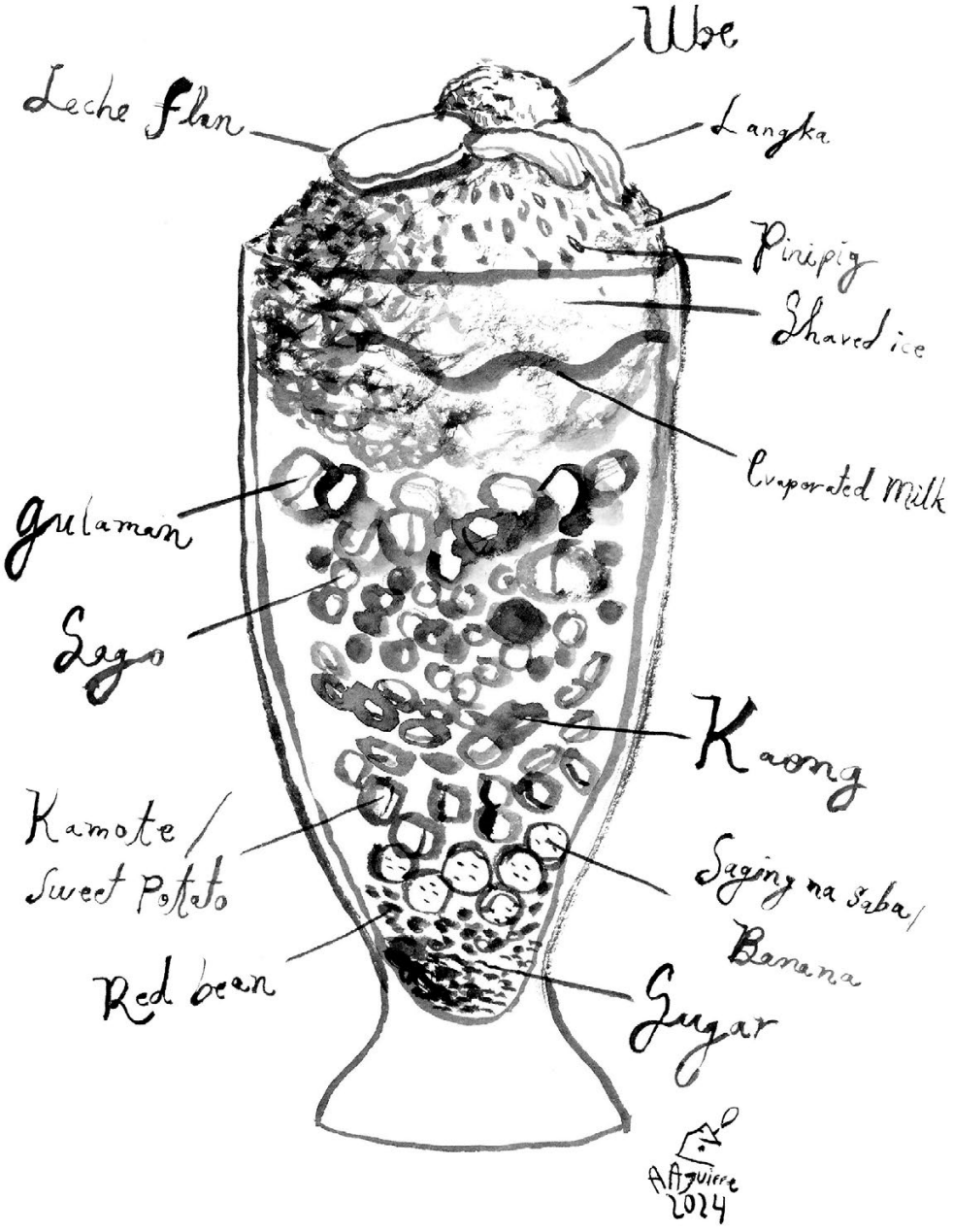
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# Prologue

## *Where* Ube *Comes From*

Ma. Katrina Beatrice David Jacinto

How do you make *halo-halo?* When I ask my mother, Pinky, a Filipina who has spent half her life at home and half her life abroad, she provides a deceptively simple answer: "No need for a recipe. Just put in your favorite stuff." She is not wrong. To assemble *halo-halo* is easy. First, the ice, crushed or shaved, goes in . . .

"*Teka!* [Wait!] Wrong order!" My grandmother's cousin Tita Juris chides me as I place my first scoops in the glass.[1] It is my first visit back to Manila in three years. As a middle-class immigrant living in Singapore, I usually had the privilege of visiting home every Christmas season, but the pandemic put an abrupt halt to this routine. For this special occasion, an impromptu family reunion has gathered in the home of Tita Baby, another of my grandmother's cousins. Though she is in her seventies, she bustles energetically around her kitchen, preparing a feast for our arrival. A beloved *halo-halo* spread serves as our *merienda* (afternoon snack). Bashfully, I empty my glass. Perhaps assembly is not so easy after all. There seems to be a way to make *halo-halo* right.

"The toppings go first," Tita Juris explains. "But just a little bit of everything, or it'll get too full." I nod, turning my attention to the constellation of bowls arranged on the narrow countertop. They hold all the tantalizing, traditional ingredients: red and green cubes of *gulaman* (seaweed jelly), chewy *kaong* (sweet palm fruit) or *nata de coco* (coconut jelly), sweet corn and beans, syrupy strips of fruit along the lines of *langka* (jackfruit), *saba* (a Philippine banana cultivar) and *macapuno* (young coconut), crunchy *pinipig* (toasted sticky rice), a glistening slab of *leche flan* (caramel custard), and vibrant *ube* (purple yam) jam. I spoon these in, replace the ice, and drizzle the whole thing with evaporated milk, mouthwatering as it

sinks to soak the goodies at the bottom. In my eagerness I have forgotten Tita Juris's advice, because my glass is nearly overflowing.

Now a glorious, heaping dessert emerges, standing formidably like the mountains of the Cordilleras. Its many technicolor layers are what tempt the eye, and the tongue, so profoundly. As my spoon burrows in, digging as I am for the perfectly balanced bite, the layers gradually blend together. But by now the aesthetics are of little concern. With the crunch of ice and *pinipig,* the give of firm jelly, the harmony of flavor, texture, and aroma, the taste is satisfying enough. I close my eyes to savor each spoonful, so cold and sweet it makes my teeth tingle. There is nothing like Tita Baby's *halo-halo,* and there is nothing like the joy of finally being home. As *halo-halo* is polished off, the ice starts to melt. One slurps it as if it were a soup until the glass is empty yet stained with the trace of a fond memory.

"But," my mother emphasizes, "it's really about what you want to put in it. *Halo-halo* represents the individual; you make it to your own taste." Perhaps, to her accustomed palate, the rules of *halo-halo* can be left unsaid: her words feel more like a reassurance that she trusts *my* taste. But, as Tita Juris showed me, there are ways to make *halo-halo* right—and there are ways to make it terribly wrong. In *Bon Appétit*'s "An Ode to Halo-Halo," many Filipinxs at home and across the diaspora vehemently rebuked the recipe, which called for ingredients such as lime juice, berries, gummy bears, and even popcorn.[2] Like those who fiercely rejected the supposed ode, my family unanimously agreed: "This is nowhere near *halo-halo.*" Even my younger sibling, who was born and raised overseas, felt that it was "extremely weird." My mother diagnoses the problem: the ingredients are all "Western," so it "really isn't the same." Her quick observation reminds me that *halo-halo* is inseparable from where it comes from. It is shaped by the lands that grow each fruit, the waters that nourish them, and the hands that stir the syrup and shave the ice. It is a story that starts away from the kitchen table, written in every rain and harvest, and ends in the tall glass I cradle now. I learn, then, that my taste for *halo-halo* is not only my own. There is no individual in the making of taste or the growing of food: only the comingling of many.

But if *halo-halo* is a story, how much am I able to tell? How well do I know *where it comes from?* Beyond the label of "Filipino cuisine," beyond even my own longing for flavors of home, what could I tell you about where each ingredient grows and how to nurture it? Though I might make a better grocery list than the writers over at *Bon Appétit,* I fear I am not

any more equipped to tell the deeper story. I need to refine my taste, not for the dish but for the magic of its making, and I wonder who can help me.

My mother is a good place to start. *Ube* is her favorite topping, and she is not alone. The purple yam, which renders any food vibrantly photogenic, has become a worldwide culinary craze, though it has been a staple of Filipino cuisine for generations. Before being bottled into jars or baked into pastries, *ube* is a hefty indigenous tuber, grown primarily in Bohol but also in other areas such as the Cordilleras. A rather shy yam, *ube* favors the cool shade of its vegetal neighbors and the familiarity of consistent temperatures—comforts denied by the dramatic effects of the climate crisis. What was once a resilient insurance crop has now become precarious.

But when my mother tells me about *ube,* she does not mean to tell me about the climate crisis or crop conditions. Instead, she is telling me about her family reunions in the 1980s, where a long buffet-style table in Laguna offered up each *halo-halo* topping like a painter's palette. She remembers being a child with sticky, purple-tinged lips and ice-numbed fingertips, living in a Philippines long gone. On those hot summer days, the treat of a small plastic cup of *halo-halo* could not be beat. She recalls these moments as if they were an unreachable dream. In her cherished memories, *ube* is sweet, jammy, and, most importantly, ubiquitous. It is these very memories that obscure her vision now, ignorant to the encroaching environmental threats to her favorite childhood food. I could never blame her for the innocence of this culinary love. But I am determined to love in a way that also seeks to know not only what is easy but what is hard to swallow. For this, my mother cannot help. The answers are buried elsewhere.

I turn, hopefully, to Tita Baby, the chef extraordinaire who ran the family bakery years before I was born. Perhaps she can fill the gaps in our knowledge. When I ask her where *ube* comes from, she replies with a chuckle: "I get it from the market." This statement is more vague than I had expected. However, with more precision, Tita Baby tells me how she makes her *ube* jam by hand. She takes me through the steps of washing, boiling, peeling, and mashing before finally simmering the cooked *ube* with butter and condensed milk. She warns me to whisk the mix quickly over heat, lest it separate. A cheerful, generous old lady, Tita Baby speaks with the familiarity that decades of cooking bring. She knows *ube* in a different way from my mother, who has never been a prolific cook. But, just like my mother, she is surprised to learn that *ube* faces environmental

concerns. It is a question that never crossed her mind, negated by the sturdy certainty of the tubers in her palms. For all the *ube* that she has cleaned, softened, and lovingly stirred, Tita Baby cannot tell me about the soils where they grew or the hands that held them first. Neither of them knows where *ube* comes from.

There are days I feel so far away from home, and this beloved food is one of my only comforts. But when I think about *halo-halo* and that precious *ube,* my hunger has changed: the taste alone is no longer enough. I am hungry to know the stories untold, the stories of the islands, mountains, and waterways that I naively call mine and their inextricable entwinement with the food that I crave. These are stories of transformation and loss, violence and resistance, love, and hope—and they are *there,* in every spoonful, though I cannot put the words to it yet. They are waiting to be unearthed and held to the light, treasures that teach me who I am, where I come from, and how I can protect the people and the environments that feed me. I am hungry to leave the table and find them. Then, even for a moment, I can stop worrying about how to make *halo-halo* right. Instead, I can make right by *halo-halo.*

## Notes

1. *Tita,* meaning "aunt" in Tagalog, is used before a person's name as a sign of respect. It can also be used loosely to refer to any female family member from an older generation, or even a family friend.

2. The recipe received an average rating of 1.5 out of 5 stars, with many commenting that the recipe reflected colonialism and cultural appropriation. The editors later added an apology to the article.

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# *Agahan*

## *A Recipe for Filipino/Filipinx Gastroecological Storytelling*

Alyssa Paredes, Marvin Joseph F. Montefrio, Orven Mallari, and Ma. Katrina Beatrice David Jacinto

Filipino food scholar Doreen G. Fernandez once reflected that "in the act of eating, we ingest the environment" (Fernandez 1994, xv). In everyday practice, however, food is disembodied from the environment, even as writers like Fernandez serve up its cultural and historical bearings. Take *halo-halo,* the iconic crushed-ice dessert beloved by many. Food writing describes this midday treat as a marker of Filipino/Filipinx identity, a colorful assortment of ingredients now considered prototypically *pinoy.*[1] Rarely is this concoction understood as a material product of Philippine ecosystems—that is, as an eclectic blend of environments in the ever-evolving and highly politicized foodscapes of the archipelago and its waters. Crushed ice, for instance, might tell the story of urban Manila's class transformation with the democratization of refrigeration technologies. Evaporated milk betrays tales of colonial ranching, the supplanting of local carabao-centered cultures, and shifting human-animal relationships with military incursion. Tropical fruit toppings like bananas are windows into the rise of plantation agriculture and the scientific management of Mindanao's landscapes. And *ube,* the purple tuber world-famous as comfort food for the diaspora and as a social media phenomenon, has become a harbinger of climate change to the farmers of the Cordilleras.[2]

The Philippines brims with these stories, powerful prisms through which to consider the complex intersection of gastronomic and environmental concerns. Home to one of the world's mega-biodiverse sites and some of the most productive fishing grounds in the Coral Triangle, the archipelago's sites of production and harvest lie at the junctions of

competing geopolitical interests and conservation agendas. Ever expanding capitalist frontier lands have paved the way for the emergence of a vibrant agrarian society, as well as for a "protracted war" in what is widely known as Asia's longest-running Communist insurgency (Putzel 1995). In the Cold War period, the archipelago became a pivotal testing ground for the modernization and industrialization of foodways of many other places in the world, but especially those of other countries in the Global South. The high-yielding varieties of rice developed during this period serve as both a parable of the successes of Green Revolution biotechnologies and a cautionary tale of an agricultural powerhouse's fall to the status of permanent net food importer (Bello 2009; Glover and Stone 2017). Today, the Philippines' claim to its position among the top exporters of coconuts, bananas, pineapples, and coffee has been accompanied by violent clashes between communities and state- and parastatal forces, earning it the title of "deadliest country" for environmental activists in 2019 (REAP Mindanao 2016; Regancia 2019). Meanwhile, Filipino/Filipinx American cuisine has gained substantial interest in cosmopolitan cities around the world. With labor as one of the top exports of the country, the palate has diffused widely to influence global spaces of consumption. How these culinary trends will eventually affect environments in the Philippines and elsewhere remains a question.

Galvanizing the efforts of the authors gathered in this volume is the deep-seated awareness—born of immersive research, teaching, and activism—that the environments behind Filipino foodways are at risk. Indeed, if Doreen Fernandez suggested that "if we can savor the word, then one can swallow the world" (1994, xvi), then "swallow the world" we have! Increasingly, Filipinos see coastal and marine biodiversity threatened to extinction, soils overutilized to the point of exhaustion, frontier lands deforested, agricultural lands converted to urban and suburban spaces, farmers and fisherfolk forced to migrate and abandon their livelihoods, and Indigenous cultures allowed to fade away. Extreme weather events such as typhoons, which have become more intense and frequent over the past few decades, are feared to exacerbate economic losses and damages and food insecurity in rural and urban communities. The impacts of the COVID-19 pandemic on food provisioning are an ominous sign of the Philippine food and agriculture systems' vulnerability to crisis (Montefrio 2020b). Further complicating these social and environmental impacts is the current political climate of militarism and violence in the

Philippines, as seen in the rise of conflict in sites of food production and the number of environmental advocates and Indigenous leaders murdered (Dressler and Smith 2022). All these trends unfold as the demand for food reaches new heights in the cosmopolitan and hyperconsumerist cities of, say, Manila and Cebu. In the diaspora, meanwhile, these realities are effaced by the common misconception that Filipino/Filipinx immigrants are "unecological" or only live "in the service of the ecologies of settler capitalism" (chapter 3 in this volume). Taken together, these realities constitute the emergent environments behind Filipino food, where the term "emergent" is meant to signal multiple meanings: not only the need for a rapid response as in "emergency" and the process of becoming prominent as in "eminent" but also, and importantly, the coming into being of newly "emerging forms" of cultural-ecological hybrids and mixed intellectual traditions.

What is at stake with the dramatic changes in configurations of land, landscape, labor, livelihood, and culture that have come to define Filipino/Filipinx life as we know it? How do these environmental perils compel us to reimagine what, how, and why we eat? What openings are available for political change? *Halo-Halo Ecologies*' central contention is that we cannot begin to address these questions or meaningfully consider their implications for policy and practice without a new storytelling tradition that creatively combines critical studies on food and on the environment. Rather than framing food primarily as a marker of cultural identity, this collection argues that centering the realities of environmental disasters, livelihood precarity, and state- and military-sponsored violence should shock the Filipino/Filipinx community out of any self-satisfaction in personal delight and nostalgia. It should urge the community toward a new gastroecological tradition, in which its sense of cultural identity is compelled by political urgency and agitation toward collective action. In the pages that follow, we begin to define the contours of that new tradition, drawing on ethnographic and historical cases from the archipelagic homeland of Luzon, Visayas, Mindanao, and the diaspora.[3]

Writing on food and on the environment has not come together as often as one might presume. Certainly, powerful contributions to Filipino/Filipinx cultural studies have traced culinary or gastronomic identity formation to the legacies of colonialism, militarism, and racial capitalism. Likewise, forceful contributions to studies of the Philippine environment link agrarian transformations with the development of core Filipino social

institutions around class, race, ethnicity, and gender. However, these pockets of writing have largely existed independent of each other, neglecting to address how cultural identities are contingent on shifting ecological foundations, which are themselves configured and reconfigured in the image of empire, nation, region, community, and self.

In response, *Halo-Halo Ecologies* brings together a dynamic collective of scholars, writers, activists, and food enthusiasts who see the intersection between food and environment as integral to their understanding of the Philippines and its peoples within and beyond the archipelagic homeland. *Halo-halo,* literally translated as "mix-mix," represents the diversity of our transnational community. Much like the assortment of jellies, fruit slices, beans, ice cream scoops, jams, and rice puffs or cornflakes that compose the dessert, the chapters below are eclectic and wide-ranging. They represent humanistic and social scientific research from the vegetable frontiers of Benguet Province to the seaweed farms of Tawi-Tawi and from the plantation zones of Mindanao to the carceral landscapes of urban Manila. They bring cultural mainstream institutions like the *sari-sari* store (neighborhood convenience store) into conversation with the foodways of vulnerable and precarious communities such as the students of Lumad schools and residents of the food-insecure informal settlements of Manila.[4] Maintaining an archipelagic vision unbound to land-based formations alone, they link the work of waterworks bureaucrats in the metropolitan center with marine scientists in the broader Southeast Asian region. Several of the chapters go back in time to the colonial period, while others extend outward in space to the Filipino/Filipinx diaspora in North America to interrogate the meaning of Filipino/Filipinx food vis-à-vis the Philippine environments.

Our collective stands on the shoulders of agrarian and food scholars and cultural writers of food who have used the Filipino/Filipinx context to inform global debates and theories on gastronomic culture, identity politics, statecraft, colonialism, global divisions of labor, the Green Revolution, Indigenous rights, civil protest and alternative politics, and more. Beyond these established academic traditions, however, the chapters draw on a vibrant assemblage of food- and environment-centered social movements, much of which has been spearheaded by young activists outside the bounds of academic institutions. Taken together, the authors in this volume contend that Filipino food is not what emerges when foreign colonial elements give way to or are subsumed in the local, as is often

suggested. That the force of colonial powers has disappeared is a myth. Instead, *Halo-Halo Ecologies* argues that Filipino food is defined and redefined as the Filipino/Filipinx community continues to reconcile with the colonial past, its lingering ghosts in the postcolonial present, and aspirations for sovereign and liberated identities.

The chapters in this collection are structured—or served—following everyday Filipino culinary rhythms. We open with this introduction as our *agahan* (breakfast) to give a taste of the scholarship that will sustain the conversations throughout the volume. The substantive chapters are then organized into the next three meals, beginning with *tanghalian* (lunch), titled "Foodways in the More-than-Human Filipino Imaginary." This is followed by *merienda* (afternoon snack), titled "Food That Was Never for Us: Commodities and Their Environmental Harms," and *hapunan* (dinner), titled "Food Is a Battleground: Vulnerable Life and Subversive Fare." Finally, we cap the volume with our concluding thoughts on the complexity of *halo-halo* ecologies in our *panghimagas* (dessert after meals).

In what follows, we contextualize the three units, *tanghalian, merienda,* and *hapunan,* in the broader corpus of Philippines and Filipino/Filipinx studies scholarship. Synthesizing studies on agrarian, food, and environmental politics from the region and its diaspora provides a comprehensive view of the gastroecological canon and illuminates how the chapters that follow expand the menu.

## The Making of "Filipino" Foodscapes

Filipinos have inherited a particular narrative about the history of their food. Philippine gastronomy, so the narrative goes, combines Malay, Chinese, Spanish, and American influences into what Doreen Fernandez has termed a "multi-layered expression of culture and history" (1991, 104). Even in the canonical children's folk song *Bahay kubo* (Nipa Hut), only three of the eighteen varieties of home-garden vegetables mentioned—namely, *upo* (wax gourd), *bawang* (garlic), and *labanos* (radish)—would have been endemic to the Philippines and the Southeast Asian region more than a thousand years ago, suggesting that the rest would have been introduced from elsewhere in the world (Acabado 2020; Acabado, Cordero, and Camacho 2020). Culinary borrowing and transculturation have thus become the central analytic for describing both Filipino foodways

and cultural identity writ large (Sta. Maria 2021a). While such narratives offer much explanatory power, they can also make it difficult, even impossible, to describe the native cuisine, *ang pagkaing sariling atin* (our own food), without using the idioms of the "foreign."

In the popular imagination, the Filipino food journey often begins with the influence of Spanish cuisine (Javellana 2015, 38). Classic dishes from menudo and puchero (stewed dishes) to relleno (stuffed dishes) and sarciado (dishes cooked with tomatoes and eggs), for example, all suggest Spanish roots, if only in their nomenclature. Spanish memoranda, missionary histories, and letters filled the void left by missing precolonial materials. While there are notable exceptions (Junker 1999), gaps in the precolonial archive set the precedent that the story of Filipino food could only be told through the lens of the "foreign," beginning most prominently with the imprint of colonizing Spain (Fernandez 1987). In this lacunae, Antonio de Pigafetta's *Primo viaggio intorno al mondo,* an account of Ferdinand Magellan's voyage, as well as other memoranda, missionary histories, and letters, became widely recognized as the earliest glimpse into the prehispanized diet (Sta. Maria 2021b).

Equally central to Filipino food canon is its Chinese heritage. Laborers and entrepreneurs, largely from Fujian Province, brought with them ingredients, kitchen implements, and styles of cooking when they migrated to the Philippines during the Spanish colonial era between the sixteenth and nineteenth centuries (Chu 2010). To this day, the Filipino culinary lexicon is peppered with Hokkien Chinese loanwords, including *pansit* from the Hokkien *piän e sit* (something conveniently cooked), *humba* (a pork dish), *lumpia* (thinly sliced tofu and vegetables wrapped in thin flour wrappers), *ukoy* from *ō kuè* (yam/taro cake), *batsoy* (soup with pork loin), and *taho* from *taū hu* (soy bean curd; Chan-Yap 1976; see also Palanca 2015). Yet the relationship between "Filipinos" and so-called Intsik, the latter a derogatory colloquialism for Chinese mestizos, has never been straightforward. Chinese butchers, bakers, and noodle makers were subjects of suspicion by the Spanish colonial government (Chia 2006; Chu 2010; A. Tan 1985), a form of racialized and ethnicized exclusion that continues to manifest in the sentiments of the urban middle class in Manila today (De Leon 2016).

If there is any period in Filipino food history that is the most contentious, however, it is likely the American Occupation. Scholars describe the decades under American rule as the period when Filipino food as

we now know it was most concretely defined, if only in contrast to foods that colonial officials imposed as the more nutritious, sanitary, and progressive (Salazar 2012). Breakfast cereals, oatmeal, milk, cocoa, cheese, soft drinks, and other prepacked and preserved provisions in branded cans and bottles came to represent the scientific rationality and modernized convenience of the implicitly "white" American juxtaposed against the backward Filipino, synonymizing purity of race with the desirability of class standing (Orquiza 2020; Salazar 2012). Food preservation and transport technologies like cold storage introduced racialized prejudices that profoundly altered the Filipino diet (Ludovice 2021b). In the process, traditional cooking practices, as well as public socializing around commensal eating and drinking, were pathologized (Orquiza 2020; Salazar 2012). This history makes clear that the national cuisine served as an "ideological apparatus that simultaneously reproduces the vitality and centrality of the state" (Salazar 2012, 134).

Today, Filipinos/Filipinx recognize their embrace of canned and fast foods to be a result of their vexed American colonial heritage. The classic Filipino spaghetti—made of canned tomato sauce, bottled banana ketchup, industrial meats like hot dogs or Hormel's SPAM, and processed cheese—is a prototypical example (Matejowsky 2007b; Salazar 2012). Fernandez lamented the "SPAM culture" of fast-food meals like fried chicken, spaghetti, and hamburgers, which she saw as a departure from the "slow food" tradition of long simmering stews and bite-sized morsels (*tingi;* Fernandez 2000; Matejowsky 2017; Panlilio and Sta. Maria 2005). But while there are many reasons to believe that the Filipino love of fast food represents dietary conformity to the industrialized West, there is also broad consensus that the success of fast-food chains like Jollibee marks a rise in neopatriotic pride and consumer identity that is entirely the country's own (Matejowsky 2008).

In contrast to the picture of a unified archipelago offered by the prevailing canon of a "national" cuisine, travel guides-turned-cookbooks have served as notable sites to displace such easy presumptions. Several food writers have pointed to the gastronomic traditions of Pampanga (G. R. Gonzalez 1993), Catbalogan (Nabong-Cabardo and Nachura 2013), and Cavite (Ramos 2018) as regional cuisines that delight and surprise. Underrepresented and underappreciated within these pages are compilations of the foodways of Indigenous Peoples, the Lumad and Moro, which offer a less rosy view into the state of living traditions (Comsti 2020; Tiu 2014).

In the face of dominant narratives of cultural borrowing and regional variation, questions around culinary authenticity—not only "What is real Filipino food?" but also "What food makes a real Filipino?"—become more pronounced with distance from the archipelago. Martin Manalansan provocatively asserted, "Authenticity hovers over the heads of immigrants like the persistent aroma of fried fish or cured meat" (2013, 290). Food, many note, has become a central mode through which diasporic subjects performatively enact their symbolic homecoming. Filipino exotica and other liminal foods—from *bagoong* (fermented shrimp paste) to *dinuguan* (pig's blood stew) to the legendary *balut* (half-developed duck embryo)—in particular play a role in the social construction of identity, particularly among those for whom cultural gatekeeping can limit a sense of belonging (Magat 2019; Zappia 2015).

While food is often held up as a genuine portal to the past and to the homeland, it can also be capriciously responsible for feelings of disconnection and connection. Certainly, home cooking enables migrants like domestic workers in Hong Kong to craft a sense of home out of geographies beyond the archipelago (Law 2001). Similarly, shipping *balikbayan* boxes filled with novelty and prestige-making foods empowers migrants separated from their families to express and show care and even control over consumption practices back home (Camposano 2017; Patzer 2018). But food is not always the instructive, illuminating, or even reliable window into the past that it promises to be (Castillo 2018). Delighting in a can of Vienna sausages or Palm corned beef as a diasporic Filipino/Filipinx might be an experience of cultural belonging, but it can also open moments of racialized and ethnicized differentiation (Makalintal 2019). Celebrating the invention of the Filipino's most beloved condiment, banana ketchup, as a narrative of food sovereignty and anticolonial resistance can come at the expense of overlooking the less savory realities of its manufacture (A. Paredes 2024). When notions of culinary authenticity mean adhering to static perceptions of belonging, culinary "inauthenticity," then, can be a way to refuse an "easy mapping of identity" and reject the cliches of Filipino-ness (Manalansan 2013, 297). In pockets of the culinary landscape where Filipino/Filipinx Americans are breaking into the mainstream (Mishan 2018), restaurateurs speak of their desires to strike a balance between reverence for tradition, openness to innovation, and respect for the particularities of their own experience of symbolic connection yet separation from the homeland archipelago.

One sees this commitment clearly across the pages of chef-authored cookbooks like *Amboy* by Alvin Cailan, *I Am a Filipino* by Nicole Ponseca and Miguel Trinidad, *The Filipino American Kitchen* by Jennifer Aranas, *Filipinx* by Angela Dimayuga and food writer Ligaya Mishan, and *Mayumu: Filipino American Desserts Remixed* by Abi Balingit. This inventiveness has been driven, at least in part, by a diasporic sense of disconnection from the ingredients and the landscapes of the homeland, the ecological base on which the ideals of authenticity typically hinge (see chapter 2 in this volume and, for a counterargument, see chapter 3 in this volume).

Often, the foodways at the center of debates on Filipino authenticity and inauthenticity belong primarily to lowland Christian communities. This has the effect of casting Indigenous upland peoples as separate or unknown. A rich collection of Indigenous histories and ethnographies from the Philippines reveals a different vision, where questions about culinary culture are never too far from matters of ecology. For example, historian Macario Tiu's *Davao Cuisine: Recipes of the Ten Tribes of Davao City* (2014) details the experiences of the Bagobos forced deep into the forests of Mount Apo in search of *kaningag* (cinnamon), a spice chefs describe as the *vetsin* (monosodium glutamate) of the past; of the Ubo Manuvu compelled to camp overnight to catch *bakbak* (frogs) for *tinadtad na bakbak* (frogs cooked in bamboo); and of the Matigsalug, who must struggle to collect the leaves used in dishes like *linuob, ovud,* and *mabul* (fishtail palm hearts cooked in bamboo).

The encroachment of extractive industries, the vilification of swidden agriculture, new agricultural and technological processes, and lowland gastronomic influences bring about these changes to the landscape, but never without Indigenous resistance. Lumad communities in Cotabato, for instance, have responded to the invasion of their lifeworlds through collaboration with various allies, from theater groups to missionaries, to iterate their cultural identities in the face of invasive logging industries (Gaspar 2011). In more Christianized areas of the highland Cordilleras, initiatives at the local level utilize diversified systems, such as the barangay (the smallest political division in lowland society), to combine irrigated fields with shifting cultivation and swiddens (Magcale-Macandog and Ocampo 2005). Such forms of struggle are frequently supported by environmentalist groups, but even within these partnerships disagreements can reproduce Indigenous subjugation (Perez 2018). Environmental

protection laws, too, present their own challenges, some deeply moral and cosmological in nature. Against the backdrop of rising antiswidden regulations, for example, the Pala'wan see their own neglect of tradition and incest, rather than the polluting practices of capitalist institutions, as the cosmological explanation behind climate change (Smith 2020b). If the literature on Indigeneity makes anything clear, it is that questions of cultural identity, ethnic belonging, and gastronomic practice respond to and arise out of matters profoundly ecological in nature. There is perhaps no other pocket of the Filipino gastronomic canon where this is clearer, and yet it has been obscured by the systemic erasure of Indigenous lifeways in both public memory and material reality.

Responding to this canon, the first three chapters serve as our *tanghalian*. They consider the flows of humans and nonhumans in complex ecologies that defy facile narratives of nativeness, indigeneity, and authenticity. Chapter 1, on the introduction of the giant gouramis in the Philippines, poses the question of whether "foreign," introduced species can amicably settle to shape local foodways. Anthony D. Medrano argues that although many such species wreak havoc on local environments and cultures, in some cases the flows of introduced species can take root in different environments, becoming embedded as "heritage" foods and complicating facile categories of "foreign" and "native" in the process. While nonhumans flow across boundaries and inhabit local environments, human migrants make novel ecological relations in the new spaces where they settle. However, the embeddedness of gastrocultural identity in local ecologies, and vice versa, is by no means a straightforward relationship. In chapter 2, Dana Collins illustrates that when divorced from the gardens of their homeland, Filipino/Filipinx Americans in the concrete jungles of Los Angeles come to anchor the "authenticity" of their cooking on other claims: imaginaries inherited from family experiences and biographic memories. Important counterpoints are the stories of migrants chronicled in chapter 3. There, Adrian De Leon draws from the stories of diasporic migrants to the United States from Northern Luzon who negotiate plantation capitalism, settler colonialism, and racial capitalism by creating fugitive and local ecologies of Ilokano food production. Taken together, these chapters illuminate that ecology is a critical platform on which claims to identity or sentiments of inauthenticity are staked. The question of who we are thus becomes intertwined with how we come to define the environment

and what belongs there. Dynamic ecosystems therefore complicate the standard narrative that what Filipinos inherit about their foodways is primarily a result of transculturation with Malay, Chinese, Spanish, and American influences. At the same time, however, environmental determinism, which would reduce and affix gastronomic identity to an ecological base that is itself constantly in flux, also poses its own dangers, particularly for members of the diaspora. Here, it is important to remember that in the American diasporic context, the very category of the "Filipino" itself traces its genealogies to food-producing ecosystems, even if this line of thought is frequently erased from national narratives (De Leon 2019). For this reason, we turn our sights to the vast tracts of Philippine land—from the Central Luzon plains to the valleys and plateaus of Mindanao—where we have grown food never meant for the Filipino in the first place.

## Producing Food Not for Us

Bowls of tropical fruit, baskets of silvery fish, and sacks of sugar and rice have become synonymous with not only how the world imagines the place of the Philippines in global divisions of labor but also how Filipinos themselves understand their most core social institutions. Moreover, the contrasting figures of the sugarcane *sakada* (migrant laborer) and the elite provincial baron, the plantation laborer and the corporate magnate, and the coastal fisherfolk and the commercial vessels embody some of the antagonism that has come to define Filipino politics since time immemorial. Given the centrality of the hacienda, the plantation, and the commercial fishery industry, therefore, it is impossible to understand the intersection of food and environment without confronting the legacies of colonial and capitalist food production.

The hacienda, symbolized most emblematically in the sugarcane monocultures of the Luzon and Visayas regions, stands at the center of national imaginaries tied to a feudalistic agrarian past and a society divided into the haves and have-nots. With roots in the friar estates around Manila Bay of the eighteenth century (Connolly 1988; Mclennan 1969), the Philippine hacienda has produced some of the most enduring elements of Philippine politics and society. The formative roots of Corazon Aquino's "cacique democracy" lay in the infamous Hacienda Luisita

(B. Anderson 1988). Even Ferdinand Marcos Sr., infamous for exploiting state power rather than hacienda power in the way Aquino did (B. Anderson 1988), empowered his cronies through monopolies in the country's most valuable cash crops.

Yet confronting this legacy compels the Filipino/Filipinx community to challenge our most commonplace narratives about Filipino social history. While many would imagine the provincial haciendero (planter class) elite as straightforward brokers of imperial rule, scholars note that their alliances with the Spanish colonial state were in fact riddled with anachronisms (Aguilar 1994; Larkin 1993). Similarly, the relationships between tenant farmers and their patrons might commonly be perceived as unequivocally antagonistic, but immersive ethnography shows that they can swing sharply between violent resistance and accepted paternalism (McCoy 1992, 111; see also Aguilar 1989, 1998). Stereotypes about the sugarcane *sakada* being irrationally stuck in the stranglehold of educational and economic ignorance are persistent among Filipino urbanites, but those tropes ignore the constraining effects of a national economy insistent on sugar and the pressures it imposes that keep *sakadas* in that stranglehold (Bilig 1992, 153). Given the complex nature of this history, it is no wonder that the Philippines has yet to see the decline of the agrarian elite, even with the rise of Filipino industrial, commercial, and financial power (Bilig 2003).

Agribusiness plantations of bananas, pineapples, and rubber differ from the traditional hacienda in the centrality of the transnational corporation at its helm. Diverse in their origins and management styles but nevertheless united in the goal of extractive capitalist production, export-oriented plantations now occupy millions of hectares of the archipelago's most fertile and typhoon-free areas (Krinks 1983). They encroach into ancestral domains, engulf areas previously used for subsistence cultivation, sever communities from their means of production, dominate labor economies of paid and unpaid work, and entrench both nation and citizen in vertices of dependence and debt (Ofreneo 1981; Rivera 1983).

Recent entrants, such as the palm oil industry, match environmental damages with threats to food and wage labor security (Espino, de Ramos, and Bellotindos 2019; Montefrio and Dressler 2019). But by the same token, plantations have also transformed even the most isolated districts into fast-growing metropolises connected to global circuits of exchange. Their effects reverberate beyond geographic bounds, as migrant workers

transmit both financial and social remittances. Thus, ideals of prosperity and technological know-how bear on natural resource transformation (Montefrio, Ortiga, and Josol 2014).

Part and parcel of those changes were shifting ideas and ideals about nature. In conjunction with the Ford Foundation and the Rockefeller Foundation in the late sixties and early seventies, the International Rice Research Institute paved the way for the country's entry into the Green Revolution through global proprietary seeds and a movement to boost agriculture with high-yielding varieties, synthetic pesticides and fertilizers, new irrigation technology, and genetic modification (Cullather 2004, 2012). The martial law regime under Ferdinand Marcos Sr. (1972–1986) further entrenched the technocratic class through development paradigms that touted their merits as value-free, even as they prioritized private agribusiness interests. Credit programs like Masagana 99 ensnared small farmers in poverty through high-yielding varieties and subsidized fertilizers (Esguerra 2016). Many of these projects that control the natural world contributed to Philippine nation-building initiatives (Pagunsan 2020; Ventura 2019). In the process, the diversity of native relationships with the natural world, including the understanding of animals (Ludovice 2019, 2021a); traditional medicines (Planta 2017); microbial pathogens (A. Paredes 2021); and human health, hunger (*gutom*), and beauty (Chiba 2010; Ventura 2015) were forever altered.

Upland Indigenous peoples and their lifeways have frequently been cast as the most affected by the arrival of market capitalism. For the Batak in Palawan, this has implied a transition to less diverse and less nutritious diets due to the increased labor required to perform extractive industries, as well as changed spiritual relationships with wild animals (Eder 1978; Smith 2020a). Among the T'boli in South Cotabato, capitalist systems of accumulation have created tensions with kinship- and reciprocity-based subsistence production (Hyndman, Duhaylungsod, and Thomas 1994, 69). In the Buid communities of Mindoro, changes to Indigenous lifeways have also manifested in shifting practices of animal sacrifice, traditionally a way of mediating between the human and spirit worlds (Gibson 2015). The commodification of socially meaningful foods, often held up as a social enterprise project, can exacerbate various issues. In the case of green honey, a Tagbanua food recently commodified for farmers markets in urban metropoles, Indigenous expertise is devalued amid the unfolding politics of authenticity (Webb 2019).

Technoscientific patterns of extraction have not been limited to land-based production alone. Throughout the 1980s and 1990s, international organizations such as the World Bank incentivized the expansion of the Blue Revolution in the Philippines and other developing countries as a national development strategy (Dunaway and Macabuac 2007). As a result, export-oriented aquaculture and commercial fishing have rapidly expanded in the last few decades, forcing rural communities and environments to bear hidden socioecological costs. These include overfishing and the depletion of fish stocks, as well as the degradation of mangrove, reef, and other coastal ecosystems (Fabinyi 2010; Uychiaoco, Alino, and Dantis 2000; Walters 2004).

Who are the actors behind the installment of market-driven agricultural and marine capitalism as the face of plunder in the archipelago? Is it enough to point to colonial forces, the aristocratic planter class, government-corporate collusion, and technoscientific institutions as the source of our food and ecological woes? The next three chapters, our *merienda,* lend a critical, multidimensional eye to the story of Filipino gastro-colonialism as we have come to know it. In chapter 4 (Nicolo Paolo P. Ludovice) and chapter 5 (Inigo Acosta), American colonial institutions, operating through the dairy and the pineapple industries, respectively, emerge as the dominant players transforming both culinary palates and rural landscapes, whether pasture or plantation. However, as the succeeding chapters demonstrate, colonialism leaves its impact not only on landscapes but on generations of colonized natives as well. Many Filipino farmers and fisherfolk are driven to assimilate with and internalize the structures imposed by colonialism, whether in the form of dependence on agrochemicals inherited from the Green Revolution or desire for market competitiveness. In chapters 6 and 7, local actors introduce known harms into their environments and find themselves caught in the snares of their own making, complicating the power dynamics of environmental responsibility. Jose Kervin Cesar B. Calabias (chapter 6) shows that the Kankana-ey Igorot gardeners in Benguet participate in the hypercompetitive commercial vegetable industry, even as they are aware of its hazards. Similarly, Jessie Varquez (chapter 7) illustrates that seaweed farmers in Tawi-Tawi "charge" or drench their seaweeds in synthetic fertilizer, all the while wary that their practice could exacerbate disease and cause harmful algal blooms.

Far from implying false consciousness, these cases demonstrate how local actors are forced to develop stopgap responses, like growing organic vegetables in their home gardens, when confronting inherited structures that are difficult to change. Recognizing how these actors internalize the projects of modernity and respond with partial or temporary strategies does not discount the structuring role of colonization, capitalism, and neoliberalism in the creation of environmental harms. Conversely, highlighting the lasting legacies of imperialism should not frame local actors as mere victims, even as they continue to struggle against its machinations through the institutions of contemporary times. These realities of Filipino gastrocolonialism compel us to confront the vexed sources of vulnerability and precarity today and to reimagine the forms of resistance necessary for our times.

## Response and Resistance

What drives the vulnerability and precarity of farmers, fisherfolk, and the urban poor? For centuries, haciendas, plantations, and commercial agriculture have enclosed lands, dispossessed smallholders, and degraded ecosystems and natural resources, resulting in people's greater exposure to threats and insecurities. Such projects have also perpetuated some of the most visible and violent forms of conflict in the country today. In Mindanao and Palawan, for example, violence against smallholder farmers and environmental activists has agrarian problems of land control at its core (Dressler and Smith 2022; Franco and Abinales 2007; Vellema, Borras, and Lara 2011). Vulnerability and precarity may also arise from natural hazards such as typhoons and droughts, but these so-called forces of nature are often socially mediated and rife with uneven power dynamics (Saguin 2022; Theriault 2020). While vulnerability to crisis is widespread throughout the archipelago, coastal communities (Andriesse and Lee 2021), as well as Indigenous peoples and women (Capistrano and Charles 2012; Dunaway and Macabuac 2007; Eder 2005), often absorb more of the risks. State and market institutions then figure largely in the making of precariats.

While state and market institutions contribute to the marginalization of food growers, their interventions to address vulnerabilities and

precarities have been unsatisfactory. Iterations of redistributive land reform, a program meant to seize large private landholdings and reward them to landless and near-landless farmers and farmworkers, is frequently held up as the solution to the problem of elite capture of natural resources, even as it has proven disappointing (Borras 2006, 95). The exclusion of potential beneficiaries, biases toward private property, and loopholes arising from market-led strategies like voluntary land transfers all undermine the program's promise (Borras 2005, 2006; Borras, Carranza, and Franco 2007). Meanwhile, other state and market interventions posture as "sustainable" solutions. Many Indigenous peoples in the Philippines are now governed through multiscalar sustainability initiatives, such as the United Nations' Reducing Emissions from Deforestation and Forest Degradation frameworks, biodiversity conservation programs, green economy projects, and other forms of green governance (Dressler et al. 2012; Montefrio and Dressler 2016). Conservation programs such as the development of Marine Protected Areas, the state's implementation of coastal area protectionist policies, and the promotion of ecotourism have also pervaded solutions to marine ecological degradation (Andriesse et al. 2019; Siavenan et al. 2005). These often top-down policies have allowed the continued control, commodification, and exploitation of local environments while ensuring that capital accumulation persists (Dressler et al. 2012; Dunaway and Macabuac 2007; Montefrio and Dressler 2016; Satizábal et al. 2020).

How have precariats responded to the ongoing ossification and concentration of power among the elite, the continued devastation of terrestrial and marine environments, and the rising threats of climate change in the archipelago? A common response among smallholder farmers and fisherfolk is to diversify livelihoods by engaging in both subsistence and agro-industrial production while supplementing these with nonfarm work. The upland Indigenous peoples of Palawan, for example, persist in practicing swidden agriculture for subsistence while learning to participate in commercial farming and fishing alongside lowland migrants (Dressler and Pulhin 2010; Dressler, Smith, and Montefrio 2018; Dressler and Fabinyi 2011). Many others have increasingly supplemented their farming and fishing livelihoods with wage labor in plantations and other nonfarm work (Montefrio 2017). In urban poor communities, households supplement casual wage labor with unconventional ways of earning income and feeding their families, such as scavenging for discarded food (Saguin 2022; chapter 8 in this volume). These efforts to diversify

livelihoods may allow precariats to buffer insecurities inherent in both smallholder food production and nonfarm work (Rigg, Salamanca, and Thompson 2016). While the precariats find ways to adapt and persist, they continue to encounter pressures and threats such as continued marginalization and violence, persistent food insecurity, and the erosion of traditional belief systems (Aguilar et al. 2021; Montefrio 2017).

With rising threats, precariats have also engaged in various forms of collective resistance. In moments of political tumult, emboldened peasants have participated in land occupations in ways they have rarely dared under conditions of peace (Kerkvliet 1993). Landless and indentured workers undertake revolutionary work in plantation- or hacienda-dominated zones amid threatening social costs from the reactionary landed elite (Rutten 2000). They are not only able to persist in the face of encroachment and environmental changes but have also successfully bargained with large-scale land deals (Rutten et al. 2017). While such forms of mobilization continue to mark the political landscape and become increasingly visible to the urban center, by and large smallholder farmers and fisherfolk's engagements take the form of nonconfrontational responses, such as cutting corners and undermining rules (Kerkvliet 2009, 233). Choices to cooperate in some cases and resist in others bespeak value systems that defy facile categorizations of what counts as resistance and what does not (Montefrio 2016). At times, precariats partake in the very structures that place them at economic and ecological risk not just because they are forced to but because they can tactically benefit from them (Hambloch 2022; Theriault 2019; Thiers 2019).

Beyond land tenure and labor politics, collective action coalesces around critical agroecological issues as well. Pesticide exposure, for example, has been a hotbed for mobilization, as activists from Davao City dispute expert-condoned evidentiary politics that leave many harmed (Nikol and Jansen 2020; A. Paredes 2020, 2022). Genetic modification, the introduction and uneven adoption of the transgenic golden rice, and the threats that they pose to Indigenous lifeworlds around rice and heirloom seeds are another (Glover, Kim, and Stone 2020). These forms of resistance often involve multiple actors aside from peasants and Indigenous farmers, such as nongovernmental organizations and allied individual activists.

Emerging with these forms of resistance are "alternative" food movements, such as the organic food movement that was spurred by protests against the Green Revolution in the 1980s (Carating and Tajeda 2012).

These advocacies aim to revitalize and preserve local foodways, cultures, and the integrity of traditional agroecosystems while bolstering livelihood opportunities for the precariats (Glover and Stone 2017; Aguilar et al. 2021; Azarias, Garcia, and Garlejo 2022; Bairagi et al. 2021). In the last ten years, an assortment of alternative foods has permeated Philippine gastronomy in the urban centers. Food concepts such as slow food, farm-to-table, local, heirloom, and superfood have entered the language of not just restaurateurs and culinary professionals but also agribusinesses and smallholder farmers plugged into these circuits (Montefrio et al. 2020). The promises of the alternative food movements in the Philippines have fallen short of expectations. State efforts to standardize organic production by way of third-party certification, for example, have made growing organic food inaccessible to smallholder farmers (Montefrio and Johnson 2019; Sahakian, Leuzinger, and Saloma 2017). Heirloom food, on the other hand, has been commodified for consumption in places like Manila and North America (Glover and Stone 2017), with cultivars that prioritize the high productivity and quality favored by the market (Sekine 2021). Access to these so-called alternative foods, then, has largely been limited to wealthy Filipino consumers (Montefrio 2020a; Montefrio et al. 2020).

Critics of the conventionalized alternative food raise calls for more radical movements. One example is food sovereignty, a smallholder farmer-led and place-based polycentric movement guided by the "peasant way" (Borras, Franco, and Suarez 2015; Heckelman, Chappell, and Wittman 2022). Today, food sovereignty discourses and practices in the Philippines are informed by agroecological principles espoused by scholar-activists like Peter Rosset and Miguel Altieri (2017). As a political advocacy, food sovereignty tackles a plethora of issues such as rights to food, land rights, the welfare of peasants and fisherfolk, agricultural sustainability, and climate justice. A notable movement related to food sovereignty and agroecology is *bungkalan* (meaning "tillage" or "to cultivate"), which is practiced by peasants, Indigenous peoples, and the urban poor who struggle to assert their rights over contested lands in the Philippines (see chapters 10 and 12 in this volume). In *bungkalan* projects, farmers occupy contested lands seized by agribusiness and big landlords and till and develop those spaces for subsistence food production. The aim is not just to enhance the food security of smallholder farmers but also, and more importantly, to subvert uneven land relations (Imbong 2021; Sy 2021, 61). Still taking root in the Philippines, food sovereignty

and agroecology are in the process of evolving (Borras, Franco, and Suarez 2015, 614) and are subject to a myriad of challenges, especially in the context of rising authoritarianism and state violence.

The final chapters, our *hapunan,* investigate these complexities as they follow foodway transformations in response to vulnerabilities created by state neglect and violence and compounded by environmental disaster. As chapters 8 and 9 show, the effects of typhoons, droughts, environmental pollution, ecological degradation, and the pandemic profoundly shape the eating practices of the vulnerable and the precariat. Maria Carinnes Alejandria (chapter 8) describes how the informal settlers in Manila's Baseco Compound have come to depend on food salvaged from the dumpster (*pagpag* and *retaso*), as well as seafood caught from the polluted estuary, as they assuage their hunger. Anacorita O. Abasolo and Marvin Joseph F. Montefrio (chapter 9), on the other hand, show how farmers and fisherfolk frequently affected by typhoons in Capiz turn to *sari-sari* stores stocked with processed food for immediate nourishment in times of calamity. When residents are forced to salvage much-beloved Jollibee Chickenjoy meals from dumpsters, and the iconic *sari-sari* stores reappear instead as *sirá-sirá* (fragile) stores, we are forced to reconsider the question of what food is socially acceptable or unacceptable, healthy or unhealthy, and real or artificial, just as we interrogated what counts as real, authentic, or native Filipino food.

While local communities attempt to address vulnerabilities and precarities in these ways, their responses can also be framed as acts of subversion by the Philippine carceral state. Subversion here is not just a matter of what you grow. As Ezekiel Sales discusses in chapter 10, community pantries, prison gardens, and land reappropriation (*bungkalan*) illustrate that the questions of where, how, and by whom food should be cultivated and consumed are normative ideals that can be deemed threatening and can move the state to respond with military or police force. The modalities of repression are not limited to overt acts; they can also be coursed through the covert practices of state bureaucracy. In chapter 11, Cla D. Ruzol argues that the workings of Manila waterworks legitimize the counterinsurgent impulses of governance in the name of potable water provision. Ultimately, however, what makes food a battleground also makes it a platform for pressing coalitional work that links the Philippine archipelago to broader transnational movements. A case in point is the incorporation of agroecology in the curricula of the Lumad schools that

Thea Kersti C. Tandog, Mary Jill Ira A. Banta, and Tami Alvarez describe in chapter 12. Rather than simply adopt the movement's universalizing approaches, however, these schools transform its tenets in response to Mindanao's unique context.

## Consuming *Halo-Halo* Ecologies

To return to the question we posed at the beginning of the book—"What, how, and why do we eat?"—the chapters that follow offer a veritable fiesta (feast) of ways to answer. In *tanghalian,* we come to understand that what is at stake in the constant flux of dynamic ecosystems is the question of "What is Filipino?" itself. In *merienda,* we appreciate the workings of external and internal gastrocolonialism, processes by which Filipinos inherit many social ills from the hijacking of their landscapes for food production but also become caught in snares of their own making. And in *hapunan,* we discover that when locals respond to their vulnerability to environmental change, as exacerbated by their precarity, they challenge a status quo invested in concentrating elite hegemony and ossifying the state's policing power.

Every chapter composing each meal is its own main dish with a distinctly individual flavor. Simmered in the particularities of the author's discipline, fieldwork context, and political commitments, each makes a unique contribution to one or more of the projects of local scholarship, intersectionality, Indigenizing knowledge, more-than-human methodologies, and scholarship-activism that have permeated the broad scholarship on food and environment. Across their differences, they are united in their intellectual commitments to critiquing gastrocolonialism, militarism, and neoliberal capitalism. While bringing out the complexities and nuances of the relationship between food and the environment in ways deeply emerging from the Philippine and Filipino/Filipinx context, they also speak to phenomena in other parts of the world.

Yet anyone who has enjoyed the beloved summertime dessert from the Philippine Islands will know that *halo-halo* is far from a random concoction. When mixed, the ingredients produce a taste that is not only delicious and refreshing but also cohesive and distinctively whole. Taken together, the twelve chapters that follow reveal that foodways across the regions of Luzon, Visayas, Mindanao, and the Filipino/Filipinx diaspora

are caught in a matrix of forces in which ecology is only one part. Ethnographic and historical attention to the environment crystallizes the ways in which state neglect, counterinsurgent geographies, capitalist drives, and technoscientific imperatives course through the production and consumption of food, often in unacknowledged ways. Collectively, then, *Halo-Halo Ecologies*' answer to the question of what, how, and why we eat is clear. We eat because our very lives depend on it—and not just in a biophysical sense. As Filipinos/Filipinx, we eat because our sense of belonging and of self, our reconciliation with a colonial past and postcolonial present, our relationship with the carceral state, our responsibility to an imperiled environment, and our political accountability to each other depend on it.

As you savor each chapter—either in the sequence of meals or, in the spirit of the Filipino fiesta, as a daylong smorgasbord of combinations—we invite you to remain attentive to these collective commitments and to save room for *panghimagas* at the end. *Kain na tayo!* Let's eat!

## Notes

1. *Pinoy* is a colloquial term referring to people of Filipino descent. In this volume the authors also adopt the term "Filipinx," which remains hotly debated across the homeland/diaspora divide (see, for example, the discussions by Aguilar and San Juan [2020] and Barrett, Hanna, and Palomar [2021]).

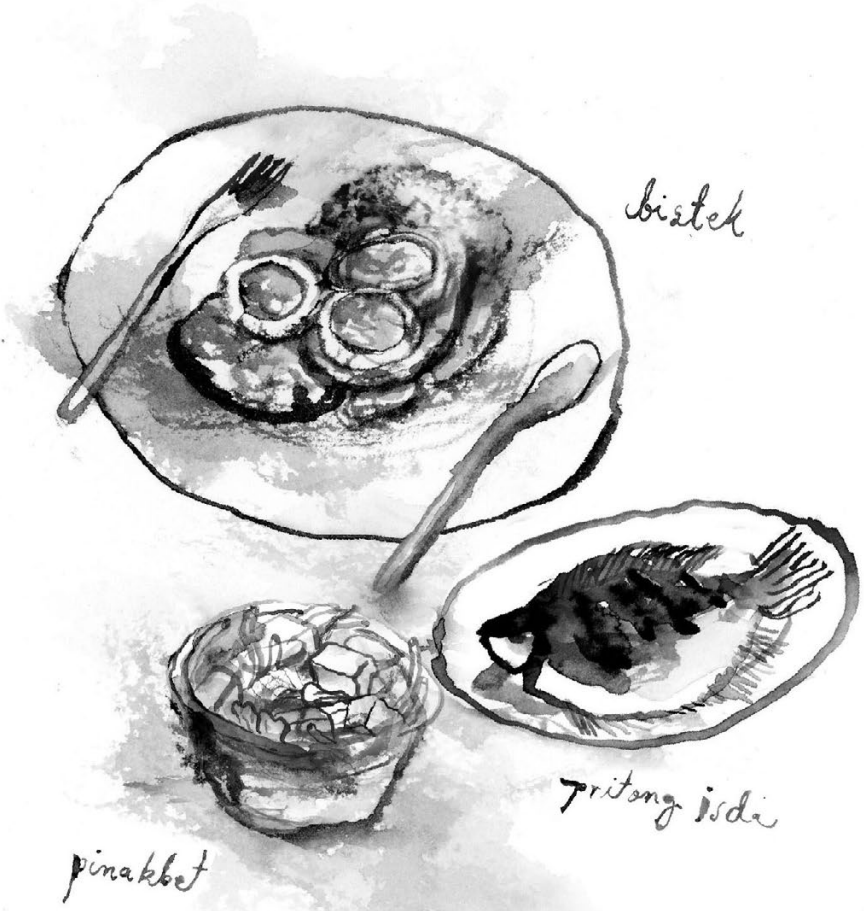
2. For a history of ice, see Ludovice (2021b). For an account of evaporated milk, see chapter 4 in this volume. Ethnographic and historical analyses of Mindanao's plantation landscapes are offered by Krinks (1983) and A. Paredes (2021). Finally, for a short feature on climate change and the shift from purple to white *ube,* see Taculao (2019).

3. Here, "diaspora" refers broadly to those who identify as Filipino and live outside the Philippines, though the authors acknowledge that adopting a singular term to refer to such a broad diversity of people often suggests a unity of experience that is not true to historical reality. It is also important to point out that the experiences of Filipino Americans, who make up about a third of the total population of Filipinos outside the Philippines (Aguilar 2015), are overrepresented in discussions of the diaspora. Many of the authors in this volume hail from diasporic communities, not only in North America but across Europe and Asia as well. Our aim is to leverage our diverse positionalities to cut across the oversimplifications these broad categories sometimes imply.

4. The term "Lumad," from the Cebuano word meaning "Indigenous" or "autochthonous," collectively describes the native peoples of Mindanao who identify themselves as separate from Islamic tradition. The term distinguishes them from the Moro of Mindanao, also an Indigenous community whose ancestors adopted Islam before Spanish colonization in 1521.

# *TANGHALIAN*

## Foodways in the More-than-Human Filipino Imaginary



# 1 | Becoming Kin

## *A History of Giant Gouramis in Philippine Fresh Waters*

Anthony D. Medrano

Fish have long shaped the cultural and economic life of the Philippines, giving rise to what we might call *fishways*.[1] Philippine fishways are vast. They differ from island to island and from coast to interior.

In this chapter I think with a history of fishways to explain why fish matter materially as well as methodologically. I do so experimentally and in the spirit of surfacing a new direction for Philippine environmental history. It is a direction anchored in the islands' fresh waters and one, too, that follows the story of fish across genres and generations: from Illustrado literature to Filipino science and from native species to nonnative types.

As such, the chapter has three parts. First, I look at the subject of fish in Philippine research, from local anthropology studies to cultural texts. Second, I center the use of fish within the recipes of interwar cookbooks, showing how a class of Filipina writers fed the rise of a new genre of Filipiniana. Finally, I consider the story of the giant gourami (*Osphronemus goramy*) in Philippine fresh waters, explaining why this Javanese fish was introduced to the archipelago in 1927 and how it has spread across the islands in the decades since. By attending to a history of Filipino knowledge production about giant gouramis, I demonstrate the promise of fishways for casting Philippine environmental history in new waters.

For context, however, it is useful to note that giant gouramis are not alone in Philippine fresh waters nor is their history of arrival and establishment out of the ordinary. The most recent checklist of Philippine freshwater fishes includes 356 reported species, of which 51 are introduced, including all 5 of the country's gouramis (Fishbase Symposium 2022). While native to parts of South and Southeast Asia, these gourami species

were not found in the islands prior to 1927. The giant gourami was the first to arrive, making it the oldest gourami species in the Philippines. Its arrival was followed by 4 additional species. In 1938 the botanist Eduardo Quisumbing (1895–1986) returned to Manila from Bangkok with snakeskin gouramis (*Trichopodus pectoralis*), three-spot gouramis (*Trichopodus trichopterus*), and presumably pearl gouramis (*Trichopodus leerii;* Guerrero 2014, 53; Herre 1953, 223). Following independence, the kissing gourami (*Helostoma temminckii*) was introduced to Philippine waters, first from Thailand in 1948 and 1950 and then from Bogor in 1952 and 1956 (Juliano, Guerrero, and Ronquillo 1989, 89; Thiemmedh 1966, 75).

But unlike these other gouramis, giant gouramis are embedded within the fishways of Central Luzon. They are one of the few fishes used to make *burong isda,* a fermented staple whose popularity and production are synonymous with rice-growing towns in Pampanga and Bulacan. By following the giant gourami across cultures and ecologies in the twentieth century, I show how fish can help us rethink not only the nature of belonging in Philippine fresh waters but also the place of food in Philippine studies.

## On Fish: Sources and Species in Philippine Studies

So why fish? The reasons are just as diverse and abundant as the ichthyofauna of Philippine waters. Academically, fish are understudied in local scholarship. From the humanities to the social sciences, existing Filipino work on the subject is "surprisingly sparse" (Mangahas and Rodriguez-Roldan 2019, 111). Maria F. Mangahas and Suzanna Rodriguez-Roldan's recent review of local knowledge production sheds light on this "yawning gap in Philippine social science," suggesting that most scholarship either remains unpublished in the form of theses and dissertations or exists in gray literature (112–113, 131). That said, we also learn from their review that generations of Filipino scholars such as Eric Casino (1967), Dionisia A. Rola (1980), Alicia P. Magos (1992), and Cynthia Neri Zayas (1994, 1998) have examined the ways in which fish and fishing were—and remain—central to the economies, cultures, beliefs, and sociologies of archipelagic life.

Complementing the rise of this "archipelagic anthropology" has been the centrality of fish in the Philippine past (Mangahas and Rodriguez-Roldan 2019, 131). Historically, fish mattered to the everydayness and

security of urban and rural society (Gutierrez and Santos 1938). Fish was meat. "Meat is that of a small fish which is lacking in no part," observed Fr. Francisco Colin (1592–1660), a Spanish Jesuit who arrived in Manila in 1626 and died in the city in 1660 (1663, 61). By the 1930s, fish was still meat and still central to local diets. The Department of Agriculture and Commerce even framed its 1939 report around two key takeaways about consumption in the commonwealth: "Filipinos are largely fish-eating people. Fish is the principal source of protein food" (Fish and Game Resources of the Philippines 1939, 3). Unlike other protein foods (except for rice), fish constituted the rhythms and routines of consumption across islands and waters. Reflecting on "fish eating" as *culture and history,* Nick Joaquin keenly explains: "Fish is our dish. We have dried fish for breakfast, fried fish for lunch, stewed fish for supper. We eat fish with fish, we flavor fish with fish, for if there's a broth it's fish broth, if there's a sauce, it's fish sauce. When we dip fish in *patis* we're dipping fish into fish" (1988, 240).

Dried, fried, stewed, or saucy, it was the everydayness of fish eating that shaped the diversity of Philippine fishways. Culturally, food fishes even fed the works of the country's literary landscape. Felice Prudente Sta. Maria's (2012) rich explorations of the islands' culinary heritage, particularly as it has been documented in the writings of Jose Rizal (1861–1896), have centered on how fish became food in the pages of late nineteenth-century Illustrado literature. In *Noli me tangere* (1887), for example, Rizal has a chapter titled "La pesca," in which he describes a lake scene, likely Laguna Bay, where a character named Tia Isabel calls out to the son of a local *pescador* (fisher). Just as the son is about to scale the *baklad* (fish corral) with his *panalok* (fishnet), Tia Isabel yells "Wait!" and reminds the boy: "It is necessary that the sinigang be ready for the fish to pass . . . from the water to the broth" (Rizal 1909, 183). For the best *sinigang,* Rizal informs us, "the fish [shouldn't] miss the water for a moment" (1909, 183). Reading how the *ayungin* (*Leiopotherapon plumbeus*) needs to move "from the water to the broth" with a particular swiftness reveals the unspoken intimacy between food and ecology. From Rizal's *Noli me tangere,* it becomes clear that the islands' fishes and their habitats are not only familiar to Filipinos in or outside the archipelago; they are familial to the imagined community, to the nation. Fish animate the stories and bonds of cultural, social, and economic life in the islands. We get a taste of the diversity of Philippine fishes and the ways in which they figured in

local fishways at the end of Rizal's "La Pesca" chapter. It is here that Tia Isabel reemerges after a dramatic encounter with a crocodile, which had been trapped in one of the *baklads.* Safe from the now dead crocodile and looking over the last *baklad* with its teeming catch, Tia Isabel seizes the moment and begins singing out species, linking fish to dish: "*Ayungin* is good for sinigang; leave the *bia* for the *escabeche.* The lobsters to the frying pan! The *banak* is for *asado* wrapped in banana leaves and stuffed with tomatoes. Leave the others for restocking. . . . It is not good to empty the *baklad* completely" (Rizal 1887, 80).

But "fish eating" flavored far more than the worlds of Illustrado literature. By the early twentieth century, food fish were commonplace among the home recipes and "fiesta specials" of some of the country's pioneering Filipino-authored cookbooks (David-Perez 1953, 1). Perhaps one of the earliest examples of this new genre of Filipiniana was Purificacion "Pura" Villanueva Kalaw's *Condimentos indigenas,* published in 1918 (Fernandez 1991, 109). A journey into Kalaw's (1886–1954) cookbook brings to light an archive of food fish dishes, including one recipe for *pinais.* Doreen G. Fernandez defines *pinais* as a dish comprising "fish or shrimp wrapped in banana leaves and steamed with onions, tomatoes, and young coconut" (2003a, 70). Kalaw collected this particular *pinais* recipe from her friend "Miss Aguilar, de Pasig" (1918, 84). In some ways, Miss Aguilar's *pinais* is no different than Tia Isabel's dish (referenced above in Rizal's passage). In both versions, the preferred fish is a regular-sized *banak* (Kalaw 1918, 84). *Banak* is the Tagalog name for most mullets (*Mugil* spp. and *Liza* spp.), and they are found throughout the archipelago's fresh waters (Herre and Umali 1948, 11). Around Laguna Bay, for example, the people of Barangay Sta. Ana hold an annual *banak* festival as "homage to its patron saint believed to have flooded the area with banak . . . when the locals were stricken by impending famine" (Gonzaga 2020). Mullets of various sizes and species are known as *banak* in other languages too, including Bikolano, Tausug, Maranao, Samal, and Bisaya (Herre and Umali 1948, 24, 35, 54).

By the 1930s, Filipino-authored cookbooks and their fish recipes were at home in the islands, serving literary and culinary publics alike. One of the most prolific food writers during this pivotal period was Maria Orosa (1892–1945). Trained as a chemist and nutritionist, Orosa was the founding chief of the Division of Food Preservation in the Bureau of Science. In 1931 she published *Recipes for Sea Food.* Orosa's recipe number fifteen

stands out among the fifty recipes she compiled because it was for stuffed *bangus* (*Chanos chanos;* Orosa 1931). Like *ayungin* or *banak, bangus* is a common food fish that cuts across "everyday dishes" and "fiesta specials" (David-Perez 1953, 1, 15). Her steps for making stuffed *bangus* are telling about not only the dish but also the fish. "Clean the fish, taking care not to cut the skin," advises Orosa, "[then] roll the fish on the table, pressing on it to soften the meat. Carefully remove the meat and backbone with the aid of a dull table knife. The skin must remain unbroken" (1931, 13).

From Kalaw's *pinais* to Orosa's *bangus,* what becomes clear is how the interwar years gave rise to Filipino-authored cookbooks and this new genre of Filipiniana. In languages such as Spanish, Tagalog, and English, these pioneering scholars collected recipes, consulted friends, provided buying tips, and tinkered with dishes. In short, they documented and archived the diversity of Philippine fishways. Whether focusing on *ayungin, banak,* or *bangus,* their cookbooks centered and celebrated native fishes and, in the process, codified "Philippine cooking" (Fernandez 1996, 118).

And yet the interwar period was also a time of biological introductions and ecological transformations. In particular, it was a moment of local scientific research and Filipino knowledge production. New fishes spawned new fishways, and new fishways fostered new kinds of understandings about food and nature in Philippine fresh waters.

## Changes in the Water: Aliens and Blooms in Philippine Nature

By the early twentieth century, nonnative fishes were shaping the processes of culinary and environmental change in the Philippines. No habitat reflected these changes more than the islands' fresh waters. Among the country's many lakes, rivers, streams, canals, and ponds, nonnative fishes were introduced—at times experimentally—for the purpose of bolstering the food supply. Food and ecology—coupled with expertise and commerce—were key factors informing the selection, arrival, and establishment of edible species and the making of new fishways. And although the biodiversity implications of some of these fish introductions were observed, these observations rarely refigured the drive to foster new fishways in Philippine fresh waters.

According to Hilaro A. Roxas (1896–1945) and Agustin F. Umali (1906–1996), these species introductions and the making of new fishways resulted from the paired problem of food and ecology. On food was a growing demand for aquatic protein among the "interior regions," where access to estuarine and marine fishes was either limited or nonexistent (Roxas and Umali 1937, 438). Demographic growth stemming from improved infrastructure, agricultural expansion, and better health services, among other things, increased the nationwide need for cheap and abundant fish supplies to feed not only the development of the "interior regions" but also the urbanization of metropolitan Manila (Doeppers 2016; Fegan 1982). During the period from 1900 to 1941, for example, Manila's population expanded to more than nine hundred thousand (Doeppers 1984, 4–5). On ecology, Roxas and Umali reasoned that the "absence of . . . native edible fresh-water species" suitable for mass aquaculture was one of the likely factors for the introduction of nonnative fishes (1937, 433; Umali 1977).

In light of the centrality of fish in local diets and the archipelago's paucity of inland fisheries, it became critical for the Bureau of Science to source farmable freshwater types for transplantation and cultivation. The biodiversity effects of these species introductions, whether large or small, were not part of the interwar calculus. Food security, rather than native ecology, was the paramount concern. In this way, nonnative fishes were identified, studied, and welcomed as both new sources of aquatic protein and as nature-based solutions to the challenges of food and ecology in Philippine fresh waters.

*Masamang tubig,* or bad water, was an especially troublesome matter that affected, and continues to have an impact on, biotic life and human health in greater Manila (Meijer et al. 2021; Villadolid 1933, 251–252; see also chapter 11 in this volume). From river to bay and bay to river, all types of waste, effluent, and decay poured into the city's interwar waterways, creating the "periodic occurrence of *masamang tubig*" (Villadolid 1934, 546). When studying the *kanduli* (*Arius manillensis*) fisheries of Laguna Bay, Deogracias V. Villadolid (1896–1976) observed how *masamang tubig* moved through the bay's aquatic system, causing "the wholesale death of fish and other animals in localities through which the bad water passe[d]" (546). We learn from Villadolid's colleagues Felix J. Arriola and Domiciano K. Villaluz, both of the Bureau of Science, that one of the leading factors that contributed to the seasonality of *masamang tubig*

was the mass decay of *lia* (*Microcystis aeruginosa*), a blue-green algae high in toxins (Arriola and Villaluz 1939, 183; Rosales and Rollon 2011). While investigating the intertwined industries of snail fishing and duck farming around the edges of Laguna Bay, Arriola and Villaluz documented how during the dry season the lake shrinks, and "various aquatic plants and organic matter rot along the shore" (183). When the seasons change and the rains come, "these decayed plants and organic materials are washed off, causing water pollution" (183). It was "the rotting of *lia* . . . together with smaller fishes and organisms" that constituted one of the most detrimental causes of "bad water" (183).

Beyond the rotting of *lia,* Villadolid (1933, 253) reasoned that another key source of *masamang tubig* was Manila Bay, where unchecked amounts of urban sewage, human waste, and industrial discharge flowed into this iconic seascape, producing blooms of "bad water" that were "devoid of oxygen, but highly charged with poisonous gases." By the 1990s the accumulation of these poisonous blooms had choked the life out of the Pasig, the main waterway that links the bays of Laguna and Manila, "render[ing] the river biologically dead" (Yang 2021). At the same time, this toxic history has sowed generations of public suspicion about the possibility of potable water in the city (see chapter 11 in this volume).

Given the toxic troubles of *masamang tubig* and *masamang amoy,* or "bad smell," which equally plagued Manila's lakes, rivers, and bays, it was imperative for the Bureau of Science to locate "wonder" fishes that could survive in Philippine fresh waters and, in doing so, reproduce in ways that would scale up the food supply (Anonymous 1903, 2; Guerrero 1994, 5). While not all nonnative species thrived in the wake of introduction, some did and have found a place within the story of the country's fishways.

One example was the *karpa,* or common carp (*Cyprinus carpio;* Saguin 2022, 124–139). Following a study tour of the United States, Hawai'i, Japan, and Taiwan, Heraclio R. Montalban of the Bureau of Science returned to Manila with hundreds of *karpa* fingerlings. Collected in Taiwan, these fish were introduced to Laguna Bay on June 4, 1926, and to Lakes Buhi and Bato on June 11, 1926, among other places. By 1937, Roxas and Umali reported that *karpas* were "very numerous in Lanao and Bicol provinces, and in Laguna Province, where [they] had replaced the native species to some extent . . . and form[ed] the bulk of cheap food fish" (435). The biodiversity effects of the *karpa*'s arrival and establishment in Laguna Bay, as observed by Roxas and Umali in the late 1930s, did little to

dissuade the state practice of importing other kinds of carp for economic and food security purposes, particularly in the early Marcos years when nonnative species such as *Carassius carassius* (crucian carp, Japan, 1964), *Ctenopharyngodon idella* (grass carp, India, 1967), *Cirrhinus mrigala* (mrigal carp, India, 1967), *Hyopthalmicthys molitrix* (silver carp, Taiwan, 1968), and the popular Imelda fish, or *Aristichthys nobilis* (bighead carp, Taiwan, 1968), were introduced (Guerrero 2014, table 1). Today, Imelda fish and common carp have proliferated in Philippine fresh waters, contributing not only to aquacultural booms but also to native extinctions (Cuvin-Aralar 2016a; Metillo and Garcia-Hansel 2016, 44).

## Becoming Kin: A History of Giant Gouramis in Philippine Fresh Waters

But not all biological transfers resulted in native declines. Some nonnative species became "Philippine fishes" without disrupting or decimating the islands' freshwater biodiversity (Roxas and Martin 1937). The story of the giant gourami (*Osphronemus goramy*), a nonnative fish, is one of acclimating to the cultures and ecologies of Central Luzon's fishways (Cagauan 2007, 52–53; Casal et al. 2007; Cuvin-Aralar 2014, 2016b; Guerrero 2014, 50, table 1; Lit et al. 2011, 13). We might think of a history of the giant gourami in Philippine fresh waters as a story of introduction, naturalization, and heritagization rather than one of ecological violence and "biological imperialism" (Belasco 2014, 7; figure 1.1).

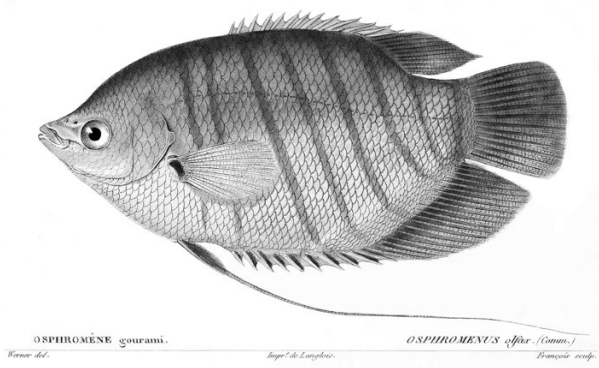



FIGURE 1.1. Giant gourami, *Osphronemus goramy. Source:* Cuvier and Valenciennes (1828–1848), plate 198.

The giant gourami was brought from Java to Manila through the work of the Bureau of Science in 1927. More than seven hundred young and old giant gouramis were purchased in Pasar Minggu from Hadji Hanapi and kept alive as they traveled to the Philippines (Herre 1929, 212; Roxas and Umali 1937, 435). Giant gouramis were seen as prized proteins that could help address the paired problem of food security and freshwater ecology in the interwar years. Finding a food fish that was herbivorous, farmable, hearty, and tasty was important for the Bureau of Science. In these respects the giant gourami was perfect: "It is essentially vegetarian, and therefore neither predacious nor cannibalistic; it is able to breed in artificial or regularly constructed fish-ponds; [it] can survive extreme pollution, and, last but not least, the flavor of its flesh makes it one of the best fresh-water species in cultivation" (Roxas and Umali 1937, 441–442).

The giant gourami's successful cultivation among the fishponds and rice fields of Indonesia, where it is native, made this species a promising addition to Philippine fishways in general and the "interior regions" of Luzon in particular. "Being essentially vegetarians," giant gouramis worked for farming publics in Bulacan, Nueva Ecija, Pampanga, and elsewhere (436). They fed on rice bran and *kangkong* (*Ipomea aquatica*), among other plants, as well as on naturalized flora such as *digman* (*Hydrilla verticillata*), papaya leaves (*Carica papaya*), and *ipil-ipil* (*Leucaena leucocephala*). More than just food, the giant gourami's entanglement with invasive and heritage plants also included how it nested—a vital stage in its aquacultural life history (Amirthalingam 1939). In the Bureau of Science's breeding ponds, where most of the seven hundred giant gouramis resided upon their arrival in Manila in 1927, it was tested and observed that the wildly invasive water lily (*Pontederia crassipes*) served this fish's peculiar nesting needs quite well (442).

Figuring out the giant gourami's nesting habits mattered because this freshwater species was unlike any other type. Measuring upward of 183 centimeters (6 feet), the giant gourami is truly giant: it is the largest of its kind within a wide group that stretches across 3 families, 19 genera, and 170 species (Nelson et al. 2016, 391; Roxas and Umali 1937, 441). But more than size, it was the giant gourami's cultured habitats that marked it from most other species. On Java these fish were cultivated in rice fields and multispecies ponds because of their herbivorous diet and slow fecundity, two characteristics that made them an ideal "second crop" for Indonesian farmers (Ardiwinata 1953; Oetomo 1959). It was indeed ponds

and fields, rather than lakes and rivers, that were seen as the most suitable nature settings for raising giant gouramis in Philippine fresh waters. These kinds of cultured habitats shaped the life and legacy of this fish as an island fishway.

In the wake of its introduction in 1927, the giant gourami has found a home in the cultures and ecologies of Central Luzon. In particular, this fish has been used to make a fermented food known as *burong isda* (Sakai, Caldo, and Kozai 1983). *Burong isda* is an enduring staple and a kind of *halo-halo* production in its own right. Mixing rice and fish, this fermented product is made out of native *kanduli* and nonnative *hito* (*Clarias batrachus*) as well as other freshwater fish types (Arcales and Alolod 2018, 501; Mabeza 1983).[2] In the past, *burong isda* was often consumed as a condiment or appetizer (Olympia et al. 1992, 193). Since the early 1990s, however, it has grown in consumption and popularity, appearing more regularly in local diets. Among the markets of Cavite, Pampanga, Bulacan, and Nueva Ecija, *burong isda* made with giant gouramis is known as *burong* gourami (Sanchez 1999, 20; see also Sanchez 2008).

And yet it is from the writings of Villadolid and other Filipino scientists in the 1930s that we learn about the giant gourami's origin story in Central Luzon. For example, Villadolid informs us that these fish were initially kept and observed in the concrete ponds of the Bureau of Science's grounds until they nested, spawned, and multiplied (1936, 9). For aquacultural purposes, this holding period was essential. It allowed scientists to map and calendar the breeding habits of the giant gourami. We gather from Villadolid's research that the giant gourami spawned not only "in confinement" but also throughout the year, making it "thoroughly amenable" to cultivation (Roxas and Umali 1937, 436; Villadolid 1936, 9). And on average, it was determined that a female giant gourami produced about eighteen hundred fry a year (Villadolid 1936, 13).

By 1930, the Bureau of Science had cultivated thousands of giant gouramis that were ready for distribution to the publics of Central Luzon, among other localities. With the combined aim of bolstering the food supply and developing the country's inland fisheries, interior regions were targeted. In most instances, farmers converted their hectares into ponds. In 1933, for example, Arsenio Escudero, of San Pablo, Laguna, established a three-hectare giant gourami farm in the "backyard of Escudero Villa," located in Tayabas, Quezon (Villadolid 1936, 10). Previously, the land was used for growing rice, but the yields were apparently poor.

Because the area had a regular supply of water, fed from the streams of Mount San Cristobal, Escudero saw an opportunity to transform his edible landscape from rice to fish. He followed the design and layout of *bangus* farmers, and by 1934 his breeding pond had almost two hundred giant gouramis. Less than two years after opening his farm, Escudero's operation included "several thousand fish, consisting of fry, fingerlings, young, and breeders" (10).

But the reports of Villadolid, Roxas, and Umali speak to something more than just the process of distribution. They also narrate the reach of transplantation. In the span of a decade, the giant gourami went from a single site in 1927—the Bureau of Science's experimental pond in Manila—to numerous localities across the nation. Not every locality has endured as a home for giant gouramis, culturally or ecologically, but some, such as Candaba, Pampanga, have in heritage-rich ways. Working with the records of the Bureau of Science, Roxas and Umali were able to tabulate the spread of this "valuable food fish" and, in doing, offer insights about its edibility: "All that have eaten it are unanimous in their praise and appreciation of its exquisite flavor, which compares favorably with that of the famed sea bass [*apahap*], *Lates calcarifer* (Bloch)" (1937, 440–441). Importantly, their writings allow us to see and situate the observations of Villadolid (1936) from "an archipelagic perspective" (Batongbacal 1998, 189). In particular, they leveraged data to show the "distribution of the goramy in the Philippines" from July 1927 to April 1936. By 1937, we learn from Roxas and Umali that giant gouramis were present in the archipelago from north to south and from Abra to Davao. Some provinces received these fish in multiple locations.

Out of the many places where giant gouramis were sent between 1927 and 1936, most were shipped across Central Luzon. Planted among the rice-growing landscapes of Laguna, Rizal, Zambales, Bataan, Bulacan, Nueva Ecija, Pangasinan, and Pampanga, this fish quickly became part of the region's economic life and culinary heritage. Pampanga was in fact the largest recipient of giant gouramis during the period of Roxas and Umali's study. Thinking with their scholarship—and the work of Villadolid—helps us to historicize the story of this fish in Central Luzon. In Pangil and Pakil, two communities located around Laguna Bay, giant gouramis are prepared and consumed in a variety of ways: fried, grilled, dried, *paksiw* (cooked with vinegar), *ginataan* (cooked with coconut milk), and *sarsiyado*/*sarciado* (simmered with tomatoes and eggs; Mendoza et al. 2021, 5).

For interwar scientists such as Villadolid, Roxas, Martin, and Umali, it was the problem of food and ecology that necessitated the need to source, introduce, and naturalize nonnative species in Philippine fresh waters. In this sense, the giant gourami was prized because of its diet and edibility and because of its compatibility with rice culture. Cultivating giant gouramis in ponds, canals, and fields was transformative for farming publics from Mindanao to Luzon, as the practice maximized the use of arable land, contributed to food security, and supplemented household incomes (Evangelista 1973). In Davao, for example, Carlos Inigo, a hacienda owner and insurance broker, quickly discovered that "raising rice and fish at the same time in the same field [was] an endless money-making cycle" (Torrento 1958, 18). We get a similar glimpse of the rice field's double life and its multispecies uses from the research of Alfredo E. Evangelista (1926–2008), a Filipino anthropologist who conducted fieldwork in Bubog, a sitio located in the delta zone of the Pampanga River in Bulacan Province.[3] Evangelista observed how the cycle of the rice harvest determined the rhythm of fish capture (1973, 6). It was at the end of the harvest that marked the time to catch *dalag* and during the period of draining the irrigation pond when "men, women, and children wade knee-deep employing a variety of local traps and nets to take the fish. Among those caught will be mudfish, tilapia (*Tilapia mossambica*), gorami (*Osphronemus goramy* Lacepede), and shrimp. If more are caught than the family can use, part of the catch is distributed among kinsmen, and any remainder sold along the highway to outsiders" (13). While at home in ponds, pools, canals, and fields, the giant gourami also found its way to native waterways such as Agusan Marsh (Baclayo et al. 2020, 61). In the Philippines, pathways like floods, monsoons, typhoons, and accidents (human error) have long played a role in nonnative species slipping into freshwater ecosystems—some with devastating biodiversity effects, as in the stories of the common tilapia and *karpa.* A history of these biodiversity effects is most visible in the country's lakes and rivers, where native and endemic fishes have declined, locally disappeared, or gone extinct in recent decades as a result of planned and unplanned biological transfers (Ismail 2011, 13; Rosagaron 2001, 32).

And although snakeskin gouramis and three-spot gouramis "abound in . . . natural waters and serve as competitors of . . . indigenous fishes," thereby unmaking native populations, not all nonnatives are problematic, and not all gouramis are the same (Cagauan 2007, 57). Whether in natural

or cultured habitats, the giant gouramis are marked as "beneficial" rather than "invasive" (Guerrero 2014, table 1). Aided by their traits and characteristics, we might think of giant gouramis as one might imagine or classify papaya, guava, *guyabano,* or chocolate: not foreign, strange, alien, or out of place but instead at home in a history of food and ecology in Philippine fresh waters.

Yet just as food and ecology spurred the introduction of the giant gourami in the interwar years, it was food and ecology—and the practice of coculturing in particular—that killed the Javanese line of these fish in Philippine fresh waters not long after Evangelista's fieldwork. By the 1970s the Green Revolution had washed over Central Luzon and other rice-growing regions, spawning a new type of "bad water" that was violently toxic. Derived from the "heavy application of chemical fertilizers and insecticides," these "agricultural inputs" poisoned the cultured habitats of the rice-field systems, resulting in massive fish declines (Cagauan 2007, 57; Umehara 1983, 27, 38). "The giant goramy was primarily affected during the green revolution years," accounting for its near extirpation (Cagauan 2007, 57). As a result, today's giant gouramis trace their genealogy not to Java and the 1920s but to Thailand and the 1990s (57). While the fish has changed, the fishways have endured. From fried, dried, grilled, and fermented to *paksiw, ginataan,* and *sarciado,* the giant gourami continues to belong in Philippine fresh waters nearly a century after its introduction.

In this chapter I have tried to think with a history of fishways to illustrate why fish matter in ways that are materially and methodologically important for charting a new direction in Philippine studies. In particular, I have attempted to follow a story of fish across genres and generations and across foods and ecologies, from the prose of Illustrado literature to the work of Filipino science. In doing so, I have sought to center the species as much as the people who cooked and studied them.

On a different register, I used a history of giant gouramis in Philippine fresh waters to rethink the place of belonging in the country's "gustatory landscapes." While the demands for food shaped—and have always shaped—nature's ecosystems, resulting in explosions and extinctions and everything in between, they also crafted new forms of kin for *certain* kinds of flora and fauna. Some species wreaked havoc on Philippine biodiversity and some, such as common tilapia and water lilies/water hyacinths,

continue to do so. Yet others found a home in the islands. From green papayas to giant gouramis and from foodways to fishways, people made *certain* kinds of flora and fauna their own—through literature, medicine, cooking and cookbooks, and farming. Therefore, in thinking about the cultural and ecological heritage of these types of edible species, I sought to explore how binaries such as native and nonnative, indigenous and alien are too simple and flat for making sense of an archipelago in motion and of the world.

But more than complicating a story of binaries and introductions, I surfaced a history of giant gouramis and other food fishes and the Filipino experts who knew them. By drawing on the interwar writings of Roxas, Umali, Martin, and Villadolid, I attempted to recover an archive of Filipino knowledge production and, in doing so, highlighted the ways in which this local scientific expertise shaped the lives and legacies of Philippine fishways in the twentieth century. In looking at freshwater fish and dwelling in their pasts and presents, I hope I contributed not only to the place of belonging in Philippine natures but also, most critically, to an emergent world of Philippine (food) studies, one anchored in the braiding of fish species, biodiversity histories, and local ideas.

## Notes

1. My thinking of fishways is borrowed from the multispecies work of Thom van Dooren (2014).

2. *Clarias batrachus* was introduced to the Philippines in 1972 from Thailand. *Channa striata* was introduced to the islands in 1908 from Malaysia. All *C. batrachus* and *C. striata* are *hito* and *dalag,* respectively, but not the reverse. Not all *hito* and *dalag* are *C. batrachus* and *C. striata* in turn. For more on their introductions, see Guerrero (2014).

3. For more on Evangelista's life, see Solheim (2009).

# 2 | "Eat That Nostalgia"

## *Filipino Foodways and Food Consciousness in LA*

Dana Collins

Isa hid her food in grade school. She conformed to her classmates, rejecting what her mother packed for her although she loved Filipino food at home:

> My mom would pack my lunch because there's no way she would let me eat the school's hot lunch. She would pack rice with meat that she cooked from the night before, or she would pack Filipino spaghetti . . . . My best friends . . . we're all minorities, but I remember opening up my lunch pail and just the smell hitting me of the food that was inside. I was super excited because it's the rice and *bistek*. . . . Once the scent spreads out, I could hear people sitting next to us going, "What's that smell?" Instead of coming right out with "Oh, it's my food; do you want to try it?" I immediately covered up the foil and threw it away . . . . I went to my mom, and [said], "Why can't you just make me a ham and cheese sandwich like everybody else? Or . . . buy me Lunchables? Why do you have to always give me food that stinks." That's something that was ingrained in my mind because people . . . were complaining about the smell . . . and I was embarrassed.

In Los Angeles (LA), Filipino-identifying Angelenos like Isa negotiate California's urban foodways. For them, Filipino food is a connection to family, an imagined homeland, and an arena where they experience racialized exclusions. It is therefore not surprising that food becomes a key site of resistance and reclaiming culture. The theme of food as resistance ties together many of the chapters in this collection.

LA is an urban culinary capital where hybrid urban spaces and places shape diasporic food cultures. Initially, I was eager to learn how Filipino cooks respond to the critiques and exoticization prominent in white supremacist renditions of Filipino food. Filipino foodways and consciousness show that colonization endures across time and space and takes shape within the intimate and embodied spaces of food, smells, and identity. Filipino foods and cooking have served as sites of US colonial control of the family, women, identity, and life-sustaining practices of producing, exchanging, and consuming food (Orquiza 2020). While colonization may have threatened to diminish indigenous foods and production methods, it made the Filipino kitchen into a key site of resistance. Filipino women looked for ways to integrate indigenous foods and innovate cooking practices as they grappled with the Americanization of Filipino food (Orquiza 2020).

Filipino food consciousness within the United States shows these persistent experiences of colonial control, struggles over authenticity, and articulations of national belonging. It also shows the struggle around the hybridization of Filipino food within LA's urban spaces, which are known for their street culture, food trucks, and pop-ups. LA is a city of enclaves that bustle with food commerce while strip malls fill the void of the vast urban space, housing inconspicuous restaurants that cater to regional tastes. One gets lost in the sprawl only to stumble across a neighborhood family restaurant that connects to history, culture, and place. Filipino foodways and food consciousness reflect this urban space, its hybridity, and the struggle over rooting to an actual place within the global flows of migration and discourse. Foodways and consciousness also illustrate the important imaginations and struggles whereby a diasporic Filipino community connects to home.

I am interested in what those connections look like as well as how a new generation of Filipino-identifying cooks, chefs, and restaurant owners imagine Filipino food in LA. What happens when they try to cook and succeed within a competitive LA food scene? What are they struggling against and for as they reimagine Filipino food? What does a Filipino environment come to mean in a diasporic setting detached from the homeland and its ingredients? Chapter 3 in this volume looks at how the diaspora changes the environments in which its members live, grow food, and cook, addressing the importance of studying not only how the environment shapes food but how transnational migrations shape

environments. Filipino cooks in LA also speak to how the hybridity of their urban environments and experiences of transnationality shape their Filipino food and how they lend Filipino visibility to their environments, hoping to transform them.

Food scholarship shows how environments, such as the land, air, water, mountains, and/or the unique geopolitical struggles of particular places, ultimately determine Filipino food. Its taste, composition, and quality are rooted in actual places. This idea is key to culinary nationalism, which seeks to establish geographic boundaries around the production of nationally claimed foods. Furthermore, the environment affects the regional specificity of food within the diversity of the archipelagic Philippine environment where particular dishes, their ingredients, and how they are made are connected to specific localities. This chapter demonstrates that these environments are not essential to Filipino food, even as this uncoupling creates struggles around cultural authenticity. What becomes Filipino food is the lived experience of Filipinoness within the urban hybridity of LA, families' memories of recipes and foods, and foods that have culinary nationalist appeal. These imaginings lose their regionality even if they gain hybridization—Filipino food becomes adobo, SPAM, spaghetti, or *ube* pancakes. This volume opens by showing that Filipino foods are regional and have elements of geographic and environmental embeddedness even as this regionality is lost in nationalist renditions. I hope to complicate this notion of embeddedness and the prevailing assumption in some of the chapters in this collection that environment shapes foodways.

This chapter draws from in-depth interviews with this new generation of self-identified Filipino chefs and restaurateurs based in LA who differentiate themselves from the more traditional Filipino restaurants that have long made up this urban landscape. I mapped the neighborhood placement of forty-six Filipino restaurants, pop-ups, or markets across the metropolitan region. Afterward, I conducted ethnographic observations of the modern fusion food spaces and analyzed forty-six commercial food spaces' Instagram accounts or websites, which feature menus and the characteristics and mission of their culinary establishment. I also examined twenty-five newspaper articles on Filipino food in major US newspapers, such as the *New York Times, Los Angeles Times,* and *Washington Post.* LA's Filipino food runs the gamut of the traditional *turo-turo* ("point-point" food bar) to the modern fusion food served in restaurants

and pop-ups. Analyses of their menus and online presence show a delineation between these food establishments. Of the forty-six commercial food spaces, I categorized thirty-two as following more traditional trends in Filipino food and fourteen as fusion. Fusion restaurants are more likely to be pop-ups or modern restaurants with table seating where the food is made to order. They focus on a crossover market in which cooks bring Filipino flavors to a wider foodie palate in LA. Examples of the fusion food on menus include adobo pork bowl, *sisig* street tacos, cornbread bibingka, *giniling* fries, *tocino* bacon jam empanadas, and Filipino Cobb salad, among others. Filipino chefs and restaurateurs practice this distinction to establish their place within LA's Filipino foodways. They must claim a connection to heritage, which for some is a troubled reckoning with an abstract homeland, while navigating cultural hybridity, different ingredients, and competitiveness in LA's urban food scene. Borrowing the words of one restaurant's website, what does it mean to cook and sell "the comfort of home cooked meals we were raised on while drawing inspiration from the local flavors of Los Angeles"?

## Family and Claiming Filipino Heritage through Food

Crisanto shared that his mother resisted their market's transition to fusion food back when he and his brother took over the business—"Over my dead body" were her exact words. He claimed that their restaurant was "OG because of my mom, who's been here around thirty-five years." He continued, "All the other business owners of my generation, they're like, 'It's okay. We need you to still have the touch of mom's cooking while we do the fusion stuff.' . . . That made me feel better." Bourdieu (1979/1984) argues that food tastes are a social distinction; tastes develop over time within the habitus of family and illustrate our habits of status and identity. Food is how we represent ourselves to others; it is symbolic of who we are and the groups with which we identify. This place that Crisanto inhabits between his mother and his generation of fusion Filipino chefs illustrates how food is at once global, cultural, internalized, and expressed.

Claiming one's Filipino-ness through food is how Filipinos represent themselves to others and legitimize their place in the diaspora. Food is also their site of innovation because recipes and tastes travel from the

Philippines to the United States. They are diverted through the lived experience of migrations and making home elsewhere. Across *all* my interviews, family was formative in the cooking that Filipino chefs did in LA. Interviewees drew inspiration from mothers, grandmothers, aunts, or fathers who cooked the family meals, wielded culinary flare at family gatherings, or operated food stands back in the Philippines.

Family also served as the main mediator of what counted as authentic Filipino food. Espiritu argues that "Filipino American identities and lives are formed . . . by different notions of 'home,' by the struggles to be 'at home' in multiple locations, and by overlapping and competing loyalties to . . . homes" (2003, 16). One place where different notions of home—in the Philippines and then here in LA—are imagined is the family gathering, where interviewees report learning about Filipino food, recipes, and mutual care: "Filipino food reminds me of my family gatherings . . . like eating good food at a dinner table," Rosario explained. "I feel like food is the only reason why we always get together; it's like an excuse, potlucks and all. It does bring people together." Isa said that food represented how her family made a home in the United States, particularly as they made space for those migrating to the United States: "When I was growing up, our house was . . . [where] all my aunts or uncles or cousins, whoever wanted to immigrate to the US, . . . the house that they would stay in to get their feet settled. . . . I remember my mom always saying, 'It's not like we can give you money, but we can give you a roof over your head and you can have whatever food is in the fridge.'" David claimed that food was the heart of Filipino culture, particularly in how his family used food to express emotions: "With . . . Filipino culture, food is a love language. . . . Like, my mom never told me she loved me, but she fed me. . . . You get into an argument . . . and she breaks [the ice] by asking you if you're hungry." Sharing Filipino food made a home in LA and rooted families to a place despite the diaspora being a space of flows and contradictions. Food bound people together and was a way for immigrant families to practice collective care and emotional connection.

The stakes are high for making a home in the United States because Filipino Americans experience what Espiritu (2003, 47) calls *differential inclusion,* wherein racialized colonial controls create the conditions of a precarious, contingent inclusion. US-based Filipinos are constructed and treated in Orientalist ways as both insider and forever a "stranger." Filipinos confront their differential inclusion through food, as Isa's experience

in the lunchroom illustrated. Simply put, Filipino food elicits racism. As Rosario shared:

> Some people would not like the idea of pork blood; even if they haven't tasted it, they're already putting a negative thing in their head. . . . I've heard people say disgusting things about Filipino food. Like "What do you call this?" . . . Back when I was dating my ex-boyfriend, who's not Filipino . . . his dad has something against Filipinos . . . me and my ex traveled to the Philippines . . . and his dad called and was asking, "Oh, how's the Philippines? How's the food? How's the people blah, blah, blah." He said something like "Do Filipinos eat fish tails and rice?" I'm thinking why would you say that? . . . He's saying that because he's thinking that since Filipinos live in poverty that that's the only thing that they can afford. . . . [It's] when someone's kinda insulting you.

Cooks resisted their differential inclusion through expressing cultural pride in Filipino food. To Crisanto, it was through his restaurant's logo that he showed pride to counter his experience of differential inclusion while growing up in the United States: "There's the Filipino sun with the American flag in the middle. . . . It's like that for Filipino Americans because I am American; this is my home; I was born on this soil. . . . There's a part of me that identifies with my heritage. . . . I'm proud now of . . . my Filipino heritage. I wasn't really proud growing up. . . . I was scared to be proud because I was afraid of not being accepted." My interviewees shared their struggle to make Filipino food visible, respectable, and accepted, which is a self-conscious resistance against the colonial "West is best" discourse. Isa spoke to the marginalization of Filipino food within her family's experience of differential inclusion:

> My parents' generation . . . wanted to be accepted and blend in. . . . When my dad spoke English, there is not even a sign of a Filipino accent. . . . It wasn't important to them for me to keep speaking Tagalog even though Tagalog was my first language. . . . The history of the Philippines . . . gets a little muddled because there's just so many dominant forces that come in and take over . . . that it's hard for someone of my generation to look and figure out what the origins are of our actual culture. . . . *Food is a huge . . . way to pass down history*. . . .

> Because that wasn't a priority, I think that's a big reason why we haven't risen because the goal for a lot of Filipinos . . . wasn't to be Filipino and proud. Their goal was to leave that country to make a better life for themselves here. Somewhere down the line, they were taught that the way to make a life here was to be American, whatever that meant.

Differential inclusion complicates US-born Filipinos' relationship to homeland; homeland is their heritage and a place for which they hold pride, but it is also an imagined space where they were not born or grew up and where some have never visited. Familial stories and expectations serve as their key link to Filipino culture, identity, and "authentic" Filipino food. Yet families are also a site of struggle around food, cultural authenticity, and pride; families become the "guardians of the authentic cultural memory and representatives of home" and can regulate their children's expressions (Espiritu 2003, 11), as Jeremy articulated: "My dad is from Baguio, and my mom is from Caloocan. Allegedly, I don't know anything about this. I've never seen a map, *so I just say whatever they tell me*. Like, I'm being ignorant about it because I've never been; I should probably look at it myself. I've never done that either. Just trusted it."

Isa's response to differential inclusion was to shift her family's restaurant toward Filipino food, which resulted in a struggle around which foods should be on the menu:

> We were selling bagels, apple tarts, Denver omelets, . . . not Filipino in any way. . . . I just said, "Why are we selling this? . . . I didn't eat this growing up." . . . There's no sign except for the literal sign on the door that says that this is a Filipino place. . . . My mom and I argued. . . . I was trying to argue that things like *longganisa* [Filipino chorizo sausage] should be on the menu, corned beef, and SPAM. Things that I ate growing up that she cooked me. . . . If you want to attract Filipino people, and you want to show people what Filipino food is about . . . you have to not be afraid [to] put our stuff on the menu. . . . It's . . . that moment when I realized my mom wanted to be so assimilated to whatever her perception of American culture was that she was willing to water down what our culture, what her actual culture was, even through food. . . . She didn't want to stand out. . . . I realized then . . . I wasn't willing to do that.

Articulating cultural pride through food is a form of culinary nationalism whereby my interviewees celebrated what they saw as a "Filipino" experience of food as an extension of identity, culture, and history. Nationalist belonging is made through food; the knowledge of and eating of what is distinguished as a nation's food authenticates one's connection to the homeland. Isa articulated culinary nationalism in wanting to shift her mother's menu toward Filipino food—or what she ate growing up—even as her chosen examples of Filipino food—SPAM, corned beef, and *longganisa*—show the colonial imprint on these foods. It also serves as an example of how culinary nationalism disappears the vast regionality of Filipino food. This is why Magat (2019) claims that culinary nationalism shows Filipino Americans' continued reckoning with the colonial legacies of Filipino food, including the assertion of cultural pride that eclipses the sheer diversity of Filipino foods. My interviewees articulated Isa's cultural pride, including the mission of sharing Filipino culture through food.

Filipino cuisine is gaining popularity, particularly within US urban areas, yet it is not as ubiquitous as some other ethnic foods. Pride in heritage requires one to positively represent Filipino food to a US consumer who has little familiarity with or who holds racist beliefs about Filipino food. For my interviewees, culinary nationalism entailed bringing a wider audience to Filipino food—like simply getting urban foodies through the door to try their foods while earning respect in LA's food scene. They viewed their cooking as a gateway to help non-Filipinos develop a taste for Filipino food, as they have for other cuisines. This was the work of "showing people what Filipino food is about," as Isa claimed, and an example of taking pride in Filipino food. Isa said that her *ube* pancakes brought people into their restaurant to try Filipino food because "Who doesn't like pancakes?" Amy Scattergood (2019) stated in an *LA Times* article that Chef Olalia of the Rice Bar wanted to serve "the food he grew up with in Manila to the folks who gathered for lunch at [his] seven-seat counter." Olalia's cooking gained national notoriety when Johnathon Gold, a famous food critic, visited that counter, ate his food, and positively reviewed the Rice Bar, giving Filipino food a break in the LA food scene. Thus, Filipino chefs drew from family influence, nationalist pride, and innovation to create their food for an LA consumer base. This required getting creative in the kitchen and bringing a uniquely Filipino taste to their cooking.

## Authenticity and LA Hybridization

Filipino chefs must struggle against gastronationalism to deliver a piece of home to their consumers in LA. All consumers seek to experience the tastes of the Philippines when they stop by a restaurant or get in line at a pop-up. Making and sharing Filipino food within this US commercial context introduces questions over authenticity; it becomes the moment at which consumers determine cooks to be insiders or outsiders, inciting debates over what counts as authentic Filipino food in the first place. Manalansan (2013) problematizes food as a site of cultural legitimation; instead, he suggests that Filipino food presents an experiential "diasporic homecoming" (289)—the smells, the tastes, the sharing simply bring one home, even as that return varies. Fernandez (2003a) encourages a reckoning with the search for authentic Filipino food given that the ingredients, methods of preparation, and what one actually eats are regionally diverse; a clear example of this are the pork-centric dishes of non-Muslim regions and the wide variety of pork-free curries of the South. Furthermore, the movement of culinary cultures from the United States to the Philippines, where Montefrio (2020a) studies locavorism in Manila, shows how the politics and ideas of eating local change when practiced within the elite consumer circles of Metro Manila. Thus, authenticity is troubled precisely because of its insistence on static ideas of culture.

Some interviewees expressed insecurity over knowing their cultural background well enough to cook acceptable Filipino food. Some claimed they have imposter syndrome when cooking for their family. Luis argued that the diaspora is where one adapts and forgets: "Individuals are looking for information about their background, their culture, their roots. A lot of us here . . . don't really understand where [we] come from. [We] don't know what's going on because Filipinos are so well at adapting and adopting other cultures that it's very easy to just forget why their adobo doesn't look like their friend's adobo." David began our interview confidently identifying as "full Filipino, 100 percent. Yeah, both my parents are from Manila" and then realized how long it had been since he had visited the Philippines: "I was born here in Bellflower, California, born and raised. I went to the Philippines, like one time, in 2015, or no 2005. Wow. Yeah. 2005. It was a long time ago when I went over there. . . . I pretty much lived here my whole life." My interviewees trod carefully around

the concept of authentic Filipino food because few could agree on what counted as authentic and because they experienced their connection to culture and identity as at times tenuous and shifting. Chefs turn to family and notions of culture rather than environment as a way to claim authenticity because they are more proximate and feel more real to their experience. This is also a way to stave off the harsh critics.

*All* of my interviewees claimed that Filipinos were their harshest critics, expressing similar experiences to those of Filipino chefs and restaurant owners in the documentary film *Ulam* (Cuerdo 2018). Mauricio, for example, shared the following: "There's like one or two [who] like really bashing us. . . . Especially what *we* do because they're Filipinos. Those Filipinos that are entitled that they think they represent the country. . . . It hurts because they don't know how hard we have been doing this to represent our culture. They didn't know . . . the hardships that we went through in order for us to get to this point, like a small business that is just starting." Sheila said she does not get many older-generation Filipinos at her pop-ups, but they were consistently critical. "You don't see a lot of old-school Filipinos come, like the older generations, and they are having very harsh input of our Filipino cuisine. . . . From the new generation of people like us, who are generating Filipino foods these days, I think it's very beautiful. And it's very tasty and it still has all of those traditional flavors," she explained. Filipino chefs struggled to prove their legitimacy not only as good cooks in LA but as *Filipino* chefs who are tasked with the impossible—representing Filipino food as a definitive set of dishes despite the history of adaptation that Luis speaks of above. Food, like culture, is not static.

Furthermore, Filipino chefs must adapt their recipes to a broader US consumer taste, like other ethnic restaurants across the United States (Chi 2019). What actually constitutes authentic food when dishes transform to fit within the urban consumer enclaves of US cities where culinary tourists travel to experience fusion food? LA's hybrid urban foodscape was reflected in my interviewees' lived experiences of Filipino cooking in LA and on restaurant websites. One website claimed that its food was "BBQ born, from the backyard boogies of Los Angeles, California. A place where American cuts meet Filipino flavor. 50 percent Mom, 50 percent Pop, 100 percent LA. This food is the product of a group of friends' adventures growing up and cooking in the hood. This is our party food." And the outside of this restaurant connects its food with both street life and "serving

the people" in a city that has struggled with its COVID-19 response, the loss of food-sector workers, and the Black Lives Matter urban social movement (figure 2.1). Mauricio adapts in this way:

> I know the ingredients that we use back home in the Philippines. I just substitute with ingredients . . . from [here]. . . . It's just making the food better but still *eat that nostalgia* that I'm looking for. . . . But they have to accept that . . . you cannot recreate how you made it at home. . . . If you cook in the mountain, or you cook in the city, the elevation, the air, the water that you use, can change everything. So regardless of how much you want to recreate how you did back home, in the Philippines, you really couldn't do it perfectly. What you do is make it the best that you can so that you can remember how good it was back home. But to say that I'm going to recreate my grandma's recipe, that's going to be impossible. It can be a version of it, or even better.

The search to "eat that nostalgia" may motivate Filipino cooking, but inevitably, the environmental differences and the need to adapt to an urban consumer market shaped my interviewees' food. This urban




FIGURE 2.1. Street view of a Filipino fusion restaurant in Los Angeles, California. *Source:* Photo by author.

cooking also offered inspiration. Jeremy credited the urban mix of LA in shaping his Filipino cooking:

> Growing up in LA, you got Koreatown; it's just down the street from Thai Town, just down the street from Little Armenia, etc. And then there's Mexican food all over, and so it's just a matter of time that you put [in] Korean barbecue. . . . I had hip-hop friends and then at school friends . . . a weird, mishmash of people. I'll always cook for my birthdays; it was kind of like my "hey, thanks for being in my life. I'm gonna cook for all y'all." . . . There were tortillas, there was Korean barbecue, I marinated beef, there's like SPAM. . . . I felt like I could do that because we're in LA.

Cooking Filipino food *and* living in LA offered another form of rootedness—my interviewees' style was central to a new generation of Filipino cooking in which they connected food to Filipino heritage, Los Angeles, and the city's thriving pop-up food scene. LA's existing street food, food truck, and pop-up scene gave them the opportunity to try out their fusion Filipino food on consumers who regularly descended on LA's enclaves to "truck hop." According to Rosario, pop-ups were helping Filipino food to "slowly [be] acknowledged, nowadays." Mauricio, whose love of street food began in the Philippines, said, "It is a very humbling experience coming from a head chef . . . to the street. . . . I needed to learn how does it work in the streets. . . . It's diverse and street food is accepted with everyone."

The existing structure of pop-ups, urban food enclaves, and the critical mass of consumers who sought out street food helped this new generation of fusion Filipino cooks. They struggled as entrepreneurs as much as they were cultural ambassadors of Filipino food. Yet the double-edge sword of culinary nationalism is that it thrives precisely because of the global forces of travel (Magat 2019), and urban tourism is one driving force of gentrification and the wider social structural transformation of cities. Wang (2013) and Zukin (2010) argue that fusion food trucks capitalize off of the street, a longing for bohemian experience, and exoticized notions of ethnic food to cater to those seeking "authentic" food experiences. Wang's (2013) study of LA's traditional *loncheras* versus the *nueva,* or hybrid, food trucks illustrates that *nueva* food trucks do not transform the racial and class borders of the city but in fact reify them because they travel to

gentrifying areas to serve the culinary tourist. Filipino pop-ups may offer an image of diversity, ethnicity, and support for local businesses in certain LA neighborhoods, yet this multiculturalism also covers the displacement of lower-income Black and Latino residents and businesses who are being pushed out with gentrification.

Hybrid food cultures run the risk of being co-opted into systems of gentrification that restructure US cities like LA through the neoliberal relations of exploitation and dislocation. Culinary nationalism and fusion food advocate cultural pride, acceptance, and relationships. Yet they must contend with the marginalizing politics of urban exploitation. This is the work of neoliberal multiculturalism—a façade for the alienation that arises in these projects of cultural acceptance (Rodriguez 2010). As I reflect on the struggles and desires of Filipino chefs making their place in LA's hybrid food scene—seeking both respect and success—I am reminded of Heidi Heldke's (2013) and Elaine Castillo's (2018) important question: Can anyone actually come to know a culture or people through eating their food? This work around visibility and positive representation elides how food consumers do not seek understanding of oppressive relations when they go out to eat. They seek new experiences carefully packaged as safe consumption that add to their own (multi)cultural capital. But what about the cultural and economic erasure that is a part of the gentrifying neighborhoods where Filipino chefs seek to make their mark?

> Filipino chefs, restaurants, and consumers have grappled with neoliberal forces for some time. They have sought to claim space and community and further cultural representation through food, and they have pushed back against the homogenizing forces of neoliberalism. Jeremy directly engaged these neoliberal forces in gentrification by claiming Filipino place through his restaurant and within his neighborhood of Historic Filipinotown. He sought to make a Filipino American hybrid space through food that directly opposed his erasure within a district undergoing gentrification. He described one part of gentrification through the whitening of Historic Filipinotown and how he used food to open up a conversation about its longer-term residents: "You've been through Filipino town; there's people walking their dogs in strollers around the neighborhood. We're just like, 'Yo, you can't do that shit around here,' but they're white. . . . I can't tell these people where to live . . . but I can tell them about *where* they

> live. . . . What better way than with food? Everyone's hungry. . . . Let's start the conversation. That's why I named the restaurant after the neighborhood.

Though Jeremy claimed to not be political, his actions expose the implicit politicization of food, particularly as Filipino small businesses struggle over their place and visibility within neoliberal gentrification. Jeremy explained the other motivations for naming his restaurant after the neighborhood, illustrating how Filipino hybridity cultivated in food and restaurant concepts combat the potential renaming of Historic Filipinotown into a design district:

> I'm not like a political dude. . . . But . . . there was this town hall meeting before I opened the restaurant, [and] the city had pitched to change . . . the name of the neighborhood into the design district. . . . [I decided] we're just gonna . . . name the restaurant after the neighborhood. If they change the neighborhood into the design district, there's always gonna be like a middle finger . . . in the middle of the design district, reminding people that this is Historic Filipinotown. The mural inside the restaurant literally said, "This is Historic Filipino Town." Is that political activism? . . . I don't know how to write a letter. . . . That's not my shit. . . . I'm an artist. . . . That's the way I'm going to do it. Passive aggressively . . . I'm a kid from the neighborhood making lumpia hot dogs. . . . I don't really give a shit about everything else. I'm just trying to make a place for Filipino Americans and trying to get my neighborhood to be vibrant. . . . I'm definitely not [moving the food forward], but I am making people of other [backgrounds] learn about [us].

## On Environment and Local Embeddedness

None of my interviewees addressed the rootedness of their foods within the regions and environments of the Philippines. My questions about how they procured ingredients in LA, away from the Philippines, stumped them and disrupted the flow of the interviews. They expressed confusion and then answered matter-of-factly that they got their ingredients from a store. It was as if the answer was obvious and needed no further

discussion. Even as they openly discussed the abstract topic of their connection to Filipino food, they resisted in-depth discussions on the material connections between Filipino food and local and regional environments, including the global travel of food to our plates.

Yet cooking "authentic" Filipino food within the concrete urban center of LA and making food taste "like it does back home" is a challenge for Filipino cooks, particularly when the mountains, the elevation, the air, and the water are distinct from the regional environments of the Philippines. For many, authenticity is attached to the backyard roast, the home garden, the dirty kitchen, or the wet market, which raises questions over whether one can capture Filipino "authenticity" in LA. Gastronationalism is how nation-states establish ownership over foods produced within the boundaries of a geographic environment (DeSoucey 2010). A culturally authentic food must be made in one place and resist having its production uprooted from actual locations within global food production. Rooting food to the environment establishes its authenticity and the legitimacy of the nation to make claims to that food and its economic profitability for the nation's businesses. The logic goes that when it is made elsewhere, it is no longer legitimately Filipino and simply does not taste as good.

Therefore, Filipino food becomes a site of contestation when made in LA precisely because of assumptions about how environment shapes food. Interviewees saw themselves as part of a new generation of Filipino chefs who wanted to put Filipino food on the culinary map by creatively adapting it for an urban consumer foodie environment. Mauricio viewed this as a creative challenge: "It's a challenge for me to . . . recreate my childhood food using ingredients from [LA]. . . . It's like experimenting through our experience. . . . We know how to create new dishes in our head [and] we're using different ingredients . . . but when we actually make it, sometimes it doesn't work." Environment matters when making Filipino food taste like "home" because cooks must work with the ingredients available in LA. For example, lime replaces *calamansi,* finding young, fresh *buko* (coconuts) is challenging (canned jackfruit is not an ideal substitute), and cooks have to adjust the proportions and timing of soy sauce and vinegar marinades. Changes are also made to meet what consumers seek in fusion food, like the *ube* pancakes discussed earlier. Filipino fusion food involves recreating memorable childhood foods, but with a twist because LA requires that twist.

My interviewees reported working alongside family members in the kitchen and learning about ingredients, the intricacies of Filipino recipes, how to shop at markets back in the Philippines, and how to grow Filipino foods in home gardens in the United States. The importance of the garden as a site for both assuring food access and for imagining the possibilities of Filipino food is also a prominent theme across the chapters in this volume. The very experience of growing Filipino food, learning how to cook it, and then cooking it again in the United States requires "blur[ring] the here and there" (Espiritu 2003, 10); it is the amalgamation of transnational environments. Sheila shared her experience of learning to cook Filipino food from her family, which incorporated these foods from a backyard garden in central California:

> Being Filipino and of culture, when I was growing up, we like to harvest our own vegetables, farm-to-table organic vegetables, and we do it anywhere, like in the backyard. I grew up with my grandma . . . raising chickens, slaughtering pigs in the backyard for large parties. . . . I took that, and I just formed it. I saw it as an art. . . . I didn't know this was that cool until I got into the industry. . . . I felt like my mom and my grandma had a huge impact on why I wanted to be in the culinary industry. . . . I've watched them, tailgating them around the garden or watching them cook on the kitchen counter.

When Sheila infused the food she prepared in LA with a Filipino taste, it was family and the environment of the backyard garden that shaped her Filipino food, recipes, and cooking techniques. Her family's garden may have had corn; mung beans; eggplant; *kangkong* (water spinach); Baguio beans; and dragon fruit that grew alongside orange, lime, and Hass avocado trees. There should have been plenty of space for chickens and a couple of pigs. They would have to contend with dry, hot summers and cold winter nights, which sometimes bring frost. Yet her family carried that knowledge of growing from environments in the Philippines to the backyard gardens of Central California, and then Sheila carried this knowledge to LA, using it in her barbeque pop-ups.

The pressures of differential inclusion, culinary nationalism, hybridization, and neoliberalism appear to dominate Filipino food consciousness in LA, making absent a consideration of Filipino food's embeddedness in environment, such as terroir, geographic regions, and the sheer diversity

of Filipino foods across the archipelago. Other chapters in this volume emphasize local embeddedness (see chapter 12), yet the embeddedness of food in the local environment remains complicated. What can be considered "local" in the Philippines, for example, may initially not be present in the Philippine environs (Montefrio et. al. 2020). And Medrano (chapter 1 in this volume) suggests that what we may consider an essential part of the Philippine foodways today—giant gouramis—were in fact introduced to the environment and then transformed those local environments.

I am interested in the deals brokered around differential inclusion, food nationalism, and food consciousness as Filipino cooks make a place for their food in LA. Their entrepreneurial struggles within neoliberal urban spaces matter for their patterns of engagement with Filipino food in this new generation of Filipino cooking. In place of fully succumbing to the homogenizing forces of gentrification, they engage in practices of remembering, connecting, honoring family and heritage, and reimagining Filipino food in an environment outside the homeland. Tandog, Banta, and Alvarez (chapter 12 in this volume) also grapple with imagining the spaces and practices of food cultivation from Indigenous perspectives and as liberated from settler-colonial regions of the southern Philippines. Imagining food in this context is a practice of freedom. Filipino cooks in LA must ensure their food business is successful in a competitive market that requires them to participate in the urban hybridization that makes LA's food so popular. Hybridization requires their messy navigation of authenticity, mobilizing Filipino pride, grappling with the residues of food colonization, and rooting themselves in the struggles of urban neoliberalism that make up LA spaces. Those struggles can and do result in their more explicit food politicization—or reimagining Filipino food as their practice of freedom—which for them is about claiming Filipino visibility within processes that threaten to disappear Filipinos alongside other Black, Brown, and working-class Angelenos.

# 3 | Uproot

## *Toward a Political Ecology of the Filipino Diaspora*

Adrian De Leon

Since the early twentieth century, Filipino migration to the United States has been tied to American ecological imperialism and industrial agriculture. In Hawai'i, Ilokano and Bisaya farmworkers toiled in the sugarcane and pineapple fields under the hot tropical sun. In Alaska they fished and canned salmon along the Northwest Coast, and in California they farmed grapes and all manner of produce that sustains the US food supply. In the off-season, they attended schools or rested in the fledgling urban centers of the West, only to be jettisoned across the continent as industry demanded.[1]

The story of American environmental transformation (and destruction) in the twentieth century goes hand in hand with the colonial workers who sustained those changes. But in Filipino American historiography, migrant workers in the United States are often seen as unecological or, at best, *in service to* the ecologies of settler capitalism: plantations, canneries, fisheries, and so on. On account of migrant workers' role in the shaping of agriculture and capitalism in the United States, Filipino diaspora is *always* ecological, but the legacy of demographic immigration studies and labor history frames these communities as either merely labor-power on the move or beholden to the legal infrastructures of state exclusion. A fundamental reorientation in these analyses might take seriously, for example, the interface between migrant labor and the crops they work by hand and the relationships between landscapes (including the irrigation foundational to California's agricultural boom) and the mass recruitment of workers in newly arable land (for some exemplary studies, see Fujita-Rony [2003] and Choy [2003]).

Even studies of nonproductive forms of migrant life, like recreation and sport, seem to reify this Cartesian duality between Nature (*the* environment) and Subject (the emergent or stubborn humanity of the Filipino). In Filipino American history, these spaces include taxi-dance halls, pool halls and gambling houses, restaurants, and more. These sites of restoration and pleasure were also the places that marked the criminality of Filipino men, drawing the ire of local authorities, white nativists, and the rising Filipino bourgeoisie alike. Put differently, they marked an "unproductive" Filipino as out of place—that is, not in the plots of "proper" labor (like farms and canneries)—and signaled an imagined risk for the dangerous intercourse between brown men and white women. Therefore, at the heart of racist concerns around Filipino vice and criminality we might find settler anxieties around miscegenation, reproduction, property ownership, and the ecological dimensions of what constitutes a Filipino in or "out of place."[2]

By limiting the history of Filipino migration from its more-than-human dimensions, the scholarship tends to reduce these experiences into those of human capital or liberal citizenship. In this chapter I want to reroute these transits through questions of food and sustenance, through the human *as part of the environment,* and through what nourishment and cultivation might have looked like on the move. As the food historian Doreen G. Fernandez (1994, xv) declared, "In the act of eating, we ingest the environment." By following the diasporas of the Ilokano-speaking region of Northern Luzon, I note that migrants make environments as much as they are made by them in their myriad transits. Filipino migrant food histories, such as the landmark works by Dawn Bohulano Mabalon and R. Alexander Orquiza Jr. (among others), have begun to demonstrate the possibilities of exploring the relationship between migrant labor and environment, even if these histories primarily focus on acts of cooking and other culinary exploits rather than an explicit study of ecology (Mabalon 2013a; Orquiza 2020).

A diaspora, then, is not merely a displacement of people but also a transit of what geographer Jason W. Moore (2015) calls an *oikeios:* relations of life-making, coproductions of human and natural history—a political ecology. Moore draws the *oikeios* from a Greek term, the *oikeios topos* (favorable place), in which the Greek philosopher Theophrastus articulated a relationship between plant species and the environment. Moore expands on the symbiotic relationship between lives and

environments by situating the human-nature interface within historical time (he asks what it means to write "History as if Nature Matters"), proposing that a political ecology of (anthropocentric) history must consider nature not as a resource or receptacle but as a *matrix*. On climate change, for example, Moore (2015, 47) writes:

> Civilizations develop by internalizing extant climate realities, favorable and unfavorable. "Climate" is not a historical agent as such; it is no more a historical agent, in itself, than empires or classes abstracted from the web of life. Historical agency is irreducibly bundled in and through the *oikeios*. To lean on Marx, a species (or biospheric process) that does not have its agency outside itself does not exist. Agency, in other words, is not a property of Nature and (or) Society—not even of humanity's spectacular forms of sociality. Agency is, rather, an emergent property of definite configurations of human activity with the rest of life. And vice versa.

It follows, then, that colonial diasporas, especially those mobilized by Western empires from 1492 to the present, might paint a different picture of the emergence of modern capitalism if we understand their dispersals as simultaneously acts of environment-making. Decolonial scholars, such as historians of transatlantic slavery, Black Caribbean philosophers, and Native Pacific scholars, as well as allied fields, have long set the tone for an ecological critique of diaspora and empire. Through the ocean and the tempest, or nuclear imperialism and native abundance, and more, this scholarship provides a genealogy through which I can reroute the histories of Northern Luzon and its scattered peoples (see, for example, Fujikane 2021; Glissant 1997; Rediker 2008; Teaiwa 1994).

Thinking about the political ecology of Ilokano migration, I argue that we must embed the study of the Filipino diaspora within the globalization of vernacular ecologies at the edges of empire and its spatial orders of racial capitalism. The fundamental regime beneath the feet of Ilokano migrants is the global plantation, rooted in the transatlantic slave trade, which historian Stephanie Camp once called a geography of containment, or "a spatial impulse . . . to locate bondpeople in plantation space and to control, indeed to determine, their movements and activities" (Camp 2005, 13). Of course, I am not suggesting a similitude between the condition of the enslaved African and the indebted Ilokano. Rather,

I am pointing to the spatial logic of the plantation that, in the social and juridical order of unfreedom that critic Rinaldo Walcott calls "the time of emancipation," manifests in the criminalization of fugitivity and stubborn expressions of freedom, the entanglements between Ilokano (and Asian) racialization and Black unfreedom, and the counterconduct of itinerancy that is both legislated against by plantation societies and also destabilizes them (Walcott 2021).

In the stories that follow, I sketch what it might mean to center the vernacular and the fugitive alongside the ecological, all immanent within the conditions of Ilokano diaspora, even as the spatial logics of plantation capitalism might preclude us from seeing otherwise.

## One: *Paria*

In an essay, I had once followed the category of the "Filipino" as it emerged between Northern Luzon's agricultural landscapes and labor import regimes to Hawai'i's sugar plantations. In Filipino American memory, the waves of migrants in the early twentieth century are called the *sakadas,* a derivation of the Ilokano term *sakasakada amin* (those who work barefoot). In the historical fields of Filipino America and US empire, the US-Philippine encounter often begins in 1898, the Spanish-American War, after which the United States formally purchased its imperial rival's archipelagic colonies for US$20 million. In the decades that followed, Filipino migrants found work in the agricultural empire that propped up the American economy until the market crash of 1929.

But in that essay, I argued otherwise. What if, instead of a violent meeting of two countries, we actually center the experiences of the people who found themselves caught in the maelstrom of colonial capitalism? An Ilokano history of US-Philippine relations begins with the century-long Spanish project in Luzon to convert the island into an experimental plantation. In the wake of these land enclosures, the subsistence economies that long sustained native people in the islands' northern hinterlands were criminalized, and Ilokanos faced a choice: fight the colonial regime or flee to better pastures. Many Ilokanos fled in search of work, finding employment in tobacco plantations to the island's northeast or in other plantations further south. In the late nineteenth century, enjoying faster access to Southeast Asia by means of steamships, American and German

ethnologists remarked on the Ilokano caravans as something essential to their racial character, calling them a footloose and itinerant people. The targeted recruitment of Ilokanos by the Hawai'i Sugar Planters' Association in the 1900s and 1910s drew upon these racial archives, forming a labor regime whose afterlives shape race relations in Hawai'i today (De Leon 2019).

I often wonder, however, if I could have stretched my historical imagination further. The etymology of the *sakada* is a synecdoche for a relationship between the hardened soles of farmworkers' feet and the soil beneath them. It also belies a fugitivity: a people beheld as footloose and itinerant by colonial ethnologists, which might also suggest their spatial unruliness. And if the itinerancy of Ilokanos might be stretched further back in time, from early Spanish colonialism and the native movement between the highlands and lowlands in Northern Luzon all the way to the radical tradition of revolutionary insurrections in the region, then a people racialized as mobile peasants might also hold within their historical experiences a penchant for resisting and evading the labor regimes that seek to discipline them.

What might my reconstruction of the Filipino have yielded if, for example, I had been able to attune myself to what people on the move were doing to sustain themselves? What sorts of Ilokano bounty, stubbornly cultivated from the wretchedness of manufactured scarcity under empire, might reveal themselves at the fringes of the archivally legible? What remains to be written is an environmental history of Ilokano diaspora (and for that matter, Filipino diaspora)—the ecological improvisation of the caravans of the long nineteenth century, the fugitive plots at the margins of tobacco and sugarcane and rice fields, the illicit exchanges up and down the valleys and mountains of the region, and the richness of the highlands crops and livestock that nourished lowlands people through their dispossession.[3]

But if I may offer some speculative approaches to this work, I might follow a flavor, an aesthetic, a bitter pleasure against the oppressive sweetness of the Philippines' cash crops: *pait* (pah-eet), meaning "bitterness." Today it might mean a specific bitter ingredient of Ilokano cuisine, green goat bile, which grounds some of the region's signature soups. It also applies to *paria* (bitter melon), a common ingredient in Ilokano stews. While certain bitter vegetables, like *paria,* are sold en masse in grocery stores today, their ethnoregional uses in the Philippines and Filipino

diasporic communities point to the persistence of Ilokanos' predominant uses of these crops, even as rapid interisland trade makes the country's produce available across the archipelago. Today's *paria* in North America comes from myriad sources (including local farms that grow Asian vegetables) and appears on shelves in different regional variants (including the smaller and rougher variant from the Indian subcontinent).

In Ilokano cuisine, *paria* most frequently appears in a dish called *pinakbet,* a stew in which the bitter gourd's crunchy and contoured shape is the centerpiece, accompanied by similarly textured vegetables such as *sigarilyas* (winged beans), *tarong* (eggplant), and *utong* (string beans). The brothy base of the dish, in which the vegetables simmer, uses any regional subvariant of *bugguong,* or a fermented paste made of small fish or krill. The root word of *pinakbet* (or, when written out without its contractions, *pina-kebbet*), is *kebbet,* which means "shrunken or shriveled," describing the flesh of the *paria* and the textures of the other vegetables throughout the cooking process.

However, according to linguists Lawrence Andrew Reid and Carl Ralph Galvez Rubino, an archaic meaning of *kebbet* is "a poor harvest" or "a season of scarcity" (Reid and Rubino 2002). This alternative meaning evokes a particular point of Ilokano history, the enclosure of the commons in Luzon by the Bourbon administrators during the late eighteenth century, through which the Spanish colonial government retooled the island's economy from a galleon port to an agricultural economy reliant on cash crops like tobacco and medium-grain rice (De Leon 2023). While native subsistence agriculture before the eighteenth century may have produced a dish like *pinakbet* during harvest downtimes, the limited access to arable land may have made *pinakbet* and other such stews a major lifeline for Ilokanos. In the absence of good soil, hardier vegetables (like those above) might have gained popularity. A dish like *pinakbet* thus expresses a politics of "making do" in conditions of scarcity, an ecological and culinary tradition that crystallizes in the present as a signature dish of Ilokano cuisine.

Another dish, called *inabraw* in the northern parts of the region and *dinengdeng* in the southern dialects, might add texture to the possible histories of Ilokano fugitive ecologies. For *dinengdeng,* one cooks down *paria* and leafy greens to a higher concentration of *bugguong* than its counterpart, *pinakbet.* In the Ilocos, the green vegetables used, such as jute leaves, squash flowers, various weedy leaves and shoots, and *himbabaw,* the male

inflorescences of a native mulberry tree, are widely available in Ilokano gardens or in the natural flora of the region's forests and fields. *Dinengdeng* is served with fried fish and scooped over rice.

The use of "weeds" and scavenged greens in *dinengdeng* suggests to me that Ilokano cuisine may very well have emerged from the same enclosures as *pinakbet.* The conversion of weeds into *prized vegetables* through cooking practices turns these dishes from economic necessities to "make do" into choice ingredients that cohere into an Ilokano culinary culture. These everyday expressions of foraging and nourishment are particularly important for a people who, in the wake of the Tobacco Monopoly in Luzon, found themselves at the mercy of a capitalist economy (see chapter 8 on everyday expressions of nourishment in the city). After sustained decades of unrest in the late eighteenth century, Ilokano farmers traveled from the coast all over the region in itinerant caravans in search of work, moving east to the tobacco-rich Cagayan Valley or south into the Pangasinan wetlands and the rice paddies of Central Luzon. Thus, these culinary practices may very well have emerged in diaspora, within the increasingly economized and hostile colonial environment of Luzon itself, to be carried over in transit to a settler-colonial environment to the east, Hawai'i (De Leon 2023).

When I lived in Honolulu in 2017, I found that the bitter greens used in *pinakbet* and *dinengdeng* were frequently sold fresh in open-air markets and swap meets, while grocery stores carry the frozen varieties, if at all. In Honolulu's Maunakea Marketplace, a two-floored concrete edifice in the city's Chinatown, you can spend your hours sifting your fingers along the shelves of vegetables: string beans, gourds, leafy greens, eggplant, winged beans, bitter melons. *Himbabaw* and *marunggay* (moringa), for example, are considered nonnative plants that grow abundantly in Hawai'i and make their way to markets by means of small growers and gardeners (see chapter 1 on the introduction of "nonnative" species in the Philippine foodways). Nearly every weekend, with a dear friend and fellow Ilokano, I made my way to the Maunakea Marketplace to buy *paria* and other vegetables. Back in our shared kitchen, we made *pinakbet,* and if we had any tofu or bean sprouts, we sometimes saved a batch of *paria* to make a related Okinawan dish, *gōya champurū.*

In Los Angeles, where I lived from 2019 to 2023, I have not found any vegetable market or grocery store that sells these plants fresh; in supermarkets like Seafood City or Temple Seafood Market, they appear in

frozen bags. However, these vegetables circulate through other economies in the city, grown in home gardens and given as gifts to neighbors or sold and bartered among Filipinos in the know. During my time in LA, I frequently received trimmings of *marunggay* and other vegetables from my neighbors in Koreatown and Historic Filipinotown (see chapter 3 on the Filipino foodways in LA).

And, like clockwork, on those evenings I opened a jar of *bugguong* and cooked some *dinengdeng*.

## Two: *Balatong*

The Big Sky city of Missoula, Montana, fell under a blazing sun in the summer months of the mid-1930s. The Wilma Building, then the tallest edifice in Missoula, bustled with its modest mix of guests. Many came by way of railroad, touring the vistas of the Rocky Mountains or on their way to the Pacific Northwest. Fewer of these wayfarers arrived than, perhaps, half a decade prior; it was the middle of the Great Depression. More patrons, also arriving by way of the railroad, though not always legally, looked to settle in after months of tramping for work. Locals knew them as Filipinos, fresh from a Montana mine, a Yakima Valley farm, or a Hawai'i sugar plantation.

One of their *kababayan* (fellow countryperson) was a favorite of Mr. and Mrs. William Simons, the owners of the Wilma. Juan Mendoza, this man in his early thirties, worked the elevator and the door greeting guests from desk to room. A former tenant himself, Juan became intimately familiar with the Wilma's halls and the local high society that gathered downstairs. By 1934, unlike many of his fellow Filipinos, he led a home life that looked more like what the white folks led: after work, he drove his small car to a residential area just outside the downtown core, into the driveway of a modest house. His wife, Rosalia, would greet him with their newborn daughter in her arms. In their yard a small garden boasted two tropical treasures: hanging leafy vines with long green gourds and low bean plants that nestled the grassy ground.

Passersby may have been forgiven for overlooking the unassuming house, save for two features. First, the owners were Filipino, at a time when Filipinos could not own a house. With some laughter, Juan

> later recalled their legal sleight of hand that allowed them to purchase the property: they registered it under their American-born daughter. Second, the garden might have drawn some attention from a resident or a pedestrian looking in. Neither plant that grew in abundance was familiar to the Western Hemisphere. The gourds were *paria,* quite foreign to the average Montanan palate. The beans were *balatong,* cooked whole with seafood or meat. Neither could have grown, Juan recalled, in Western Washington, where the air was chilly and the rains moist and cool. In Missoula, the summer climate was favorable for a small harvest of these hardy plants. One might have heard the thuds of a knife cutting *paria,* or the fishy and savory aromas of the stews that followed a potful of whole *balatong.* At work, Juan might have been the Filipino lift operator, but at home and in the garden, the Mendozas were unmistakably Ilokano.[4]

I first wrote the story above in *Bundok* (De Leon 2023), my book on the racial archives of Northern Luzon, as part of a larger narrative on Ilokano migrant narratives. These men and women circulated organic knowledge among each other about how to apprehend the circuitous temporalities of American capitalism as they manifested in their everyday lives: train schedules, festivals and parties, forms of work during the off-season, to name a few. Among their peers, the Mendozas were truly exceptional: they bought a house, found time to take courses, built small businesses, and established a family in a settler landscape that considered them—at best—illegible nonsubjects.

In the study of immigration, historians (including myself) often frame displacement, no matter how circuitous the movement, as a vector: a deterministic line segment between point A (the home country) and point B (the host country). Vector logic ignores the total distance traveled along the migratory flight path, even if the migrant's experiences were more itinerant than a straightforward displacement from port city to port city, from home community to new home. In some cases, migration might be bidirectional, in the case of repatriation or deportation. In short, the vector form of immigration history points to the dominance of the nation-state as the stable objects between a migrant's path, rather than as topological spaces in their own right, with the varying degrees of unevenness in municipalities and workplaces and legal discriminations and transportation infrastructures to which migrant life finds itself beholden.[5]

But Filipino migration (as with most migrant life) is nonlinear, not just by the volition of the subject but by the nature of the labor regime itself. For example, upon disembarking from a transpacific steamship the Ilokano might find oneself not in the United States but in Canada—more specifically, on Vancouver Island—before taking a ferry south to Seattle. There, after momentarily enjoying the briny breeze of Puget Sound and the soft light against the city skyline, one might head over to a local hotel to stay until finding work as far north as Alaska's canneries or further east toward the Yakima Valley's hops fields and, in the colder months, back near the city to work in packinghouses.

This was the story of Juan Mendoza in his younger years, before he returned to the Philippines to bring his beloved Rosalia across the Pacific with him. He left his hometown in late December 1926, landing a day after New Year's in Victoria, British Columbia. As he saved up money, he found seasonal jobs—in Alaska for the short temperate summer, in the semiarid desert climates of Yakima for the harvest, and in the damp but mostly temperate Seattle winter. Mendoza's early migrant life was like other Filipino workers in his time: unless they found full-time jobs in domestic labor in any of the major cities of the American West, their transits were dictated by seasonal jobs, with some brief but extended stays in agricultural hub cities like Stockton in California's Central Valley or Pacific port cities like San Francisco and Seattle.[6]

The operative word here is *seasonal.* For example, in California's Central Valley, a veritable ethnic stronghold began to take shape in what was quickly becoming the United States' most important agricultural engine: Stockton. With the increased importance of San Francisco's port, Stockton's Filipino community emerged as a permanent settlement during the interwar years. As the historian Dawn Bohulano Mabalon described, Stockton became attractive to migrant workers because of its advantageous location within the geography of Filipino labor. For those who failed to find domestic work in metropolitan areas like San Francisco, Stockton proved to be a good landing place because of its proximity to perennial agricultural labor. Grapes, citrus, and asparagus were the crops that grew in the Central Valley, and Filipino workers found employment along every stage of these crops' lives, from planting and pruning to harvesting. For those who sought work in far-flung regions like Alaska and the Pacific Northwest, Stockton offered a place of reprieve and community in between work seasons, especially as the city's Little Manila grew into a

veritable ethnic enclave (Mabalon 2013b). The rise of this prominent site of Filipino American life was thus tied to irrigation and ecological imperialism in California, transpacific imperialism in the Philippines, and the seasonal nature of cash crops in the region.

But this is not to say that Filipino workers were merely passive migrants at the whims of climate and capital. After reuniting and moving to the United States together, the Mendozas quickly found Seattle unsuitable for their eventual settlement and instead went east, as far as Juan was familiar, all the way to Montana, which they chose on account of its drier climate. The Mendozas, as with their contemporaries, carried mental almanacs with them, and their transits were as equally guided by the infrastructures of settler mobility as by their insistence on finding a suitable place to grow vegetables. In 1982, through money provided by a National Endowment for the Humanities grant, the sociologist Dorothy Cordova traveled to Montana to visit and interview them. In her interview, Dorothy was puzzled as to why—and how—a Filipino family might have settled outside of more familiar environments like the West Coast.

> "No complaints!" Juan laughed. "I like to work and wake up early. In the morning, when the weather is good, I'm always outside, God willing, and I work in the garden. I enjoy that."
>
> "Did you grow your vegetables here?" Cordova asked a little later as the Mendozas gave her a tour of their house, with research assistants in tow.
>
> "Yeah," Rosalia said. "We were able to grow *paria, balatong.*"
>
> Juan nodded. "The weather in the summer, it's just like the weather in Wapato—"
>
> "Hot!" Dorothy interjected.
>
> "That's why you can do tropical crops," Juan concurred.
>
> "Like cantaloupe," Rosalia added.
>
> "But [in Wapato], not like here [in Missoula]. In Seattle, only a few of the tropical [crops]."[7]

The Mendozas, as Cordova's oral histories found, were quite exceptional in that they had a garden so early in the twentieth century in their own yard. Yet these gardening practices could only take place because of *property ownership*. Because of Montana's relative dryness and the career options in the hotel industry, Rosalia and Juan moved further east than the majority of their contemporaries. However, when they did eventually settle and build their careers in Montana, they did so in the years after the 1934 Tydings-McDuffie Act. As such, according to federal law, they were no longer US Nationals but instead were considered aliens, barred from owning land. In 1935, Juan's boss at the local hotel, Mrs. Simons, gave them a basement apartment to live in. In 1938 their daughter, Rosalie, was born in the local hospital and raised in that basement. Shortly after, under Rosalie's name, as she was an American citizen by birth, with Mrs. Simons listed as the legal guardian, the Mendozas finagled their way to homeownership and bought their house for US$720.

I found the story of the Mendozas in the National Pinoy Archives of the Filipino American National Historical Society, an organically compiled community archive in the Central District of Seattle. They are just a sliver of the hundreds of oral histories in the collections, many of which are still kept in untranscribed cassette tapes; the breadth of Cordova's work is a rich trove of testimonies of Filipino migrant experience in the early twentieth century. While they have been studied by many scholars of Filipino American history, I note the potential for others to take up an invitation to explore them further as an archive for food and environmental scholarship.

At the individual level, I cannot help but celebrate the ways that the Mendozas wiggled their way past racist laws in the volatile years between the Tydings-McDuffie Act and the onset of America's war with Japan. And yet the *oikeios* through which they navigated the climate and landscape of the Pacific Northwest, and their eventual settlement and homeownership in Montana, is an example of a settler-political ecology through which they could plant a garden and feed themselves only vis-à-vis the negotiation of settler law. Through the visible production of a heterosexual household, the Mendozas opened up a space for themselves through which they might be regarded as respectable in the eyes of local business owners, Missoula's authorities, and (eventually) the descendants of their early twentieth-century contemporaries (Shah 2012).

Nonetheless, it might be worth asking and speculating: What does a history of Filipino migration look like if we center the *seasons* of seasonal labor? What can a climatological perspective on immigration history do for our reinterpretations of migrant labor, and what can the nexus of land and atmosphere teach us about the nature of the itinerancies of colonial workers in the myriad geographies of a settler colony?

## Coda: Diaspora as Ecology

I wanted to focus on the transits of Filipinos along multiple threads—as migrant farmworkers, as the landed middle class, as mixed-race families—and piece together their myriad relationships with the natural environment, inside and outside the labor regimes of the colonial plantation. The plantation, nonetheless, still haunts these stories, a political unconscious that structures the very existence of their transpacific lives. But gardening and foraging, unlike the throes of Hawai'i cane fields and the rows of grapes along the Central Valley of California, suggest the possibility of fugitive ecologies, imaginative and creative forms of life-making along the fringes of Spanish and American imperial agriculture.

What can we glean from these two scenes of Ilokano diasporic life? The first story followed a genealogy of *pait* (bitterness) through *paria* (bitter melon) and its uses in Ilokano recipes such as *pinakbet,* a stew of foraged vegetables cooked in *bugguong.* In the etymology of *pinakbet,* the most well-known meaning is "shriveled," describing the wilting process of the vegetables and the choice of flora whose textures fold into themselves. The second lesser-known root of *pinakbet* (*kebbet*) is "a season of scarcity." By placing *paria* and other *pinakbet* vegetables in the history of Ilokano displacement across the archipelago since the eighteenth-century introduction of monocropping, I meditated on how *paria* sheds light on the diaspora's fugitive ecologies, in which migrant families foraged and cultivated cheap produce at the fringes of plantation capitalism in the Philippines.

In the second story, I explored the worlds of an Ilokano family making a home in Montana during the Great Depression. Originally, the Mendozas settled in Seattle but found the dampness of the climate unsuitable for growing the vegetables familiar to them. Hopping on a train, they traveled eastward to the mining city of Missoula and found employment

in the local hotels. Aspiring to own property but barred by racist laws in the United States, they purchased a small house under the name of their American-born daughter. Quickly, they began to grow an abundant garden of *balatong* and other greens that would make them a self-sustaining Ilokano family in one of the unlikeliest of places. Here, I think through migrant homemaking (diasporic *oikeios*) as a settler ecology, made available to the Mendozas only through property ownership and navigating the gray zones of American settler-colonial law.

Through braided stories between Ilokano diasporas and particular foodstuffs at the heart of Northern Luzon's lifeways, I speculated on what becomes of Filipino American studies when told through the lens of the diaspora-environment interface. Does the Filipino, the American, or the Filipino American, for that matter, fall away when our analytical fingers dig into the dirt? Brownness offers one possible, albeit limited, articulation of a racio-ecological subjectivity through which to articulate Ilokano diaspora, if the latter be situated within what José Esteban Muñoz called the "brown commons," which "is not about the production of the individual but instead about a movement, a flow, and an impulse to move beyond the singular and individualized subjectivities. It is about *the swerve of matter, organic and otherwise, the moment of contact, the encounter and all that it can generate.* Brownness is about contact and is nothing like continuousness. Brownness is a being with, being alongside" (2020, 2; emphasis added).

But the nationalizing logic of Asian American studies tends toward the uncritical chromaticism of racial formation—that is, a current liberal "movement" called "Brown Asian Americans," or older hagiographies of the yellowness of "Yellow Peril"—at the expense of the fleshy and gritty aspects of brown world-making (see Nadal 2019). As such, I did not offer a nonnationalized (or nonethnicized) framework, not yet, but instead chose to move within and against the grain of these ethnonational demarcations. It behooves the historian to ignore the sociolegal dimensions of Filipino alterity in the United States when so much of the political life of migrants actively navigated their changing status from "US Nationals" to "aliens" to "immigrants" to "Filipino Americans."

In this contribution, I have set out to suggest that diaspora is always already ecological, located in the material life of what constituted Ilokano displacement from Northern Luzon across the Pacific in the first place. But, to paraphrase Jason W. Moore (2015), diasporic subjects are

also *environment-making,* which includes their ecological role as migrant workers. This is not only a causal, one-directional argument that environments make food (as my fellow authors note) or, conversely and dialectically, that food makes environments (as Collins highlights in chapter 2). Rather, I am suggesting that food and environment, as well as the subjects that mediate and are mediated by them, exist within a more-than-human *milieu* in which all coconstitute each other through the vernacular practices of everyday life. In the fugitive ecologies of the garden and the shoreline, in the everyday economies of Philippine crops teeming from Chinatown crates, even as both produce and its ethnic consumers are embroiled within modes of colonial-capitalist exchange, we might find other relations and practices through which we might imagine the histories of Filipino diaspora.

## Notes

1. The familiar historiographical contours have been relatively uniform since the early social histories of Asian American immigration (see, for example, Chan 1991).

2. I am alluding here to the way that literary scholar Juliana Hu Pegues (2019) conceptualizes Asianness in Alaska as a "people out of place" and Alaska Natives as a "people out of time." Filipinos "out of place" speaks to the racial geographies of industrialized agriculture in the United States, as evidenced by their criminalization in urban sites of recreation and leisure. For more on Filipino leisure, see España-Maram (2006) and San Pablo Burns (2012). On racial anxieties around reproduction, see Baldoz (2011); Shah (2023); and Winkelmann (2023).

3. Some blueprints toward this history might include Doeppers (2016) and McKenna (2017).

4. Cassette PNW82-FIL-032DC, National Pinoy Archives, Filipino American National Historical Society. Reproduced from De Leon (2023).

5. For some macrological dimensions behind this cursory reading of immigration history, see Donato and Gabaccia (2015).

6. Rosalie and Juan Mendoza, interview, accession number PNW82-FIL-032DC, May 24, 1982, Filipino American National Historical Society.

7. Rosalie and Juan Mendoza, interview, accession number PNW82-FIL-032DC, May 24, 1982, Filipino American National Historical Society.

# *MERIENDA*

## Food That Was Never for Us: Commodities and Their Environmental Harms



# 4 | Dairying Dependence

## *Industrialization and Ecological Change during the Postwar Philippine Republic*

Nicolo Paolo P. Ludovice

Every Filipino who has savored the taste of *halo-halo* (mixed shaved ice) knows the important role of evaporated milk, or simply, *evaporada* (figure 4.1). Apart from its taste, it binds all the bits and pieces of this beloved dessert together. Once mixed with the sweetened beans, *kaong* (sugar palm), *nata de coco* (coconut gel), sweetened bananas and sweet potatoes, *ube halaya* (purple yam jam), leche flan (milk custard), ice, and sugar, the *evaporada* transforms in color and integrates with the rest of the ingredients for a more "drinkable" *halo-halo.* As suggested in the Liberty Evaporated Filled Milk advertisement, the *evaporada* even extends its use to baking and cooking. Other all-time favorite Philippine dishes, both hot and cold, are made possible as well, whether as *champorado* (chocolate rice pudding), *sopas* (milk-based soup), *maja blanca* (corn and milk blancmange), or even adobo (marinated meat).

Evaporated milk is a type of concentrated milk that entails the removal of water from full-cream or skim milk through evaporation, with or without the addition of sugar. Typically, unsweetened concentrated milk is known as evaporated milk (or unsweetened evaporated milk), while the sweetened type is called condensed milk (or sometimes sweetened evaporated milk). Both undergo the process of heat sterilization to stop bacterial growth and render the long shelf life of evaporated milk (Sharma, Patel, and Patel 2016, 311). Its sterilized nature and hygienic packaging gained prominence as an infant food to combat infant mortality, dysentery, and beriberi during the American colonial administration in the early twentieth century (Ludovice 2021a). Making a strong impression on public




FIGURE 4.1. Liberty Evaporated Filled Milk advertisement, 1958. *Source: Philippines Free Press*, June 14, 1958, 13.

health officials, advocates, physicians, and mothers, evaporated milk turned into a staple in every Philippine kitchen.

The postwar period marked an era of dairy dependence for the Philippines, which consisted of dairy industrialization and importation. Dairy industrialization, which is the production, processing, or manufacturing of dairy for mass consumption, effectively shifted a family farm–based system to a more capitalist-industrial model. By using technologies and culinary infrastructures, dairy industrialization has promoted affordable, portable, and convenient milk (Jackson-Smith and Buttel 1998; Pilcher 2016). Alongside industrialization, dairy importation maintained its momentum to satisfy local demand. From 1936 to 1940, the Philippines imported an annual average of US$2.18 million of evaporated milk, the majority from the Netherlands (54 percent) and the United States (44 percent; US House of Representatives 1946, 2:292). By 1953 the Philippines was importing evaporated milk with a value of US$12.9 million (US Department of Commerce 1955, 146).

The ubiquity of evaporated milk in Philippine households and food culture begs the question of how dairy systems and practices have evolved to promote the pervasiveness of dairy dependence. According to the 2018 Family Income and Expenditure Survey, Filipino households currently spend 3 percent of their food budget on milk, or PHP (2018) 177.7 billion (PSA 2018). Despite the growth in local milk production and demand over the decades, most of the milk used to produce evaporated milk is still dependent on imported milk. Journalist Teodoro Valencia described this lack of a dairy industry as "anomalous" given the availability of grazing fields in the country (quoted in Samala 1961b, 39). This implied that the country's dairy dependence is intimately tied to global dairy practices and systems, exhibiting overlapping dairying ecologies.

Examining the history of evaporated milk signified the participation of the Philippines in modern science and milk hygiene (Doeppers 2016). Milk historians noted how the local production of milk often began with smallholders and in backyards and was often contaminated or adulterated, which led to a whole host of milkborne diseases (Adell and Pujol 2017; Kurlansky 2018; Valenze 2011). The invention of vacuum-concentrated milk in 1856 by Gail Borden introduced the possibility of producing concentrated milk in a semifluid state. The addition of sugar served as a preservative for the sweetened evaporated milk. Borden's method was later improved in 1884 by John B. Meyenberg, who produced heat-sterilized

evaporated milk under reduced pressure, which did not depend on sugar to preserve it. However, the prolonged storage of evaporated milk resulted in fat separation. This problem was resolved with the homogenization of concentrated milk in 1909, which reduced the fat globules and dispersed them uniformly throughout the milk. In this manner the evaporated milk became a weapon against antiquated methods and a key to the construction of nutrition and health in modern Asia (Leung and Caldwell 2019).

The consumption of evaporated milk complicates the postcolonial moment. In the postindependence experience of many countries, postcolonialism finds its expression in self-determination over resources. But this does not signify an immediate break from colonial structures, systems, and practices. Many former colonies like the Philippines find themselves continuing colonial relations because of disparities in economic development, technologies, and investment. Externally, political relations of the Philippines with the United States continued to flourish. Internally, expatriates maintained control over key domestic industries, including the dairy industry (Schirmer and Shalom 1987). This "neocolonial" condition blurs the lines between political sovereignty and economic means by also including the environment (Young [2001] 2016). Similarly, environments find their neocolonial continuities through the legacies of plantations, like the dairy farms and pineapple plantations discussed in chapter 5 of this volume. As with many industries from the Global South, like sugar, coffee, and wheat, milk as a global commodity is subject to this "dependency": it subsumes countries within the forces of a global economic order through promises of economic gain, modern health, scientific participation, and social development while taking control over localities and their environments. Hence, dairy dependency is an issue of political, economic, and environmental agency.

More importantly, an operation this global warrants attention to ecological changes. Dairy industrialization emerged with the development of synthetic chemicals and dairying practices to combat hunger in the decades after 1945. While it brought immense prosperity to developed countries, it yielded consequences that those in the developing countries would also feel. The use of food provisioning for dairy cows, supplemental inputs (i.e., feed, water resources, and pharmaceuticals) to increase milk production, and antibiotics against diseases are among the many impacts on ecosystem health. The complex and uneven effects of dairy industrialization could be seen further in the negative impacts on

human-environment systems, including pasturage runoff, soil erosion, and water pollution. The Food and Agriculture Organization (FAO 2019) estimates that between 2005 and 2015, greenhouse gas emissions from the global dairy sector increased by 11 percent, alongside a global milk yield increase of 15 percent. In a more recent study, Groot and van't Hooft (2016) outline the impact of dairying on the environment in the Netherlands, India, Ethiopia, and Uganda, which includes antibiotic leakage, loss of biodiversity, enhanced use of pesticides, monocultures of highly productive grasses, and loss of local cattle breeds. While it can be argued that only dairying countries are most affected by these ecological changes, consumers in nondairying developing countries are part of the assemblage because they contribute to the continued expansion and intensification of dairy practices.

Thus, the Philippines' postwar dairy dependence is marked by its willingness to participate in internationally accepted practices of milk production by maintaining its neocolonial arrangement with dairy-producing countries, attempting to establish self-sufficiency, and accepting the intended and unintended consequences it brings to the environment. This was achieved by political accommodation, capitalist expansion, technological advancement, and intensified environmental use. As Philip McMichael (2007) puts it, "The conversion of the natural world to service a livestock-based food system, stresses both environments and bodies, and in the context of private solutions to public health problems that privilege care over prevention, promotes a scientific and institutional complex geared to ameliorating, and thereby in practice deepening, the effect" (182).

This chapter examines the development of evaporated filled milk and its subsequent impact on the ecologies of the postwar Philippine republic (1946–1965). While milk importation is discussed, it focuses on dairy industrialization by tracing the political ecologies of evaporated milk within the postcolonial backdrop of a new Philippine republic. By using government and scientific historical documents, I argue that the development of evaporated milk intensified an imported dairy dependence that could not be avoided despite attempts at local pushback. It also led to the coevolution of ecological changes to the management of nonhuman animals, pastures, and plants, whose concerns traverse national, domestic, and environmental levels. This chapter builds on the issue of milk as an ecological question with multiscalar costs often unaccounted for and disregarded.

## Dairying Dependence

Prior to the arrival of the Americans in 1898, the market for fresh milk as a component of the everyday diet was almost nonexistent in the Philippines. Even with the introduction of the first canned milk in the colony in the 1870s, milk advertisements targeted only children and older adults. Attempts to stabilize the supply of fresh milk through dairy cows were made significant by American colonial officials touting animal products like milk and meat as essential sources of protein key to the maintenance of healthy, civilized bodies. Elsewhere, I have pointed out that milk from native animals (i.e., carabaos and goats) was perceived to be inadequate both to the diet and to the American palate (Ludovice 2021a). To maintain supply, colonial officials of the Bureau of Agriculture promoted the systematic importation of dairy cows from Australia, New Zealand, and the United States.

Canned milk assisted in satiating this demand. However, importation and production costs resulted in canned milk being exclusive and distributed only through select commissaries and more affluent districts. The US Congress modified the tariffs that prompted the "free-trade" arrangement between the United States and the Philippines. It specified that all American dairy products were exempt from any duty in the Philippines but not necessarily the other way around. The tariff changes led to lower importation costs, increased quantities, and more distributors, thus improving the accessibility of canned milk in the urban areas. By the 1930s, Filipino households had grown accustomed to unsweetened and sweetened evaporated milk as part of their everyday diet and cooking.

The destruction caused by the Second World War on food networks reinforced the dairy dependence from the earlier period. In specifying the terms of the war damage payments through the Philippine Rehabilitation Program, the US Congress included conditions that forced the country into a corner. Packaged by American legislators as "beneficial" to the reconstruction of the war-torn economy, the US-Philippine Free Trade Agreement provided eight years of free trade between the two countries (US Statutes at Large 1946). But it was not a necessarily equal free trade: absolute quotas were imposed on Philippine goods entering the United States but not on American goods entering the Philippines. Regarding canned milk, the United States received preferential duties in the Philippine market, ranging from 10 to 20 percent, compared to other countries such as Australia, the

Netherlands, and Switzerland, with duties of up to 30 percent. The other important factor was the passage of the Agricultural Trade Development and Assistance Act, also known as Public Law 480, by the US Congress in 1954. The law entailed the disposal of close to US$35 billion worth of farm surplus commodities, including wheat, flour, and skim dry milk worldwide, especially to "friendly nations." These agricultural products were sold at a very inexpensive price and in local currency, which allowed dairy products to directly compete with the local milk supply (Helscher 1978).

Along with the many US tariff laws, the free-trade arrangement has also bolstered the landscape of import-export industries since the prewar years. From 1936 to 1940, dairy products were heavily imported, with an aggregate value of PHP 8.5 million, 34 percent of which came from the United States. With the new trade agreement that highlighted preferential trade with the United States, PHP 57.06 million worth of dairy products entered the Philippines in 1958, 70.5 percent of which came from the United States (Zafra 1960). On the export side, the coconut industry remained the country's top export, with nearly a million hectares devoted to the production of coconuts. From 698,000 metric tons of coconut products in 1949, coconut production doubled in a span of a decade to 1.3 million metric tons in 1958 (Zafra 1960). In accordance with the US Revenue Act of 1934, the two-cent preferential duty on Philippine coconut oil allowed this product to be competitive and serve as the primary, if not the only, source of coconut products for the United States. Under the General Agreement on Tariffs and Trade (GATT) in 1947, the duty for coconut oil was further reduced to one cent per pound (Zafra 1960).

Moreover, the prewar to postwar prices of evaporated milk in the local market doubled, from US$0.08 to US$0.23, yielding US$2.7 million worth of imported canned milk (or 60 percent of the country's total imports; US High Commissioner 1947, 120). At the same time, it also made it particularly difficult for the country to establish its own dairy industry, so much so that the import dependence on milk remained to be a viable solution. Representatives of the US Congress remarked that the Philippines was "an important market of the United States for dairy products, particularly canned milk, the Philippines having been the best buyer of American canned evaporated milk in the world" (US House of Representatives 1946, 2:291).

The trade arrangement on milk did not sit well, especially with economists. For a new country that had just achieved its political independence

in 1946, the imported milk dependence meant dollar reserves going outside the country that could have been used to stimulate the domestic economy. To avoid the continuous outflow of US dollars to import goods, the newly established Central Bank of the Philippines pushed for a monetary regulation through a protectionist policy known as imports control, which limited imported goods, especially those considered unnecessary or luxury items, except for raw materials used for manufacturing. Items classified as "necessary," such as milk and dairy machines, did not require import licenses and were subject to the preferred trade agreement.

In theory, this policy was much needed because it prioritized local manufacturing. However, in practice this was more challenging. Substantial investments in the agriculture sector and infrastructure were required to supply manufacturing and meet the demands of the milk market. Salvador Araneta (1961, 10–12) expressed that a protectionist policy would be ineffective without intensified agricultural development, which involved promoting land and processing plants with the aid of agricultural technologies such as mechanization and chemical resources. He suggested that agricultural intensification with import controls on raw materials would result in enough input for the manufacturing sector. Hence, a domestic dairy industry was much desired.

## Developing Recombined Evaporated Filled Milk

The development of recombined evaporated filled milk in the 1950s posed a long-term solution to work around the foreign trade arrangement and protectionist policies. Three strategies were employed by the dairy companies. First, they adopted the process of *milk recombination.* This refers to adding water and milk fat to skim milk powder to achieve the desired consistency and a specified water-to-solids ratio. While locally produced fresh milk was prioritized, imported milk for processing came in nonfat dry-milk solids to cut costs. The removal of cream and its conversion into a powdered form effectively removed the milk's water content, commonly the source of spoilage and bacterial growth.

The second strategy made use of *filled milk* to reduce manufacturing costs. This type of milk used fats like vegetable, corn, or coconut oil as a substitute for the fat content of milk. Developed in the United States in the 1930s, filled milk was used to mimic whole milk's full-bodied taste, which

is usually accomplished with cream. In this sense the cream is what causes milk to be expensive. In 1958 the General Milk Company (GMC) and Consolidated (Philippines) Inc. started to employ coconut oil to produce canned evaporated filled milks. The Philippine Refining Company (Unilever) supplied coconut oil, which was sourced from the coconut plantations in Quezon, Laguna, and Cebu Provinces, to these two companies (US House of Representatives 1959, 49). Although buttermilk was still seen as far superior based on nutrition experiments with rats (Samala 1955, 74–75), the choice of coconut oil fared well with normal fresh milk as far as taste and quality were concerned. It also stimulated the local economy and aligned with the desire of the government to conserve the outflow of currency (US House of Representatives 1959, 2).

The last method involved the entry of foreign partnerships to establish local subsidiaries. Unlike the prewar dairy farms, the postwar dairy farms relied on many dairy cows, milk extraction equipment, a pasteurization plant, canning technologies, and labor for their fresh and canned milk production, requiring a capital-intensive investment. Since there were limitations to the foreign ownership of companies in the country, multinational dairy corporations had set up Filipino subsidiaries, such as the GMC, the first milk manufacturing company established in 1957, as representatives. Its parent company, the GMC (United States), had the Carnation Milk Company as its majority shareholder (65 percent), along with another huge milk producer in the United States, the Pet Milk Company (35 percent). With the restriction on American-owned firms in the Philippines, the GMC (United States) used a wholly owned subsidiary holding company, the General Dairy Corporation, located in Panama, to facilitate its entry into the Philippine market. By October 31, 1956, the GMC (United States) was granted a license to do business in the Philippines. It eventually proceeded to install the necessary machinery and equipment for its milk processing and cannery. The construction and installation of the US$2 million plant was finished in August 1957 and was known as the Liberty Milk Plant, named after its most famous canned evaporated milk. It even boasted an evaporator, the first of its kind in the country (*American Chamber of Commerce Journal* 1957, 588).

The new postwar milk-processing companies featured a manufacturing system that could cater to a wider geographic scale. The GMC plant produced an output of 2,400 cases of milk for each eight-hour shift, and its high-speed canning factory had an output rate of 22,000 cans per hour

(Joint Business Ventures 1958, 143). To ensure the consistency and safety of milk products, laboratories equipped for milk analysis, regulation, and quality control were built into the factories. Other milk-processing plants followed suit, including Consolidated (Philippines) Inc. (manufacturers of Darigold Filled Milk) and Milk Industries Inc. (manufacturers of evaporated and condensed Dutch Baby Milk). By the end of 1958, the Philippines was already producing 1.66 million cases (48 cans per case) of canned evaporated milk (US House of Representatives 1959, 49).

The output of the milk-processing plants left the impression that dairy importation was no longer needed. Yet this was not true. In 1964 the Department of Health reported that the national milk requirement was 458.7 million kilograms, or 200 grams a day per person. However, the annual milk output of the country was around 36 million kilograms, or 7 percent of the national requirement. These primarily came from small dairy farms outside the metropolis, such as Grassland Farms Inc., Magnolia Dairy Products, Hacarin Dairy Farm Inc., Pacosta Dairy Products, and Dairy Queen Products, which all supplied the milk-processing plants daily. Moreover, the presence of milk-producing animals such as carabaos, cows, and goats did not automatically translate into milk per se. Even with 3.3 million carabaos, 1.2 million cattle, and 484,000 goats in 1964, the differences in fat and protein content made some animals unsuitable for milk processing (Department of Commerce and Industry 1966, 70). Carabaos were also much preferred as draft animals than as sources of milk, while the taste of goats' milk was not comparable in terms of texture and consistency to that of cows'. Contrary to the aims of the Central Bank of the Philippines to reduce import dependence, milk-processing companies needed to import milk for local processing and adopt innovations in dairy science to lower the cost of evaporated milk.

The expansion of dairying and milk processing was prompted by a period of decontrol, which started at the beginning of 1960 and aimed to remove all restrictions on foreign exchange transactions. The issuance of Circular 133 by the Central Bank on January 21, 1962, made it possible to replace the system of a fixed currency exchange rate with a floating rate system. It implied that the Philippines could import canned milk and powdered milk based on current market prices, thus encouraging competition in the local dairying industry and attracting new foreign milk companies. In 1960, Nestle S.A. entered into an agreement with the San Miguel Corporation to form Nutritional Products Inc. (Nutripro) to

manufacture recombined condensed filled milk. It was followed by the establishment of a Philippine branch of the Carnation Company of America to manufacture recombined evaporated milk. It partnered with GMC as the official manufacturer for both Liberty Evaporated Filled Milk and Carnation Evaporated Filled Milk (Ayal 1969, 4:iii–9).

The growth and expansion of evaporated filled milk from the 1950s onward provided a much-needed economic stimulus. Samala (1962, 9) assessed that the industry managed to employ twelve hundred Filipinos and saved the country US$14.45 million in foreign exchange annually. In addition, milk-processing plants paid the government PHP 3 million in the form of direct taxes. Local refined coconut oil companies generated eight million pounds, worth about PHP 4 million. The country's potential to expand its milk processing even alarmed the United States, as shipments of US powdered milk continued to decline. While the majority of the milk for processing was still import dependent, milk-processing companies made evaporated filled milk affordable and accessible, turning it into a staple of every Filipino household.

## Ecological Changes of Milk

In describing the need for a dairy industry, journalist Teodoro Valencia wrote: "We are the only country in the world today without a dairy industry. This is more glaringly anomalous when we realize that we have an inexhaustible supply of grazing lands available. In many countries of the world where they have to plant grass in order to support a dairy industry, they do it. . . . The public should grab at the idea and implement the dream of a Philippine dairy industry" (quoted in Samala 1961b, 39). This denotes that economic development, especially for a young country, would be possible with evaporated filled milk only when extended to exploit the seemingly "inexhaustible" environmental resources. It entailed systematically moving dairy animals, experimenting with new animal and grass breeds, expanding plantations, and relying on synthetic chemicals to induce greater milk yields. Yet many of these changes have coevolved long-term impacts that could potentially harm human, animal, and environmental health.

Animals and plants were moved to accomplish the task of stocking and feeding. The purchase and shipping of dairy animals entailed a high

level of investment. In a study conducted by Samala (1961a, 205) on the development of a dairy sector in the Philippines, a milk-processing plant seeking to maximize output need at least seven hundred thousand pounds of fresh milk daily to produce eight thousand cases of evaporated filled milk. In order to produce this figure, local dairy farms and milk-processing plants must breed and invest in around sixty-five thousand to eighty thousand dairy cows.

But the physical movement of animals was not sufficient. Selecting the breed of the dairy cow mattered in the production of milk. In the early years of the American colonial regime, prized dairy cow breeds, including Jersey, Friesian, and Holstein, were directly imported from Australia and the United States. The government experimental stations across the country learned that while producing higher quantities of milk, these breeds could not survive for long in the tropical climate (Kretzer 1934). Their crossbreeding experiments in the 1930s discovered that the Red Sindhi cows native to India had a higher milk yield and, at the same time, acclimated better to the Philippine heat. They also yielded cattle with distinct Indian-breed features such as a heavy neck, shoulders, and hindquarters; a well-developed hump; and not too pendulous testicles, which indicated higher virility. However, the interbreeding of cattle must be controlled. Bolong (1967, 232) observed that if the foreign cow blood reverted to less than 50 percent, the milking capacity dropped even to the point of being unable to produce milk for calves. He recommended achieving a higher milk capacity by limiting the cross-bred animal's foreign blood to between 50 and 75 percent. These movements signified the importance of *Indigenization* and *transculturation* processes with respect to environment and culture, which are also discussed in chapter 1 of this volume.

Another significant transformation was in the form of agricultural experiments in the 1950s, which led to a better appreciation of grass and its role in the ecology. Tall grasses like cogon (*Imperata cylindrica*), which dominated the so-called uncultivated lands, needed to be cleared out, as they were considered the leading grass "pest." While the slash-and-burn strategy was traditionally employed, it also ran the risk of destroying plant varieties endemic to the area. Instead, new grass varieties were introduced to combat the growth of cogon grass. Among them were legumes like the *siratro* (*Phaseolus atropurpureus*), climbing soybean (*Glycine javanica*), silverleaf desmodium (*Desmodium uncinatum*), *singkamas* (*Pachyrrhizus erosus*), and *batao/bataw* (*Dolichos lablab*) and grass varieties such as

Alabang X (*Dichanthium aristatum*), elephant grass (*Pennisetum purpureum*), and Santa Barbara (*Dichanthium* sp.). Of course, new grass breeds implied new ways of pasture management. Bolong's study noted that while calves fed on *ipil-ipil* (*Leucaena leucocephala*) grew significantly healthier and bigger than cattle fed on grass alone, it also aided in uprooting the cogon's rhizomatic network (1967, 233).

Such experiments not only led to improved pastures and forage but also demonstrated the Philippines' ability to command its own sovereignty. For Farinas, the importance of grass and forage improvement was deemed to be a mark of newly independent nations: "Grass and livestock should have been our utmost concern at least since our independence in 1946 because then we were already masters of our own destinies and no external power or colonizer could dictate we should continue to produce the plant products needed badly by her or to refrain from producing meat or milk which are competitive with their exports into the country" (1966, 227–228).

Finally, increasing milk production implied expanding the acreage of pastures, dairy farms, and plantations. Normally, this translated into encroachment on unoccupied areas (e.g., primary or secondary forests) or occupied territories (e.g., Indigenous highland settlements). Coconut trees, for instance, depend on alluvial, loamy, volcanic or sandy, friable, or fertile soil of at least sixty centimeters deep. This type of soil is usually found inland and mostly in forested lands. Southern Luzon, Bicol Region, Eastern Visayas, Western Visayas, and most regions in Mindanao are considered most conducive regions for growing coconuts. More than 50 percent of its farmlands were dedicated to coconut plantations in Southern Luzon and Bicol Region alone. The increased demand for evaporated filled milk signified the expansion of coconut plantations by clearing out forests. Among the most drastic expansions were in Southern Tagalog (from 66,100 hectares in 1902 to 268,800 hectares in 1960), Bicol Region (from 21,100 to 279,500 hectares) and South and Western Mindanao (from 3,100 to 282,500 hectares) (Nyberg 1968, 9).

While expansion activities opened possibilities for economic growth and addressed the population's dairy requirements, they also denoted engagement with existing ecologies, especially in the wild. Clearing forest lands for coconut plantations attracted possible insect and disease infestations. Insects like the uang (rhinoceros beetle, *Oryctes rhinoceros*) and *dalipos* (red beetle, *Rhynochophorus ferrugineus*) were among the

most serious pests that attacked the fruit itself. An entomologist from the Bureau of Agriculture under the American colonial administration estimated the damage caused by the beetles at around US$3 million annually (Wester 1918, 48). The trunk of the coconut tree is also prone to insect attacks. The serricorn beetle (*Melitomma insulare*) is insidious because it penetrates the stem at the base among the roots. Upon entry, the beetle lays its larvae, which secrete a caustic liquid. Worse, as soon as the tree becomes infected, nothing can be done but to remove the infected part or the entire tree altogether to avoid infecting others (Snodgrass 1928, 122).

In this connection, controlling changes in the ecologies necessitated treating some insects, animals, and plants as pests. While forms of controlling pests had a long history, it was in the 1950s, with the growth of synthetic chemicals, that this practice became more widespread. In 1928 a viroid disease known as cadang-cadang was first detected on San Miguel Island, off the coast of Luzon. It had spread so extensively that by 1960 the disease had already reached Quezon Province. By the time the cause of the disease was identified, over thirty million coconut palms had already died. In the study, Maramorosch (1961) concluded that human activities contributed to the origin of viroids in cultivated plants, but they might have existed earlier in a latent state in natural hosts yet known. To avoid the spread of disease, coconut plantations heavily utilized pesticides, insecticides, and weedicides such as arsenical sprays to destroy biting insects; mixtures of copper sulfate and lime to direct toward fungi; and dissolved soap in kerosene, caustic soda, and quick lime to get rid of fruit and tree insects (Wester 1918, 55–57).

Even with the diseases endemic to the environment, the need to control the health of animals entailed a dependency on antivirals and antibiotics. Older livestock diseases such as rinderpest, anthrax, and bovine tuberculosis remained as fatal threats to dairy cows. However, common forms of pest infestations, such as ticks, and diseases, such as piroplasmosis (caused by the parasite *Babesia occultans*) and mastitis (inflammation of a cow's mammary gland), required better antibiotics and animal treatment facilities (Bolong 1967, 233). Some of the lesser-seen but destructive parasites were also spread through cattle's interaction with the environment. For instance, fascioliasis (liver rot) enters the bloodstream of dairy cows via the ingestion of aquatic vegetation and targets the liver, destroying it in portions or as a whole. Such infection results in the retarded growth of cows, affecting milk production and leading to curtailed

breeding activity, emaciation, and death. In the years after the war, a study at the Swiss Dairy Farm in Caloocan discovered the endemicity of fascioliasis among dairy cows (Refuerzo 1947).

While it is difficult to make heads and tails of the ecology of disease emergence, economic and social patterns can still be discerned together with biological factors. Of course, this would reduce relations to an agent-host model of disease ecology (Mayer 2000). It might, however, also be beneficial to question the perceived position of the human body relative to the environment. Much like Valencia's earlier comment at the beginning of this section, humans imagine themselves as separate from these ecologies, believing an "inexhaustible" environment is at their disposal. The environmental historian Linda Nash proffers the need to resituate human bodies within the ecologies in which they try to change: "Subjects blur into objects and historical agency becomes distributed among a multitude of entities: humans, insects, microbes, trees, groundwater, and chemicals" (2006, 8). This denotes that while the Filipinos' concern for milk is central, they cannot expect to control the harmful consequences to human, animal, and environmental health without curbing their own interest and consumption. In a sense the manifestation of infections and infestation highlights not just the physical interaction of species in multiple ecologies but also the ecological tensions produced by capitalist modernization, political sovereignty, local knowledge, and individual consumer preference.

The adoption and promotion of evaporated filled milk in the postwar Philippines illustrate how dairy dependence pervaded the economy and environment. The terms that defined the political and economic ties with the United States forced the newly independent country to yield to its former master's global ambitions and objectives. Despite the neocolonial arrangement with dairy-producing countries, the Philippine government and dairy manufacturers attempted to push back by developing recombined evaporated filled milk. The use of coconut oil was a clear attempt to support the local economy and to resist the almost uncontrollable flow of imported milk.

Evaporated filled milk also induced ecological changes in the environment that went unnoticed. The dependence on new dairy practices persisted as well: introducing new animal and plant species, animal feeds, antibiotics, and pesticides effectively turned the farms into centers of

production, which constantly retooled the landscape to produce greater and better quantities of milk effectively and efficiently. Milk companies produced evaporated milk according to the international standards of milk sanitation and production. However, the growth of diseases and pests coevolved as well, as seen in dairy farms worldwide. Hence, dairy dependence implicates the relations not only between governments but also between Filipinos and their environment, both transforming each other in the process.

In this manner, evaporated filled milk in the Philippines marked one form of the industrialization of ecological changes on the archipelago. As the global dairy sector increases its milk production, contemporary societies must begin to ask whether they are ready to face the environmental, nutritional, and even economic hazards dairy systems employ. An ecological question of dairying, then, is no longer whether we know what goes in the milk but whether milk is worth drinking given its costs.

# 5 | Pineapple's Primacy

## *Hunger and Theft on the Del Monte Plantation of Bukidnon*

Inigo Acosta

When I think of Bukidnon I think of driving through Del Monte pineapple fields with my grandfather. Dust from the red upturned soil clouds the air as we pummel through the bumpy plantation roads. On the horizon lies the majestic Kitanglad mountain range, home to the second-highest peak in the country, Mount Dulang-Dulang. The presence of both mountains and plantations is indicative of Bukidnon's agrarian and sociocultural diversity. On one hand, the Kitanglad mountain range is a medley of floral and faunal biodiversity as it is home to one of the last remaining rain forests in the Philippines and six hundred rare and endemic species. It is also a recognized ancestral domain of three of Bukidnon's seven Indigenous tribes and carries important cultural significance as a spiritual home of the tribe's ancestors (Tordecilla 2010).[1] On the other hand, the Del Monte plantation is a zone of ecological homogeneity and uniformity. From the window of the vehicle, neat lines of manicured rows of the long, sharp green leaves of the pineapple plant emerge like a thousand spiky crowns across the Bukidnon plateau (figure 5.1).

Del Monte started in the Philippines in 1926 as the Philippine Packing Corporation (PPC), a subsidiary of the California Packing (CALPAK) Corporation headquartered in San Leandro, California. Del Monte was one of many multinational agricultural companies taking root in the Philippines given the islands' status as a colonial possession of the United States. Since 1926, Del Monte has transformed Bukidnon's agrarian and social landscape by occupying more than twenty thousand hectares of land and employing the labor of thousands of migrants from other parts



FIGURE 5.1. Del Monte pineapple with the Kitanglad peak in the background. Source: Photo by author.

of the archipelago. Today, countless Bukidnon residents, including myself, can claim descendance from a current or former employee of Del Monte. My grandfather was a crop scientist and plant geneticist who worked for the plantation for close to thirty-five years. Educated in agriculture and horticulture at the University of the Philippines Los Baños, the University of Hawai'i, and Iowa State University, he is one of many Filipinos who learned and adopted American agricultural techniques and returned to apply them in his home country.

Together with my grandmother, my grandfather settled in Bukidnon, and our family's history took root in the province. My father and his siblings had an idyllic life. They attended Del Monte schools, played golf on the American-built golf course, and rode horses through the plantation field. Upon retirement my grandfather continued to develop disease-resistant varieties of fruits and vegetables, including seven patented pineapple varieties. One of them was exported to a multinational enterprise, while the other varieties were seasonally sold in local markets. My grandfather serves as an example of the influence of American tropical agriculture on Filipino food cultivators. My family's story is but one of countless multifaceted accounts of people whose lives have been altered by plantation agriculture. In this chapter I examine how Del Monte's origins in American colonialism affect its present relationship with Bukidnon society.

I argue that the legacy of colonial-era land laws has allowed monoculture plantations to maintain a disproportionate use of arable land, which has contributed to the rise of hunger and petty theft in Bukidnon.

## Pineapple's Primacy in Bukidnon

I first visualized the extent of Del Monte pineapple's impact during fieldwork in 2019 when I interviewed Talaandig elders in Barangay Ticala, Manolo Fortich, and Bukidnon.[2] Much like my family's, the lives of Ticala residents were intimately tied to the pineapple but in a different way. Most of the residents were not directly employed by the plantation but were outsourced general service providers working irregular contracted jobs based on the company's needs.[3] These positions have alternatively been called "broilers," a crude reference to chicken broilers that are grown and then slaughtered after forty-five days. While most rank-and-file employees, like my grandparents, lived in compounds adjacent to the fields called Camp Philipps, Ticala residents were literally an arm's length away from the pineapple fields. My interviews were conducted in the Talaandig tribe's School of Living Traditions, where soon-to-be-exported pineapples could be seen from all directions.

Three years later I returned with a simple question for my informants: "Do you ever eat Del Monte pineapple?" I received mixed responses. One said, "Yes, once in a while the Del Monte foreman allows us to eat some harvested ones, but we are not allowed to throw the skins on the side of the road." Another remarked with a resounding "No. It is the company's property and if we are seen consuming it, we are penalized." I ended my interviews content with the results and ready to conclude that although plantation workers sporadically eat the pineapple, it is largely restricted. A few weeks later, however, I asked my neighbor, Manang Susing, if Del Monte pineapples are sold in the local municipal fresh market. Her response was one that would be reiterated by many others: "Oo mga kinawat nga piña" (Yes, the stolen pineapple). My remaining time in Bukidnon led me to question other friends, neighbors, and informants who were stealing these pineapples. What were they doing with them?

A few days later, I saw Manang Susing sitting by the highway waiting for her *hawl,* a localized Bisaya version of "haul" to describe the process of being hauled by large trucks to work in the fields. Manang Susing's use

of "haul" to refer to workers reveals a diminishing distinction between human and commodity on monoculture plantations. Specifically, the shared term indicates a shared treatment of the prized fruit and those who pick them. If you were fortunate enough to be *hawled* to a harvest site, some workers would furtively stash a couple of pineapples in their backpacks to take home. While this practice is prohibited by the company, it is common knowledge that a handful of pineapples regularly emerge at local markets and foodways, where they perch on colorful fruit stalls next to other Bukidnon fruits.

The stolen pineapples are sold in small amounts to buyers for PHP 10–15 (US$0.19–0.28 in current rates) per kilogram. This is markedly less than in a supermarket in the nearby city, Cagayan de Oro.[4] A regular site of this transaction occurs in Barangay Puerto, along the highway to Cagayan de Oro, where motorists and tourists returning home may purchase Bukidnon's famous Del Monte pineapple, albeit from an "unofficial" source. This practice of "side selling" has also been recorded among Davao's banana plantations (Thiers 2019). According to Manang Susing, this is a way for the harvesters to make money for rice, school supplies, and other small purchases. In a way, the stashing and selling of Del Monte pineapples are still supporting local livelihoods.

If the pineapples were not sold, they found their way into local culinary practices, where they encountered new meanings and ingredients (see chapter 1 for more on the transplantation of foreign life forms into local Philippine environments). Manang Susing remarked that the pineapples were put into *humba,* a Visayan braised-pork dish like the more commonly known chicken adobo, and *afritada,* a Filipino chicken stew commonly served during town fiestas like the Feast of the Immaculate Conception in December. In *humba,* the pineapple meets pork belly along with the well-known list of adobo ingredients such as soy sauce, vinegar, garlic, onions, peppercorns, and bayleaf. What struck me about Susing's *humba* was that the dish was a site of encounter between the two dominant crops of Bukidnon's agrarian and social landscape: Del Monte pineapple and the Bukidnon Sugar Milling Company's brown sugar. While pineapple dominates Bukidnon's north, southern Bukidnon is sugar's kingdom. Much like Del Monte pineapple in the north, the Bukidnon Sugar Milling Company has been a magnet for migrants, especially from other sugar-producing regions like Western Visayas. Sugar is also a financier of Bukidnon's prominent political families, such as the Fortich and

Zubiri clans, who own vast sugar holdings in the province's fertile lowlands (Angeles 1999).

How did multinational export crops, particularly pineapple, come to occupy such a central and critical role in the province's social landscape and maneuver their way into local foodways? What impact has this had on land issues in Mindanao as a whole? Answering these questions requires examining the colonial history of the province and subsequent postcolonial impacts on land availability.

## Pineapple's Journey to Bukidnon

Del Monte originated in the late nineteenth century in Northern California as the California Packing Corporation (Braznell 1982). The company's foray beyond the continental United States began in 1917 in Hawai'i when it acquired pineapple farms and a cannery. Mass-produced pineapple was already growing in Hawai'i through the efforts of the Dole corporation. Dole came to Hawai'i in 1901 through James Dole, a nephew of Sanford Dole, a key figure in the annexation effort by Hawaiian subjects of American descent. By leveraging his powerful family networks in the state and securing investment from mainland sources, James Dole built his fruit empire, climaxing with the purchase of almost the entire island of Lanai to grow pineapple in 1922 (Okihiro 2009). It is through the efforts of people like Sanford and James Dole that pineapple became a central player in American interests in the Pacific.

Despite Hawai'i's rich volcanic soil, Del Monte—and the Hawaiian pineapple industry as a whole—encountered numerous problems. By the early 1920s, the scarcity of farmland had become a major issue for the corporation. Del Monte shared the rich but limited land with several sugarcane, pineapple, and other agricultural corporations. This not only reduced the available farming space but also increased the price of what available land was left. In addition, the mountainous lands were unsuitable for cultivation and thus decreased the overall crop-growing potential. The corporation also faced numerous plant diseases and bug infestations that destroyed millions of dollars' worth of crops and almost eradicated the entire Hawaiian pineapple industry (Tucker 2000, 320). It was clear to company executives that new land suited for pineapple growing was necessary. Pineapple growers and colonial officials turned

their eyes further south toward the Philippines and settled on Bukidnon, Mindanao.

Del Monte's arrival in Bukidnon would not have been possible had Mindanao not been a colonial possession of the United States for approximately twenty years. Due to the 1902 Philippine Organic Act, the American colonial government placed a limit of 1,024 hectares of public agricultural lands that corporations could own (Hayami, Adriano, and Quisumbing 1990). Government officials gave two reasons for the cap on land ownership. First, the limit was imposed to discourage the establishment of plantations due to the history of unequal land ownership and the overexploitation of workers on Spanish-era haciendas, large, landed estates owned by Spanish persons or those of mixed-Spanish descent (Galang 2012). Other sources point out that the ceiling was actually enacted to prevent competition from affecting the American agricultural market, particularly surrounding beet sugar (Corpuz 1992; Hayami et al. 1990; Go 2000). Regardless, Del Monte and succeeding corporations utilized the favorable conditions during the colonial era to lobby Philippine Commonwealth leaders to make exceptions to the land restrictions and lease vast tracts of Mindanao's land for monocrop cultivation.

From 1921 to 1925, Del Monte sent agricultural experts to the Philippines to test sites as far north as Baguio in Luzon and as far south as Cotabato in Mindanao (Colayco 1987). By the end of 1925, multiple rounds of testing found that Bukidnon's high plateaus were ideal for pineapple cultivation. From a scientific standpoint, Bukidnon was chosen because of its fertile soil, good temperature, and vast uncultivated land due to the limited presence of Spanish haciendas in Mindanao's interior. Furthermore, Mindanao's prime location meant Bukidnon would be spared from the powerful typhoons that hit the Northern and Central regions of the country every year.

American corporations and individuals were enthused by the opportunity to take advantage of the fertile conditions for pineapple cultivation and the systems of land acquisition that favored mestizo (mixed race) elites and American colonialists. For example, in the first decade of the twentieth century, discharged American soldiers acquired land along Davao's gulf coast and established abaca (Manila hemp) and coconut plantations. By 1907 there were twenty-seven American-owned plantations scattered around Davao's coast, with some plantations reaching 1,000 hectares in size (Dacudao 2010). In Bukidnon, a mestizo by the name of

Manuel "Manolo" Fortich would take advantage of the favorable social conditions to acquire land. Fortich settled in Mindanao in the 1890s and married an heir to a prominent Spanish Filipino family. His sons would do the same, and in the process the Fortich family amassed significant amounts of land totaling an estimated 753 hectares in the 1990s (Angeles 1999).

In the eyes of American officials surveying the province, Bukidnon's grassy rolling hills evoked a romantic "home on the range" prime for recreating the American West (Edgerton 2009, 149). For example, Dean Worcester, secretary of the Interior and a pioneer rancher, noted that Bukidnon had a "white man's climate" and that it was an ideal location for the emergence of a successful livestock enterprise (see chapter 4 in this volume on the Philippine dairy industry). One Indigenous (Talaandig) man from the municipality of Manolo Fortich stated, "So they brought in big carabaos and big cows from Australia with big horns, so the Natives were terrified! That was the first time they saw these monstrous creatures! Ahh so that was why they [the Natives] left. . . . They were driven physically, and they used terror. Those cows are a form of terror."

From the beginning, American colonial politics and officials were instrumental in the birth of the Del Monte plantation. The PPC's original 4,000 hectares were leased from private entities: Bukidnon Cattle and Coffee Co. Inc., R. E. Gearheart, Manuel Escobar, J. J. Ossorio, and M. J. Ossorio. The aforementioned individuals then leased the land to individuals connected with Del Monte—namely, Anita Crawford, Leonard Wood, A. W. James, Harry White, and James Crawford. Crawford was the PPC's first manager and later president (1938–1958) and was likely sent by CALPAK prior to 1926 to acquire land (Colayco 1987). Gearhart was a cattle rancher and chief of the Bureau of Animal Industry. All were close associates of Dean Worcester, thus indicating the close relationship between American colonial officials and Del Monte.

Much like Dole's story in Hawai'i, Del Monte in Bukidnon was a colonial project negotiated between Filipino mestizo landed elites, American agribusiness corporations, and Commonwealth officials. In 1938 Del Monte's lease of the land was due to expire by 1942. Del Monte turned to its powerful networks through Manolo Fortich to lobby support from Commonwealth president Manuel Quezon (Colayco 1987). Quezon acquiesced and the land was turned over to the new National Development Company, which was given the authority to hold public agricultural lands without limit. According to the historian Ronald Edgerton,

"Without missing a harvest, Del Monte transferred its leases from the Navy to the National Development Company in August 1938, paying only ten pesos per hectare" (Edgerton 2009, 165).[5] This newest arbitrary land transfer not only displayed Del Monte's links to the highest offices of Philippine politics but also cemented Del Monte's place in the fast-emerging Bukidnon-Manila political and economic nexus. By the late 1930s, Del Monte was exporting nearly $2 million of canned pineapples annually (Tucker 2000).

## Agricultural Colonies

Del Monte's ability to acquire large tracts of land for pineapple cultivation was made possible due to prevailing legal norms that unilaterally proclaimed land to be property of the state. The prevailing framework for land policy in the Philippines at the start of American colonialism was the *Jura regalia* (Regalian Doctrine), which proposed that all unclaimed lands belonged to the Spanish king. The Americans sustained this policy using a different name, the Torrens system. The system takes its name from Sir Richard Robert Torrens, who first applied the concept in Australia that allowed for the transfer of lands by titles controlled by the state. Torrens specified the terms of this titling system in the Real Property Act of 1858 in which, in effect, all land was placed on a central public register that provided conclusive "indefeasible" evidence for who "owned" the parcel of land (McRae and Baldwin 1997). Therefore, any citizen or corporation could refer to this central land register to determine who owned what. The system soon spread, and several countries adopted the centralized land registry with the United States, employing it in their colonies.

The colonial government applied the Torrens system through a series of laws such as the Philippine Bill of 1902 and the Jones Act of 1916, which placed public domains under the colonial government (Colayco 1987, 12). In 1902 the colonial government passed the Land Registration Act No. 496, declaring all lands subject to the Torrens system. According to Gaspar (2000), "This was the law that officially turned land into a commodity that could be exchanged by a piece of paper" (31). Gaspar's statement previews the process that allowed for the many proclamations and land transfers, which ultimately allowed Del Monte to take root in the archipelago in the twentieth century. In sum, the *Regalian Doctrine* and

Torrens system allowed a small yet powerful group of actors to arbitrarily claim and delineate land for the interest of the state.

Colonial-era land laws paved the way for the American colonial state's objectives in Mindanao to go beyond resource extraction. For instance, the arrival of Del Monte and other agribusinesses served a dual purpose for the American colonial state; beyond simply being profit ventures, they were central to the American colonial officials' strategy of *Filipinization* of Mindanao's Indigenous populations. The colonies were first established along the Cotabato River, where Christian and Moro families planted rice, corn, tobacco, peanuts, sweet potato, coconuts, and other garden vegetables (Gowing 1988, 292). Frank Carpenter, the governor of Mindanao and Sulu, provides an eloquent description of this process, stating, "The aim of the agricultural colonies was the amalgamation of Mohammedan and Native populations into a homogenous Filipino people" (Gowing 1988, 292).

From the perspective of many American officials, agricultural colonies were necessary since Mindanao's native inhabitants lacked the intelligence, energy, and capital to take advantage of Mindanao's fertile land. For example, writing in 1904, Governor-General Leonard Wood expressed the need for "a good class of American settlers and plantation owners who would not only contribute to the economy of the province, but would also be an example to the native inhabitants" (quoted in Gowing 1988, 131). Thus, Wood advocated for the prevailing land laws to be amended to give settlers not forty but two hundred or more acres so that "big capital" would be inspired to plant on a large scale. This view was shared by Dean Worcester, whose main emphasis was the need for the Filipino to adopt "modern agricultural machinery" to cultivate the land (quoted in Worcester 1914, 48). In the eyes of American colonial officials, the Philippines' abundant natural resources could serve key roles not only in the economic development but also in the sociocultural assimilation of Indigenous populations.

By the early twentieth century, large multinational corporations attracted numerous migrants from other parts of the country to work the fields and capitalize on the crop-producing potential of Mindanao. Peter Gowing notes that as early as 1912, there were 159 plantations (one hundred hectares or more) in Muslim Mindanao growing several profitable export goods such as abaca, rubber, and copra, to name a few (1988, 222). Ultimately, agricultural colonies would not only generate high income for American corporations but also serve as mechanisms for the regulation,

pacification, and assimilation of Indigenous populations as docile, productive agrarian individuals or, as Hayden puts it, "compel the young warrior to discard his lance for the grub hoe" (Worcester 1914, 28).

Del Monte became one of these agriculture colonies when it entered in 1926. Frustrated with the 1,024-hectare limit, the Hawaiian division manager of the California Packing Corporation, Harry White, expertly sold the idea of a pineapple reservation to Philippine Secretary for Agriculture and Natural Resources Rafael Alunan and the then incoming governor-general Dwight Davis. Both men acceded to White's request, which culminated with Executive Proclamation No. 230 in 1929 declaring "14,052 hectares of public land for the establishment of an agricultural colony to be known as the Bukidnon Pineapple Reservation." Davis provided further protection to the growing pineapple industry by declaring the 14,052 hectares as a US Naval reservation and naming the PPC as the only corporation able to lease land from the navy (Edgerton 2009, 165). The PPC took further control of the land by recruiting farmworkers from Bohol and building camps to house its new workforce (Putzel 1992, 55).

The plantation's establishment required the use of coercion and the forced removal of Indigenous Peoples through its partnership with the Philippine Constabulary, predecessor of the Philippine National Police. Prior to Del Monte's arrival, instances of the constabulary's forced relocation had already taken place since 1907 when Dean Worcester advised Lieutenant Governor Frederick Lewis and Don Manolo Fortich to relocate Indigenous communities to the plains to learn plow agriculture and attend settlement schools (Edgerton 1983, 2). By 1914 more than thirty thousand members of the Bukidnon tribe had been moved into compact model settlements on the plateau. A ninety-year-old Indigenous person (Bukidnon tribe) whom I will call Mr. Lanyao remarked that the constabulary had such a large presence in their community that they coined a word in the *Binukid* language, *kostables,* to refer to them. The word carries negative connotations of fear and distrust given the heightened role of state security forces in Indigenous Peoples' lives due to the incursion of plantation agriculture. Del Monte's partnership with the *kostables* is another example of the symbiotic relationship between the state's law enforcement mechanisms and resource-extractive industries as expressed elsewhere in this volume (for example, see chapter 11 on water resources).

Scholars of settler colonialism have continually emphasized that the initial instance of dispossession is not something to be relegated to the

past but has residual effects (Sturm 2017). As Ludovice similarly argues in chapter 4 of this volume, Del Monte represents *neocolonial continuities* through a series of decisions and laws regarding the unilateral and arbitrary allocation of land to one group over another, which persisted long after the end of the American colonial period. A noteworthy example was the arrival of the Dole corporation's pineapple plantation in 1963. Much like Del Monte, Dole also received assistance from the National Development Company, which helped it acquire 5,569 hectares of land in Bukidnon. Furthermore, the government body's arbitrary land allocation went beyond that of Del Monte's because it did not limit Dole's land, unlike the cap placed on Del Monte at that time (Gaspar 2000, 34). The case of Dole also resulted in the displacement of many Blaan peoples from their ancestral lands (Guegen 2010). The almost identical manner of large-scale land acquisition by Dole, almost twenty years after Philippine independence from the United States, is a glaring example of the United States' neocolonial legacy on land rights in Mindanao.

## Del Monte and Land Scarcity in Mindanao

Since the 1960s, numerous attempts have been made to spur Del Monte into reinvesting its profits to improve Bukidnon's society and livelihoods. In the early 1960s, a profit-sharing scheme between Del Monte and the National Development Corporation was brokered to allocate portions of their twenty-four million pesos in profit (1957–1967) to the Philippine government. However, Mardonio Lao provides evidence that not a single centavo was remitted (Lao 1992, 96).[6] The remarkably low land-lease fees enjoyed by Del Monte during the colonial period were maintained post independence. In the early 1990s, Del Monte continued to expand into the municipalities of Sumilao and Impasug-ong and leased land for only two hundred pesos per hectare per year. This was raised to PHP 1,000, but as Lao argues, "This is still ridiculously low given the productive capacity of the leased lands" (Lao 1992, 96).

After 1987, Del Monte became subject to the Comprehensive Agrarian Reform Program, or Republic Act 6657. The law required large public and private landowners to redistribute lands to small farmers and landowners, otherwise known as Agrarian Reform beneficiaries. However, a convenient arrangement was made wherein Del Monte and other

multinationals could continue their operations through a clause in the Comprehensive Agrarian Reform Program (section 8) that allows Agrarian reform beneficiaries to lease their land back to multinational corporations and consolidate all lands under an umbrella cooperative (Digal 2007, 24). This led to the creation of the Del Monte Employees Agrarian Reform Beneficiaries Cooperative (DEARBC), which administers all Del Monte lands today.

DEARBC and the leaseback agreement structure has been subject to numerous critiques. Studies have found that several multinational corporations identified and selected existing fieldworkers to be members of the cooperative; they were thus more likely to readily resume work in post land redistribution operations (Borras and Franco 2005, 352). In other instances, the company shows preference to regular rather than contractual/seasonal field employees when choosing DEARBC members (Henry and Chato 2019, 26). This is done to place more loyal technical staff in the cooperative's leadership positions. Once lands are leased, the company reserves exclusive rights to "develop, cultivate, improve, plant, administer and manage agricultural projects on the land" (Digal 2007, 24). Ultimately, land redistribution under CARP resulted in almost no changes to monocrop agriculture's strong hold over the rural Philippines, except for a brief land ownership transfer on paper.

The leaseback arrangement is also criticized for perpetuating cycles of poverty and dependency by locking workers into restrictive long-term agreements. In the case of Del Monte, DEARBC's lease agreements after land redistribution were set at twenty-five years. The lease payment by the corporation to the workers is regularly criticized for being far from a fair deal given the multinational corporation's enormous profits. For example, Putzel (1992, 343) found that Del Monte's leaseback agreement was priced at a meager PHP 1,500 (US[2022]$26) per hectare per year. In other instances, agrarian reform beneficiaries report that nearly 40 percent of their rental earnings are held by the cooperative to cover administrative and land amortization fees, leaving only 60 percent, or approximately PHP 12,000 (US$245) per hectare per year (Henry and Chato 2019, 27).

The debate over what constitutes a fair minimum land rental price continues in recent years with heated discussion between Del Monte and other agribusinesses versus Bukidnon's Sanguniang Panlalawigan (Provincial Board). In March 2020, the government issued an ordinance (No. 2020–012R) declaring a fixed minimum rental rate for all banana and

pineapple plantation entities at PHP 25,000 (US$456) per hectare per year. At the time of this writing, there is no evidence Del Monte has not complied with the ordinance. By September 2020, the provincial government passed an additional ordinance that threatened Del Monte and other companies with revoked business permits should the minimum rental rate not be met.[7] Given the very recent passage of the ordinances, further research is necessary to examine how Del Monte has complied with the new laws and adjusted production to meet the new rates.

My interviews in Ticala in 2022 demonstrate that the new ordinances likely have yet to take full effect in altering impoverished landowners' lives. Specifically, I asked residents about leaseback agreements and rental rates in their barangay. One Talaandig community leader's response summarizes the cycle of dependency and predatory land relinquishment produced by the leaseback agreement system:

> Mapugos gyud ka para icontinue. Syempre ang abang sa yuta . . . dali man mahurot ang kwarta. Daghan gamitan sa balay. Kung 10-years ang kontrata dili maka abot ang 10-years ang kwarta. Del Monte gi encourage ang advance hangtud makahikot na ang tao sa sigeg advance. Dili mabawi ang yuta. Naa pud incentive nga kung morenew ka for another 10 years hatagan ka sa kani nga amount. Kinsa may dili pa tintal ana? (You are forced into continuing. Of course, the one who rents out the land will use the money very quickly. There are a lot of household expenses. If the contract is ten years, it [lease payment money] will not reach ten years. Del Monte encourages you to advance until the person is bound because of the constant advances. They won't get their land back. There are also incentives that if you renew for another ten years, they will give you this amount [usually an upfront for five or ten years]. Who will not be tempted by that?)

The response brings up a simple but important question. If most land is leased to Del Monte with very little financial return, how do workers and the rest of Bukidnon's population survive? Returning to my earlier anecdote, perhaps stealing pineapples to include in *humba* or "side selling" for rice and other basic needs is one strategy that impoverished Bukidnon residents wield against a larger system of food scarcity and a lack of food sovereignty among rural Filipinos. This was evident to me after Manang Susing listed all the necessary items workers purchased through the small

profits from stolen pineapple. She lowered her head and admitted, "Tungod sa kawad-on" (It is because of poverty).

Manang Susing's comments point to a larger issue of hunger and poverty in the province. While Bukidnon may pride itself on ranking in the top-ten wealthiest provinces in the Philippines, this is a misleading statistic given that it also ranks with the provinces having the highest rates of hunger and malnutrition. Specifically, a 2015 survey by the Philippine Statistics Authority showed that Bukidnon was one of the three provinces with the highest prevalence of households going hungry due to lack of income (47 percent; Gavilan 2015). Since land rental rates and minimum-wage salaries are unable to provide for workers' daily needs, it is conceivable that people will seek alternative ways to provide for themselves using the resources available (see chapter 8 on strategies to combat food insecurity in Manila). In sum, due to the legacy of colonial land policy, some Bukidnon residents are left with limited options and have turned to the province's most abundant crop to meet their needs: pineapple.

It must be mentioned that several residents of Bukidnon view Del Monte and other multinational plantations favorably. The days of American managers and their families living in Del Monte compounds is long gone. Today, the management living in the prestigious Cawayanon neighborhood of Del Monte is all Filipino and represents the upper class of Bukidnon society. In some cases these families are intergenerationally tied to Del Monte, with some current managers the children or even grandchildren of former managers. Many were born in the Del Monte hospital and receive pensions from the company when they retire. To them, the company represents a "womb-to-tomb" affiliation.

In June 2022 I spoke to one of the managers, a family friend, and asked about his thoughts on the outsourcing of field labor. He responded that many residents of Bukidnon were happy when Del Monte began outsourcing jobs. It allowed more people to find jobs with regular salaries, unlike smallholder farming, in which yields and profits are uncertain. "Now they have insurance. Wealth was spread." Regarding leaseback agreements, he defended the practice, saying it is legal and within the boundaries of the Comprehensive Agrarian Reform Program (CARP). "If you don't want to lease your land, that is the title holder's right." The former manager's responses highlight the entrenched presence of Del Monte in Bukidnon resident's lives. Despite Del Monte's harmful actions to some, the plantation is a powerful magnet that lures many into cycles of debt

and dependency on agribusiness high yields. The lease payments paid to landowners, while small, are a safety net for many. It is evident that what started as unequal structures put in place by American economic imperialism has morphed into a system of dominance wherein reliance on the company is often the best means of survival.

Today, Del Monte's plantation in Bukidnon is approximately 26,000 hectares. This well exceeds the initial 1,024 stipulated under Philippine Commonwealth laws. Moreover, the company has expanded into Central and Southern Bukidnon and further into parts of the adjacent province of Misamis Oriental through lease agreements with landowners seeking to convert rice and cornfields into the more economically valuable pineapple. The manner of land acquisition by Del Monte has changed immensely from that seen during the colonial period. What started as an agricultural colony birthed through a series of negotiated deals and periodic violence has morphed into a system of leaseback agreements in which workers are compelled to relinquish their lands to their employers for twenty-five-year-long leases.

Del Monte's arrival signaled a new period in Bukidnon in which large amounts of land could be unilaterally claimed by the state and distributed to certain actors to fulfill the state's interests. Land laws could be diverted, negotiated, or skewed in favor of land accumulation by multinational agricultural enterprises and mestizo landowners. As a result, Bukidnon's percentage of arable land ownership is disproportionately in favor of Del Monte and other large agribusiness, leaving small farmers and tenants dependent on powerful landowners and multinational corporations for survival. Faced with low wages and a lopsided system of leaseback agreements, Del Monte field employees turn to other means to meet their basic needs, such as the petty theft of small amounts of Del Monte pineapple. Thus, the infusion of Del Monte pineapple into local foodways is symptomatic of the consequences of a longer history of land inequality that has left impoverished Bukidnon residents with limited alternate options for survival.

While this chapter analyzes the structural inequities brought about by the colonial history of the plantation, I have also endeavored to show the primacy that pineapple has played in Bukidnon residents' lives, livelihoods, and foodways. Countless migrants from other parts of the country have gone to work for Del Monte in its fields, packing sheds, canneries,

laboratories, and offices. Hundreds of children have attended Del Monte schools and received Del Monte scholarships. Given its size and influence, Del Monte has a complicated relationship with Bukidnon, with many people relating to and engaging with the company in different ways. Nevertheless, a study of Bukidnon's land and food would be incomplete without understanding the pineapple's ubiquitous presence.

## Notes

1. Different terms are used to describe Mindanao's Indigenous Peoples (IP, Lumad, Nitibo, etc.). I use Indigenous throughout this chapter given that this is how most of my informants referred to themselves. Despite the decreased usage of "tribe" in academic texts, I still use this term in the context of Bukidnon since it is what most of its Indigenous Peoples use to refer to their communities. Mount Kitanglad is home to the Bukidnon, Talaandig, and Higaonon tribes.

2. A barangay is a territorial and administrative jurisdiction that constitutes the most local level of governance in the Philippines.

3. In 2016 the ratio of regular workers to contract workers was one to four. Del Monte hires approximately fifteen thousand contract laborers from five different cooperatives and five private job contracts (Henry and Chato 2019, 19).

4. Cagayan de Oro is the closest city to the plantation and the site of Bugo port, where pineapples are loaded onto ships.

5. Putzel (1992, 43) claims that the agreement between the NDC and the PPC was listed even lower, at one peso per hectare in Northern Bukidnon. Regardless of the total value, both are extremely low costs for the corporation, even for that time.

6. This scandal was exposed when Senator Lorenzo Tañada challenged the NDC in 1969 through G.R. No G-30257. As of 1992 the case had not been decided. I was unable to find the case's status in online law libraries.

7. Details of the September 2020 ordinance were delivered by the former governor of Bukidnon Jose Ma. Zubiri Jr. on the provincial government's Facebook page (LGU Bukidnon), September 3, 2020.

# 6 | Toxic Temporality in the Igorot Kankana-ey Vegetable Gardens

Jose Kervin Cesar B. Calabias

Since the American Occupation of the Philippines at the turn of the twentieth century, the commercial highland vegetable industry in the Cordillera region has grown to become the country's foremost supplier of temperate vegetables. Cordillera highland vegetables remain a staple ingredient in many Filipino dishes, from the cabbage in *nilagang baka* (boiled beef soup) or pancit guisado (stir-fried noodles) to pechay Baguio (bok choy), a garnish that accompanies *humba* (braised pork in black beans) in the Visayas region. The Igorot, a collective term for several Indigenous Peoples of the Philippine North, engage in the vegetable gardening that sustains Benguet Province's identity as the country's "Salad Bowl." My family has been part of this century-old commercial highland vegetable industry, with three generations having managed vegetable gardens in Barangay Amgaleyguey in the province's municipality of Buguias.[1] As an Igorot Kankana-ey scholar, my relationship with the vegetable industry is rooted in a precarious livelihood. In the face of this precarity, my family and community bear the vegetable industry on their shoulders, absorbing its risks as our own personal losses (in this volume, a similar ethnographic self-reflection can be read in chapter 5).

In 1972 my grandfather died in an accident. His repurposed MacArthur Jeep fell off a cliff along the highway. Relatives blamed the Jeep's faulty brakes and the slippery roads from the heavy rains that day, while others attributed it to a faulty door lock, which jammed and left him unable to escape before the fall. While the cause of his accident remains unclear, every time my father recalls this story I cannot help but think that

accidents like these are aggravated by a race that forces vegetable gardeners to chase after higher prices for their produce as they ply the Halsema Highway during the monsoon seasons. Deemed the Mountain Trail by locals, the Halsema Highway is a 150-kilometer throughway that reaches its highest elevation at a little over 2,400 meters above sea level and connects Baguio City, the region's commercial center, to Benguet Province and its vegetable-growing municipalities. After my grandfather died, my grandmother single-handedly raised her five children by managing the vegetable gardens alone. Years after, she suffered from chronic back pain and difficulty walking. I believe this was caused by the many days she spent carrying a backpack sprayer filled with agricultural chemicals. As a result, she was mostly bedridden for almost a year before she died in 2019.

The Benguet vegetable industry remains shaped by the risks and losses experienced by gardeners who continue to gamble on a chance to win what Martin Lewis describes as the "jackpot bounty" (1992, 39), in which the frenzied transportation of vegetables along the Halsema Highway happens precisely during the rainy season when the risks of travel are highest. Local authorities caution against the dangers of driving on this cliffside highway, where roadside collisions happen daily (Alimondo 2019). In the wake of the typhoon, large areas of *uma* (garden terraces) are destroyed, and landslides, rockslides, and other roadside hazards temporarily cause the closure of large portions of the road, thus dramatically increasing the prices of vegetables (Russell 1987, 142).

Vegetable gardeners continue to face mounting economic stress from aggressive market competition and fluctuating vegetable prices alongside various occupational hazards from the production and distribution of highland vegetables. However, due to this dramatic shift in vegetable prices, it is challenging to estimate the average income of vegetable gardeners in the region. The industry supplies about two-thirds of the demand for fresh vegetables from the country's capital, Metro Manila (Agoot 2021), and despite a slight dip in production in 2020 due to the COVID-19 pandemic restrictions, Benguet Province produced 83.3 percent of the total regional vegetable output of the Cordillera (PSA 2021). The municipality dedicates almost two-thirds of its total land to vegetable growing alone. In 2014, Buguias contributed at least 80 percent of the region's total production of cabbage, carrots, and potatoes (PSA 2016).

The staggering statistics overshadow this industry's other risky business. The intensive use of agrochemicals and synthetic fertilizers that have

plagued this industry since World War II compounds the risks of vegetable gardening (Lewis 1992). Alongside local competition with growers who might plant the same crop that season, Benguet gardeners also compete against traders who illegally smuggle and import vegetables and fruits from other countries (De Vera 2021). As a result, gardeners throwing away truckloads of vegetables along the highway, selling to break even, or even giving their harvests away for free due to buyers opting for smuggled goods are common (Ilao 2019; Santos 2022).

In this chapter I revisit the municipality, illuminating the experiences behind the risks and hazards obscured by the breathtaking view of seas of green, precisely where my grandfather's vegetable truck fell many years before. Engaging with prior scholarship on vegetable gardening in Buguias that describes the industry as aberrant and erratic and where gardeners "deliberately choose risk" and employ precarious strategies (Lewis 1992, 136), I show how Kankana-ey gardeners from Buguias operate under a contravening temporal regime that hastens them to chase after unpredictable profits while overlooking the gradual effects of years of intense agrochemical use.

## Time, Toxicity, and Materiality

*Time is of the essence.* This adage is especially true for vegetable gardening in Buguias. Time is marked and synchronized with the seasons, and gardeners sync themselves through well-timed actions based on experienced intuition. Such actions range from cycling the suitable crops or planting a variety at the first signs of rain to putting in the right amount of pesticide with the dosage applied evenly at specific times throughout the day. Conversely, the vegetable industry thrives on incalculable and uncoordinated decisions in which unpredictable market demands eschew the flow of natural seasons that gardeners follow. Sarah Sharma describes this phenomenon as a condition wherein subjects are expected to "recalibrate and fit into a larger temporal order" that either privileges or disavows other temporalities or lived time (2014, 8–9). Gardeners try to bend time to their advantage, employing experimentation, intuition, and scrambling to haul and drive their vegetables down a dangerous road while most of us are simply waiting with all the time in the world. Indeed, "capital caters to the clock that meters the life and lifestyle of *some* of its workers and

consumers . . . [while] others are left . . . to serve a dominant temporality" (Sharma 2014, 139). The "timescapes of the vegetable gardens" are mobilized to speed up to keep pace with the industry; those in the lower end of the chain of production suffer from and by making haste (Perez 2018, 80). Meanwhile, the economic upper class enjoys capitalism's "technology-driven velocity" (Tomlinson 2007, 74). While this unequal relationship bound by time can be examined empirically and is primarily driven by earlier market models and social and political relationships (Lewis 1991; Reyes-Boquiren 1989; Russell 1987), the emergence of uneven cultural practices and temporal regimes from disparate ends of production offers a critique of "speed" as a discourse (Sharma 2014, 8). Gaining speed is precisely the problem. Gardeners cut short their lived time to submit to the "condition of immediacy" of fast capitalism wherein "the production of commodities can and will be matched to human demand and desire" for the fresh delivery of produce (Tomlinson 2007, 73).

However, I observe a contrasting temporality in the vegetable industry of Benguet. While gardeners strive to keep up with capitalist speed, the accumulative and anticipated conditions prevailing in vegetable gardening, such as the toxic spread of agrochemical fertilizers and pesticides and the potential waste produced by these chemicals or even unsold fresh produce, present a competing temporal order. To an extent, these conditions reflect what Rob Nixon (2011) describes as *slow violence* or the *violence of delayed effects,* long-form violence that unfolds over years of degrading conditions of life (3). However, the attritional and exponential effects of these conditions do not trigger much sentiment from a public accustomed to and venerating the spectacular power of cataclysmic environmental disasters over the invisible and compounding effects of other forms of environmental degradation (3). Focusing on this gradual and accumulative character of unseen violence fused with Achille Mbembe's (2019) necropolitics, Thom Davies acutely describes a form of "let die" violence in the polluted geography of Louisiana's Cancer Alley, where a petrochemical assemblage has been responsible for the release of fifteen million pounds of toxic chemicals in the last decade before 2016 (2018, 1538). Davies's ethnographic work documents the residents' feelings of confinement, or being "trapped," for being "right in the middle" of toxic smells, infrastructures, and other "constrictions" (2018, 1545).

In Buguias I observe a temporal order that fuses speed and dormancy. The somatic afterlives of pesticides, such as illnesses caused by gardeners'

exposure to and handling of agrochemicals, do not just affect the land and bodies of Indigenous Peoples but also shape a toxic culture of abusive agricultural practice among gardeners. I elaborate on these in the subsequent sections and nuance time scholarship further by describing what I call a *toxic temporality:* a contravening temporal order that, on the one hand, is regimented by capitalist speed in the production and distribution of vegetables and, on the other, is sustained by the gradual and degenerative effects of pesticide use, which also initiates the waning of the Igorot Kankana-ey's traditional agriculture and notions of nature and time. Alongside the hazards and risks in the commercial vegetable industry, the takeover of Indigenous land and livelihood is aggravated by waning sustainable agricultural practices and tensions between gardener agency and the protection of ancestral land, creating a fertile space for toxic imperialism.

## Chasing after the Jackpot

The transportation of highland vegetables during monsoon season involves working intuitively and efficiently, managing risks while adapting to real-time market changes. Vegetable prices, for example, would shoot up to as high as PHP 70 per kilogram of cabbage compared to the average of PHP 10 per kilogram during the monsoon seasons. In the early decades of the industry, Buguias gardeners relied on the announcement of price changes via the radio or word-of-mouth from gardeners who had just come from the La Trinidad Trading Post (Lewis 1992, 128). Today, vegetable gardeners can pick up these price changes in real-time via SMS messages their partners send from the trading posts. The speed at which these communications and transactions occur is not without consequences. Since updates can be received almost immediately as the price changes, the volume of deliveries can double in a matter of minutes. Many gardeners deliver their vegetables simultaneously, causing prices to drop. Moreover, given this speed in information, price changes are more frequent and erratic. While the supposed bounty from the jackpot is fleeting and unreliable and subject to numerous factors beyond the control of gardeners, the hope for price surges in the trading post can alleviate the losses of even the most devastated gardeners during the typhoon *if* they can haul whatever is left ahead of all the others.

Many gardeners dismiss questions on expenses, average income, and even a simple budget breakdown. Questions of this nature are given haphazard answers, approximations, unsureness, and even silence. Gardeners describe their financial plan as contingencies, survival tactics, *suwerte* (luck), and constant experimentation in which they copy strategies or crops cycled in a particular month by their neighbor and are resigned to *bahala na* (come what may) in the process. Of course, they account for their expenses to determine if their trades were profitable. Still, gardeners do not focus much on the numbers and figures. A vast majority readily conclude that they chose vegetable gardening not because of reliable profits but rather because of having no choice. Nevertheless, some gardeners place stakes on stories they have heard of gardeners from Buguias buying houses in La Trinidad and rationalize the risks and gambles as a natural part of the industry. Gambling for the chance to win the jackpot bounty is reinforced by natural factors such as typhoons or fluctuating market demand and by the emotional drive of anticipatory hope that overshadows unpredictable risks. In this way, capitalist speed is somehow tempered by a mixture of risk-taking, aspiration, and exploitation of the possibilities caused by natural events.

## Toxic Temporality in the Buguias Gardenscapes

As gardeners manage the risks involved in chasing after unpredictable profits, vegetable gardens become increasingly subject to varying environmental and chemical stresses from capitalist hyperproduction. Unlike other cases of environmental injustice, such as Cancer Alley residents (Davies 2018), Buguias gardeners are active agents in the spread of agrochemicals. They have been known to promote negligent practices in vegetable growing that ignore recommended pesticide applications. Gardeners commonly double pesticide dosages, multiply the frequency of application, or mix several pesticides in what is called a "cocktail." Such practices ultimately increase safety and health risks and pesticide residue on crops and soils. These strategies seem to stem from a "more is more" attitude among gardeners. Gardeners follow the practice of their neighbors, who claim that their "formula" could yield more harvest (see chapter 7 in this volume on seaweed charging). Indeed, quoting Pidelo (1997), Lu states that Benguet gardeners are the "most highly pesticide-exposed vegetable growers as

compared to the farmers in other major vegetable-producing areas in the country" (2011, 19). Recent scholarship on pesticide use has since focused on the accumulation of pesticide residue and the exposure of gardeners to these harmful substances. In Lu's research, gardeners who engage in pesticide cocktailing have little to no protective clothing or equipment in dispensing pesticides, rarely wearing goggles and head covering. Instead, they resort to wearing improvised personal protective equipment, such as shirts wrapped around their faces. Some have also experienced sprayer leakages, had their skin exposed to pesticides, or have reentered sprayed sites without baths (Lu 2011). One of the most frequently used pesticides among Benguet gardeners is Tamaron®, categorized by the World Health Organization as "extremely hazardous." Alongside the health and safety risks endured by gardeners are the pesticide residues found in certain crops and soils, which exceed the maximum limit (Lu 2011, 25). Toxic chemicals linger or bioaccumulate in the ecosystem due to intensive agrochemical use negligent of the maximum dosage of pesticides (Reyes et al. 2017).

The situation above has resulted in a plethora of diseases and medical illnesses. Charles Cheng and Katherine Bersamira document several adverse health effects from pesticides gathered from two thousand gardeners from Benguet Province who exhibited itchy skin, dry lips, watery and itchy red eyes that lasted for days, abdominal and chest pains, chest tightening, cramps, epistaxis, and dizziness (1994, 32). However, determining certain adverse health conditions from agrochemical use can be difficult since the symptoms mirror common diseases. More recent research in Benguet Province also observes similar health risks, but these may not entirely be attributable to pesticide use since they can be aggravated by other factors (Reyes and Laurean 2007). Adverse health effects are sometimes dismissed as the result of hard labor. Perhaps more importantly, some of these conditions take a while to manifest, as toxic effects on the body are cumulative or accrue over *time*. Depositing not just on the land but also in the bodies of Indigenous Peoples, the abusive use of pesticides and their bioaccumulative consequences remain ignored.

Similar phenomena have developed elsewhere in the Philippine archipelago. Residents near banana plantations in Mindanao remain critical of the aerial spraying of pesticide cocktails that contaminate other plants, animals, and households near the plantation's periphery (A. Paredes 2021, 2020). However, the pesticides used have evaded community resistance because "mixed chemical cocktails make it impossible for the public

to determine which specific active ingredient they are exposed to at any given time" (A. Paredes 2020). Such is the politics of pesticide use: on the one hand, as in the case of Buguias, the delayed, accretive, and sometimes unseen adverse health effects only further gardeners' abusive use. On the other hand, the abusive use of pesticides escapes criticism precisely because of the indeterminacy of their effects. Buguias's case offers a contrary scenario of agrochemical invisibility that extends what A. Paredes (2020) describes as the "chemical anonymity" and "corporate secrecy" in Mindanao that allow pesticide companies to evade accountability.

Since 1986, four companies have dominated the agrochemical market in the Cordillera region: Hoechst, Bayer, Shell, and Union Carbide (Lewis 1992, 144); the German multinational company Bayer manufactures the notoriously hazardous Tamaron®. In some way, the undeterred presence of these companies exacerbates gardeners' excessive and complacent agrochemical use. They claim that they are left without a choice, arguing that these agrochemicals remain the most effective despite their toxicity. Gardeners' privileging of this purported high efficacy illustrates their reliance on faster, cheaper, and less labor-intensive measures to control pest infestation. A case in point is the handling of the region's most dominant potato leaf miner species (*Liriomyza huidobrensis*), which first came to the attention of local institutions when it initially infested potato gardens in Buguias, leading to an outbreak in the region in 1999. While local government has promoted integrated pest management strategies, recent studies have found that pesticide abuse, such as cocktail preparations and increasing pesticide dosage, as well as the refusal to cycle crops, has not only remained a dominant control method but has also, in fact, led to the increased resistance of leaf miner pests in the region (Molitas-Colting et al. 2002). Gardeners in my research continue to rely on chemical pesticides in spite of the availability of more sustainable and organic options to control pests, believing these chemicals are faster and more efficient in eradicating infestations. The abusive practice has led to a violent cycle of cocktailing and double dosing to control pests that have become increasingly immune to it. Resting on their self-defeating convictions on cocktail efficacy and efficiency in pest management is the attitude in which gardeners rely more on their fellow gardeners and pesticide dealers' claims than on agricultural technicians (Molitas-Colting et al. 2002).

Other lingering effects of pesticide toxicity can be felt more acutely when toxic waste takes on a different purpose in gardeners' lives. Fifty-two

suicide cases in Benguet gardening communities from 1961 until 2010 were from self-poisoning due to the ingestion of pesticides by primarily young men aged fifteen to twenty-four (Batani et al. 2013, 19). While researchers recommend restricting the availability, import, and use of pesticides by local government authorities (Batani et al. 2013, 45), actions should arguably be taken primarily by the companies that produce these harmful toxins in the first place. Indeed, these toxins are potent beyond their intended purposes. My father once described Tamaron® as one of the most "popular" pesticides for suicide. He compares pesticide use and abuse in Buguias to addiction: "It's like cigarette smoking. One can easily ignore the warning labels. Gardeners do the same. So, without proper government regulations, they will continue using it [Tamaron®]" (on addiction, see chapter 11 in this volume).

The gardeners in my research are aware of the advantages of organic agriculture—what they call "gardening with nature"—and are also mindful of several government-led initiatives to reduce pesticide use, such as the Department of Agriculture's Good Agricultural Practices (GAP) campaign that recommends, among other measures, a fifty-fifty use of botanical and chemical inputs. GAP differs from organic agriculture, but some gardeners express how GAP's allowances for some chemical inputs are easier to follow and sustain. Unfortunately, despite some gardeners adopting GAP, dangerous agrochemicals such as Tamaron® remain prevalent. This results from the enduring hypercompetitive agricultural market in the region, which forces gardeners to opt for more efficient chemical practices despite their known harms.

On the other hand, organic gardening proved to be an unpopular practice among gardeners. Some express how they are compelled to put up physical structures—such as fences, greenhouses, composting pits, exclusive irrigation systems, sheds, and sanitation areas—to remain competitive with other organic growers beyond the region. Organic gardens should also go through inspection and certification from governing institutions, and gardeners must attend a succession of seminars and training in organic agriculture. Many gardeners see the legwork, requirements, and paperwork to transition to organic as too cumbersome, especially for a limited market. Speed is critical in chasing after profits, and an increased reliance on chemical pesticides and the promise of profit from higher yields discourage gardeners from safer and healthier options.

## Eroding Tradition

While gardeners have often expressed fear of possible poison in their vegetables, some retreat to safeguarding the food they grow in their dooryard gardens (*baeng;* figure 6.1). Traditionally, *baeng* gardening caters to domestic needs and appears to be a sustainable option in providing food for the household, growing only what the family needs while evading chemical inputs and promoting organic practices. Corroborating Perez's (2018) observations of the Kalanguya gardeners, Kankana-ey gardeners in my research also distrust the food they produce for commercial markets, knowing how many chemical inputs they have used in producing these vegetables (chapter 10 in this volume provides another examination of community gardens). A respondent jokingly quipped in the middle of our discussion that he would rather eat meat than those "healthy" vegetables (see chapters 8 and 9 in this volume on comparing healthy and acceptable food). This gardener has a *baeng* where he grows vegetables organically and away from his main garden where he continues to use pesticides, knowing how the toxins can creep into the soil and, eventually, the vegetables.



FIGURE 6.1. My family digging for potatoes at my grandmother's *baeng* in Amgaleyguey, 2000. *Source:* Photo by author.

Conversely, some gardeners, including my family, have converted these sustainable plots to grow commercial vegetables, expressing the need to maximize every arable plot for income. Sustainable agricultural practices such as the *baeng* and the *uma,* which predated commercial vegetable gardening, became the framework for undeterred land conversion in the region using swidden techniques to construct sprawling mega terraces (Lewis 1992). Although stricter forest laws have banned the practice entirely, wealthier gardeners in Buguias have circumvented land conversion restrictions by using backhoes and trucks to transplant large volumes of soil to create artificial terraces and gardens along rivers and creeks that consequently obstruct their flow. Ironically, gardeners remember the *tumungaw* (nature spirits) that hamper people from cutting down trees, displacing rocks and soil, or obstructing the flow of rivers. Still, the compulsion to maximize profit through land conversion has defied these guardians of nature in the name of destructive practices. Gardeners passionately recall these beliefs, and each barangay even has a cultural officer promoting Indigenous knowledge and practices at the village level. Unfortunately, this local government position has become superficial as Indigenous beliefs fade away as mere memories.

Three decades ago, tradition was deeply embedded in Buguias commercial vegetable gardening, where gardeners claimed observable effects from rituals they believed could even manage the risks in the industry (Lewis 1992). My grandmother, for example, believes in the potency of *sida* (thanksgiving feast) and has hosted feasts during planting seasons, claiming that the ritual sacrifice of certain animals involved in these feasts appeases ancestral spirits who can guarantee a bountiful harvest. Hosting feasts also means that one's family is ready to share their bounty with the community, increasing their social status and thus deserving more bounty.

Indigenous notions of time have since been replaced by capitalistic speed. For example, locals believe that the arrival of the *tiway,* or the gray wagtail bird (*Motacilla cinerea*), signals the start of the monsoon season, but they claim they have seen these birds less frequently than before. Interestingly, gardeners think the continued denudation of forests has led to fewer places for the birds to roost. Some residents also blame the unpredictable weather patterns on the disappearance or rarity of other birds that signal dry and wet seasons and planting and harvesting. To some extent, Indigenous time has since passed, and signs point to a degradation of

both Indigenous land and tradition as gardeners continue to convert large tracts of land for commercial agriculture.

Almost every gardener in my study constantly refers to commercial vegetable gardening as "traditional gardening." Agrochemical gardening became "traditional" to these gardeners because the actual traditional agriculture discussed previously became relegated to domestic practice. Moreover, agrochemical gardening became traditional precisely because it was what gardeners have grown accustomed to and have felt a duty to continue. As Jack, a gardener from Barangay Natubleng, aptly expressed, "Daytoy lang met ti naisuro ni tatang nga naamuan na met laeng kinni tatang na. Daytoy lang met ti kasapulan nga ipasak kinda anak ko" (This is what we know. This has been passed on to me by my father, who also got it from his father. This is what I will have to pass on to my children). Many group discussions with gardeners invoke this feeling of responsibility to sustain their gardening methods. In the process, gardeners have embraced agrochemical gardening as traditional, infusing the practice with both duty and inheritance. Thus, the effects of agrochemical use also result in contravening temporal orders or a toxic temporality hinged on frantic capitalist time, the gradual effects of toxins, and the waning of Indigenous agricultural practices and traditions. Buguias is thus shaping lives and livelihoods that are constantly on the move but are consequently attached to what gardeners in this study describe as a traditional agricultural practice that must be preserved.

In a way, the belief in increasing the efficacy of agrochemicals overshadows the efficacy of prestige feasting. Moreover, the meticulous staging of traditional rituals is overshadowed by faster ways of guaranteeing bounties, such as land conversion and mega-terracing. To be fair, many gardeners, including my family, continue to practice ritual feasting and believe in its spiritual and practical benefits. Tradition has adapted to capitalist time by allowing flexibility in ritual feasting, such as reducing the number of sacrificed animals for a particular *sida,* amending the frequency of its hosting, and opting for more affordable breeds of the animals to be sacrificed. However, while these changes have allowed feasting to continue, the more efficient staging of feasts has replaced the more nuanced and naturally attuned Igorot Kankana-ey time and agriculture that has oriented itself to and is guided by the movement of nature and ancestral spirits and not windfall profits.

## Wasting Away

Gardeners continue to scramble to make deliveries in the fast-life scheme of capitalism and dispose *quickly* rotting vegetables in their wake. In other words, the degenerative, accumulative, and long-form adverse effects of agrochemical abuse have solidified as traditional practices are furthered in the afterlives of these vegetables. In May 2022, a Facebook post showed photographs of a truckload of carrots with a makeshift cardboard sign that read, "Bargain Carrots PhP10/kilo *pang gas lang* [for gas only]. thanks." The asking price was three to five times lower than the typical price in the Baguio city market and even lower for groceries. Meant to defray transport costs because there were no buyers in the provincial trading centers, the advertised price led to comments that were a mix of shock, concern, and frustration, magnifying an emotionality surrounding fresh produce that is seemingly going to waste. Those who want to help the farmers are asked to "kindly bring [their] own Eco Bag." This drama on social media aptly captures what it means to "live with" toxins (Davies 2018). Encouraging people to bring an ecobag as a sustainable gesture perhaps masks and tempers the profound image of wastefulness elicited from truckloads of carrots that are discarded and unwanted and could potentially be left unsold. A social media campaign does little to cover the attritional effects of more than a century of intensive agrochemical use in the vegetable gardening industry in the region. Mobilizing people to help or having gardeners desperately find ways to dispose of their vegetables not because they are food that can spoil but to cover expenses to transport these goods in the first place reveals the industry's deeply entrenched environmental and cultural toxicity. Gas money and the frustration over who gets to profit disturbingly reflect how much of the shock from food waste comes from the loss/gain of capital.

While gardeners should never have to be the ones to make these harsh decisions to dispose of vegetables discarded by unregulated and unchecked market powers, the pressure behind capitalistic speed and the lingering traces of agrochemicals that promise high yields magnify the consequences of waste aggravated by these competing regimes of time. Moreover, the tension between these time frames reveals how food and toxins are more potent in their afterlives as waste and residue than forms of nutrition and sustenance that spawn equally toxic behaviors

and relations from the gardeners in Buguias, where the essence of time is violence.

In many ways, toxic temporality in Buguias ushers in a form of toxic imperialism of Indigenous lands. Toxic imperialism is the movement of harmful waste from a politically and culturally powerful center to marginal countries that serve as geopolitical dumpsites (Walker 2012, 94). However, the movement of toxins is more covert in the form of agrochemicals promising bounty for gardeners, while its hazards on the land and bodies of Indigenous Peoples remain anticipatory. Thus, a gradual takeover of Indigenous lands happens as vegetable gardeners continue pursuing the jackpot bounty, mastering efficiency, and risk-taking while "wagering" land and lives as bargaining chips to the industry's risks (Lewis 1992, 1). To an extent, not owning these lands might have added to gardeners readily making their lands collateral. Then again, despite legislation such as the Indigenous Peoples Rights Act, which honors native title and tenurial practices, the Indigenous ownership of land is not always a guaranteed way out of a livelihood deeply entrenched in commercial agricultural practices and denies the culturally heterogenous composition of some Indigenous communities (see Perez 2018; Prill-Brett 1994; Theriault 2019).

Survival motivates these gardeners to push through and take risks as if resigned to defeat: "Ket kasta met laeng ti biag" (That is life). Remarks like this can only emphasize risk as a fact of life, a normalized mundane truth of gardening. While natural phenomena such as typhoons leave most of Buguias impassable due to landslides and other forms of soil erosion, destroying millions of pesos worth of vegetables and crops in their wake, in the aftermath vegetable gardens survive, and gardeners live another day. Several active campaigns and institutions encourage gardeners to take on a less chemically driven livelihood. Still, the financial and logistical burdens risk eroding the life of numerous gardeners and households that continuously depend on this profitable, albeit tenuous, livelihood.

The risks and experiences behind a toxic temporality that pervades the Philippine Cordilleras, a temporal regime dependent on the contravening nature of fast capitalism and agricultural hyperproduction and the slow and attritional effects and material afterlives of toxins, chemicals, or otherwise, have been the focus of this chapter. While measures are available from governmental institutions to dissuade gardeners from chemically

intensive agricultural practices, the financially and logistically demanding processes inherent to organic methods of gardening have left agricultural land as collateral in an increasingly risky, albeit profitable, chemically intensive form of vegetable gardening. This complication has led to gardeners leaving traditionally sustainable agricultural practices, rituals, and Indigenous notions of time behind for the more efficient agrochemical abuse encouraged by the fast-paced life of the vegetable gardening industry. Moreover, multinational agrochemical companies have secured a foothold in Indigenous communities in this contentious environment, and we belatedly reap the toxic effects from agrochemicals sourced mainly from Western multinational companies that mobilized toxins as imperial appendages—a biohazardous legacy of the continued colonization of Indigenous land rendered dependent on the promise of greater harvest yield and profit from agrochemical use.

On the other hand, the personal losses and sacrifices endured by my family and many others are often weighed against the profitable, even lucrative, possibilities of engaging in risk. The vegetable industry cannot be entirely to blame for my grandparents' passing, and my family has benefited from it and continues to rely on its promises. Agrochemical companies not only evade culpability due to chemical anonymity but also hide behind their guarantee of a profitable return (A. Paredes 2020). In other words, the vegetable industry sustains itself precisely because there remains a palpable hope among vegetable gardening communities that renders the rewards worth the risks. In this way the potency of the cultural effects of living with toxins cannot be denied. Thus, solutions must also demand a reorientation of our understanding of the affective materiality of agrochemicals.

Ultimately, advocating for a multifaceted approach to addressing the agrochemical crisis in the region might offer hopeful ways forward. To mobilize an acceptable resolution to the chemically intensive agricultural industry, several agents and institutions in the industry must be involved in crafting solutions—from gardeners to intermediaries and retailers to consumers—offering a plurality of solutions that are sourced not only from agricultural experts or Indigenous Peoples but from a collaborative effort of counterexpertise that brings in ethnographic, political, and grassroots knowledge and experiences to address the agrochemical issue while respecting Indigenous land and gardener agency (Nikol and Jansen 2020). While it is easy to conclude resolutions based on collective,

comprehensive, and grassroots efforts, highland commercial vegetable gardening has permanently changed the livelihood landscape in the Cordillera. In other words, the remaining arable lands have already been plotted for commercial vegetable gardening. Solutions must therefore account for the possible losses people incur in the environmental restoration process. While vegetable gardeners must not solely bear the consequences of carrying out any kind of solution, perhaps they have already been pointing to a possible way forward when they insist on describing commercial vegetable gardening as traditional agriculture. By reframing this practice and livelihood as a form of Indigenous heritage (*tawid*), solutions to agrochemical usage in the region can be conceived as ways to secure a more culturally and environmentally conscious future for the next generation, and the duty to pass on this tradition can be seen as acts of environmental restitution. And to this, only time will tell.

## Notes

1. A barangay is the smallest political unit of local administration in the Philippines, akin to a village. It is also sometimes referred to as a barrio.

# 7 | "Our Seaweeds Are Now Addicts!"

## *The Peculiar Case of Charging on Sibutu Island*

Jessie Varquez

One fine morning on Sibutu Island, after an early boat trip to see the seaweed farms in the shallow seas between Sibutu and Sitangkai in Tawi-Tawi, I met a seaweed farmer I call Yusup. When we spoke, Yusup had just returned to Sibutu after working for almost three decades in Kota Kinabalu in Sabah, Malaysia. He used to farm seaweed and left Sibutu in 1991. After juggling different jobs and eventually marrying and raising a family in Sabah, Yusup returned to Sibutu in 2017 and ventured back into seaweed farming. He spent around PHP 10,000 (US$[2017]200), converted from his ringgit savings, as start-up capital for his new seaweed farm. To his surprise, however, seaweed farming in 2017 was different from when he practiced it in the 1990s; almost all seaweed farmers in Sibutu, he found, are now "charging" their crops. "Our seaweeds are now addicts!" Yusup quipped at the end of our conversation, laughing while visibly perplexed.

I begin with this vignette to tease out my surprise upon hearing the metaphors of "charging" and "addicts" to describe seaweed-farming practices on Sibutu Island. *Charging* is what the seaweed farmers call their practice of drenching their marine crops in diluted inorganic fertilizers. They do it for the primary purpose of hastening seaweed growth, thereby boosting crop yield. Because seaweeds propagate vegetatively, the seed stock that Yusup acquired comprised clonal cuttings from charged seaweed parents. He found that he had little choice but to charge his newly

acquired cuttings as they came from an equally addicted source. The seaweeds perished when Yusup attempted to refrain from charging, suggesting that addicted seaweeds are dependent on charging, without which survivability is imperiled.

Seaweed farming is a common livelihood for many coastal peoples throughout the Philippine archipelago. Coastal dwellers like Yusup are expectedly drawn to seaweed farming as their main and sometimes only livelihood option. They farm seaweeds not for immediate food consumption, although occasionally Sibutu dwellers eat seaweed. Instead, they dry and sell them to traders to be exported and processed for carrageenan, an essential component for industrially produced food items such as dairy products, beer, sweets, ice cream, and other ultraprocessed food (Parker 1974; Pereira 2016), including evaporated milk (see chapter 4 in this volume), which is a key *halo-halo* ingredient. In 2022 seaweed topped the fisheries' production in the Philippines with more than 1.5 million metric tons produced, besting other fishery products that are typical food items in the Filipino diet such as milkfish, tilapia, tuna, sardines, and other commercially and nutritionally important fish catch (PSA 2022a). Seaweed farming is a livelihood for about two hundred thousand Filipino families (BFAR 2022b). As such, seaweed is arguably the most important fisheries product in the Philippines in terms of commercial value and source of livelihood.

In the context of seaweed farming as a vital livelihood for coastal communities and its commodity as one of the top fisheries products in the Philippines, I ask: How did Sibutu farmers end up addicting their crops and exhausting themselves and the seaweeds in the process? What are the ramifications of charging? To answer these questions, I approach charging as peculiar on two grounds. First, seaweed farmers complain that charging demands more capital and extra labor, yet almost all are doing it. While many seaweed farmers are unsure about the provenance of charging, they press on and feel exasperated at having to undertake such an arduous regimen that occupies their multispecies lives. Second, charging is peculiar because it is a homegrown strategy that farmers developed and disseminated themselves. In intensive agricultural systems, the chemicalization of solutions to problems of production is aggressively promoted and maintained by the industry (A. Paredes 2022; Romero 2021). Charging was not industry initiated. It has even caused concerns among stakeholders, who fear it could threaten the million-dollar seaweed industry, as charged seaweeds are believed to yield low carrageenan content.

In what follows I describe the process and extent of present-day seaweed farming in Sibutu. I chronicled seaweed farming as part of a multidisciplinary research team that conducted fieldwork in 2017–2018 where I had the opportunity to talk with farmers and observe and participate in their activities. My curiosity about charging led me to review the fascinating story of seaweeds in the Philippines and how they were harnessed and continually "improved" via technoscientific means for their commercial value. In narrating the story of seaweeds, I look at the historical, ecological, and scientific accounts (see also chapter 1 in this volume) to understand why Sibutu is central to their transformation. Thinking about charging as peculiar also attends to the multispecies enrollment that such farming practice engenders. I argue that while charging appears peculiar, it is a logical outcome of farming systems designed to intensify and exhaust species' lives. Such logics of intensification and exhaustion pose unintended consequences that both nourish and disrupt human and more-than-human worlds.

## The Island Factory

Sibutu is the largest in a group of islands traditionally referred to as the Sitangkai area in the southwest part of the Sulu Archipelago. The island municipalities of Sibutu and Sitangkai are the southernmost frontier of the Philippines and share sea borders with Malaysia and Indonesia. Sibutu is about twenty-eight nautical miles from Bongao, the provincial capital of Tawi-Tawi, and eighteen nautical miles from Sabah, making the island closer to Malaysia than the Philippine territory. Sibutu was administratively part of Sitangkai until it was created as a separate municipality in October 2006. It has a total land area of 11,432,7540 hectares composed of 16 barangays, with a total population of 28,532 according to a local census in 2015. Describing the island based on his fieldwork in the 1960s, anthropologist H. Arlo Nimmo (1972, 47–48) notes the ethnic composition of the island: "Until fairly recent times, the Sibutu Islands were inhabited exclusively by the Samal speakers, who even today probably represent more than 90 percent of the population. The remaining 10 percent consists mostly of Taosug, and a few Chinese and northern Filipinos." During my fieldwork, the peoples of Sibutu distinguished between the Sama, referring to the land-based dwellers, and the Samal, referring to the Sama

Dilaut who are coastal dwellers mainly subsisting on the sea. As one might expect, the Sibutu that Nimmo witnessed in the 1960s is remarkably different from the Sibutu of today. People have cellular phones. There is electricity, so almost any modern gadget or household appliances are found on the island. The roads are paved with concrete. Public buildings like schools and hospitals are well-built. Houses on stilts still occupy the coasts, but many Sama houses are constructed in subdivision-like settlements in the town proper.

Of the many things that piqued my interest on the island, the seaweed stood out the most. Upon my arrival the pier was noticeably littered with dried seaweeds that had turned yellow and been spread on cement open spaces. Worn-out plastic twine used to tie seaweed cuttings to the cultivation lines also littered the landscape. At a recreational beach on the eastern side of the island, a few meters away from the shoreline, were small floating devices where long lines of seaweeds were attached underwater. Seaweeds were virtually everywhere on Sibutu. An orientation to the island's ecological features is key to understanding why seaweed farming thrives. Although there is a deep channel called *sallang* between Sibutu and Sitangkai, reef flats and shoals extend out, especially westward. Shallow waters, when reefs and shoals are exposed during low tide, are locally called *tabba.* These shallow reefs can be found along the coast called *behingan,* or in the middle of the sea. The lagoon-like reef flats, however, are found on the southern side of the island. Sibutu is surrounded by extensive reef areas teeming with a rich diversity of marine life. Nimmo describes the reefs of Sibutu as "one of the most lucrative fishing grounds in Sulu—indeed, in all the Philippines" (1972, 47). The terrestrial features of the island, meanwhile, are a different story. Soil cover is generally thin, with deep layers of limestone underneath, thus limiting intensive agriculture. The limitations of the island's terrain at the backdrop of its lush and extensive reef flats make Sibutu an ideal place to farm seaweeds. My older informants recalled how coconut farming was virtually abandoned when seaweed farming was introduced to their island.

Agal-agal is the local term for all varieties of farmed seaweeds. Like seaweed farming elsewhere, thalli cuttings become the seed stock in Sibutu. The cuttings are tied to the cultivation lines using plastic twine.[1] The choice of agal-agal variety is informed by which side of the island one is farming. The *tambalang* variety is often farmed on the *behingan* or *tabba* on the western side facing Sitangkai, where the sea current (*sollog*) is

relatively strong and steady.[2] On the southeastern side, another agal-agal variety called *katunay* is commonly farmed.[3] Farming techniques are also informed by the location where the agal-agal farm is set up.[4] In *behingan* and *tabba* areas, the "fixed, off-bottom" method locally called *parasdas* is typical. Wooden stakes called *osol* are lined on the seafloor and arranged rectangularly. Ropes are tied to each end of the wooden stakes and serve as cultivation lines. Farmers often quantify their seaweeds based on the number of lines and blocks they maintain. In shallow waters in the middle of the sea, a method called *labad-labad* (hanging long line) is typically used. Another method called *spring* consists of long lines, but both ends are tied to the seafloor. These simple and accessible materials require minimal capital investment regardless of the seaweed-farming methods employed.

Seaweeds inhabit the landscapes and seascapes of the island in this way. When I saw the extent of the seaweed farms on Sibutu, I thought the island was like a factory whose architecture, production line, raw inputs, environments, and people have become organized around a particular commodity. Official statistics back this impression. In the third quarter of 2021, Tawi-Tawi recorded the "highest production of aquaculture" in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), where seaweeds accounted for 98.88 percent of the total aquaculture production (Tuka 2022). In 2022 BARMM was the top producer of seaweeds in the Philippines, "contributing more than half of the total production of seaweeds," or 48 percent of the total seaweed production in the country (BFAR 2022a, 46). Before seaweeds became a priced commodity, however, they were food items traditionally consumed by coastal communities in the Philippines. A glimpse of seaweed history is necessary to understand such a transformation from food to commodity.

## Commodifying a Food

"Seaweed" refers to various species of marine macroalgae that can be broadly classified based on pigmentation as red, brown, and green (McHugh 2003). In the Philippine context, seaweeds are traditional food items and were commodities traded with the Chinese in Sulu in the eighteenth and nineteenth centuries (Saleeby 1908, 133–144; Warren 1977, 79). When Alexander Dalrymple explored the Sulu Archipelago in the

1700s, he observed that seaweed "was gathered and eaten in a sort of salad by Bajau, Samal and other coastal people" (Blanchetti-Revelli 1997, 8). What Dalrymple must have observed is now commonly called *guso* (*Kappaphycus* spp.). Along with *lato* (*Caulerpa* spp.) or sea grapes, these two are the most commonly harvested and traded seaweeds in Philippine public markets (Dumilag 2019; Wagey and Bucol 2014). *Guso* and *lato* are normally eaten as a salad dressed in vinegar. In Sibutu, *guso* is still occasionally eaten as a salad. However, *guso* was transformed from an unassuming traditional food item to a global commodity by extracting carrageenan.

Obtained from red edible seaweeds called *carrageenophytes,* carrageenan is commonly used in food products due to its thickening and emulsifying properties. It is also used in a myriad of applications for pharmaceutical, cosmetic, and industrial purposes (Campbell and Hotchkiss 2017). Upon harvesting, seaweeds are dried in Sibutu, shipped to Bongao and Zamboanga, and then sent to be industrially processed for carrageenan in Cebu. Carrageenan is so ubiquitous that it is found in most everyday items—not only in food but also in lotions, air fresheners, and textiles, among many other products. As the anthropologist Lanfranco Blanchetti-Revelli (1995) notes, carrageenan is ever present in ordinary things and can be considered a "ghost" commodity. People unknowingly consume seaweed daily through the hyperconsumption of carrageenan by-products.

Up until the 1960s, Canada dominated the global production of carrageenan from Irish moss. However, the heavy exploitation of Irish moss from "natural stocks" could not meet the increasing demand (Naylor 1976). This prompted commercial producers to scout for other carrageenophytes, especially since seaweed ecology research indicated the strong potential of cultivation, rather than traditional harvesting, in addressing the shortage (Valderrama et al. 2015). In 1965, leading carrageenan manufacturer Marine Colloid Inc. forged an alliance with Maxwell Doty, a botany professor at the University of Hawai'i, to search for new carrageenophytes in the Philippines (Delmendo, Alvarez, and Rabanal 1992). In collaboration with the Philippine Fisheries Commission, research explorations ensued across the country (Doty 1973). The experimental work in Zamboanga eventually led to commercial farming trials—in Caluyas Island in Antique, Illin in Mindoro, Tapaan Island in Sulu, and

Sitangkai in Tawi-Tawi (Delmendo, Alvarez, and Rabanal 1992).[5] Despite several setbacks, the project was sustained due to sufficient and consistent funding from Marine Colloid and the US Agency for International Development. Graduate students of Maxwell Doty, particularly Vicente Alvarez, who eventually became the manager of Marine Colloid, Philippines, and Gavino Trono, who was later recognized as a National Scientist of the Philippines for his lifelong work on phycology, were instrumental in the pioneering work on seaweed farming in the country (Neish et al. 2017). *Eucheuma cottonii* was renamed *Kappaphycus alvarezii* in honor of Vicente Alvarez.[6]

By 1979 the Philippines surpassed Canada as one of the largest producers of carrageenan in the world (Blanchetti-Revelli 1995). From 800 tons in 1966, the Philippines exported 1,840,832 metric tons in 2011 (Parker 1974; Trono and Largo 2019), an astonishing, exponential increase in the space of fifty years (Loureiro, Gachon, and Rebours 2015). This "phenomenal success" led to the economic uplift of seaweed farmers "above the national averages for producers of other agricultural goods, such as rice farmers" (Blanchetti-Revelli 1997, 8). The success of seaweed farming in the Philippines spread globally, not only to expand commercial farming but also to introduce a new alternative livelihood to the coastal poor (Ask et al. 2003). As news of a lucrative new livelihood spread, many families were drawn to Sitangkai and Sibutu Islands. A massive displacement occurred, however, when martial law was declared in 1972, the same year the family production model was introduced to the islands. When martial law broke out, conflict arose between the Philippine Armed Forces and Moro separatists. Driven by conflict and attracted by the success of seaweed farms in Sibutu and Sitangkai, displaced Tausug families from Sulu migrated south. The exodus of Tausug, in the words of Nimmo (1986, 25), "altered the ethnic composition" of the archipelago. The influx of Tausug migrants "displaced many of the Sama cultivators, and what began as an industry dominated by Sama became an industry dominated by Tausug" (Nimmo 1986, 28).[7] Despite the political turmoil and displacement caused by martial law, seaweed farming had already become deeply entrenched in Tawi-Tawi lifeways by the 1970s. The aligned agendas of science and industry (see chapter 5 in this volume) resulted in the remarkable rise of seaweed from a traditional food item to a global commodity.

## Charging a Clonal Monocrop

Being one of the pioneering sites of farming trials in the 1960s, seaweed farming in Sibutu gradually expanded to become the main livelihood on the island. A barangay called Sheik Makdum southwest of Sibutu illustrates the extent of seaweed farming. Rows of small logs had been installed as drying facilities. Coastal houses had attached workstations called *pantan,* elevated wooden platforms where hauled seaweeds were placed, sorted, charged, and dried. It was in Sheik Makdum that I first saw charging in action. While a young farmer drenched a mountainous pile of seaweeds on the *pantan,* another young man gently repositioned the lines of seaweed back into the sea using a dugout. He carefully waded through the calm seawater using a small oar to avoid damaging the seaweed. The odorous diluted inorganic fertilizer filled the air. In the era before charging, farmers waited at least forty-five days before the seaweed reached full maturity. Charging, however, dramatically altered this rhythm. In the past, seaweed farming was seasonal, attuned to the rhythms of the sea, tides, lunar cycles, and monsoons. As one farmer nostalgically remarked, "There's no season in charging anymore; we do it the whole year."

The charging procedure is simple but tedious. Farmers must purchase inorganic fertilizers, locally called *tambal,* priced at PHP 50 (US$1) per kilogram in 2018. At least two types of *tambal* are used—namely, 16–20 and 14–14, meant for agricultural crops.[8] Approximating the amount based on perceived efficacy, a farmer distributes the *tambal* into 1.5-liter polyethylene terephthalate plastic soda bottles half filled with seawater. The bottles are thoroughly shaken and then poured into a drum full of seawater. Seaweed farmers emphasize that the shaking is an essential step; mixing undiluted *tambal* directly into the drum container ruins the entire batch. The cultivation lines get a quick bath in the *tambal* solution for about ten seconds, and the drenched seaweed lines are set aside on the *pantan* and left covered with canvas overnight. The charged seaweeds must be reinstated in the sea farms the following day (see figure 7.1). Once the efficacy of the diluted *tambal* has been exhausted, the contents are discarded into the sea.

Charging renders human-seaweed relationships precarious. Reciprocal productivity needs to be maintained between humans and seaweeds, requiring intensive labor and capital from the former to maintain the



FIGURE 7.1. A farmer wades into the calm water of the shallow reefs northwest of Sibutu Island. He is about to reposition seaweed cultivation lines after charging them the night before. The sticks poking at the sea surface are wooden stakes lined on the seafloor where seaweeds are tied. *Source:* Photo by author.

livability of the latter. Yet in the process of charging seaweeds, more-than-human worlds are also entangled. By entanglement, I refer to the idea that species are "constituted in relation with others" (Tsing 2014, 28). In this sense, epiphytes and *ice-ice*—common "outbreaks" that cause problems in seaweed farming (Vairappan 2006)—are entangled in the constituted encounter of charging. While multiple factors contribute to these farming troubles, they are exacerbated by charging when seaweed farmers discard their exhausted *tambal* solution back into the sea. Dumping inorganic fertilizers into the sea results in what ecologists call nutrient enrichment, eutrophication, and algal bloom. Such waste disposal encourages the flourishing of epiphytes, or filamentous red algae that Sibutu locals collectively call *lumut*. Epiphytes are part of the ecologies and rhythms of the sea, expected in certain months to proliferate. From a seaweed-farming perspective, however, epiphytes are a problem because they compete for resources—for example, nutrients, space, and sunlight—with the farmed seaweeds (Hurtado and Critchley 2006). When the epiphyte population booms due to charging, it entails extra work for the farmers because it colonizes the farms by attaching itself to the seaweed. When such outbreaks

happen, farmers need to remove the epiphytes physically, a laborious task typically assigned to children and women. In my fieldwork in Sibutu, the coastal communities I visited were visibly occupied by epiphytes and other marine algae, coating the beach, house stilts, and other objects therein in green.

*Ice-ice* is also entangled in the messiness of charging. The term was coined by Filipino farmers referring to the loss of thallus pigmentation, turning the infected parts white, hence the term "ice." The disease strikes because seaweed farms are overcrowded and overstocked, attracting pathogenic bacteria and causing stress to seaweeds (Hayashi et al. 2010). *Ice-ice* reduces carrageenan content, resulting in lower crop quality. Having "wiped out entire farms" in the past (Largo, Fukami, and Nishijima 1995, 595), it has been reported since the 1970s and continues to be one of the greatest threats in seaweed farming. Among Sibutu seaweed farmers, managing *ice-ice* is a dance with the weather, sea current, water quality, and other abiotic elements. Old-timer farmers have acquired skills and knowledge over time in dealing with *ice-ice;* some farmers know *pandoga* or ecological signs by reading the stars and the sky and knowing which direction the winds come from (Muallil et al. 2020). Local and scientific knowledge provides competing accounts about the relationship between charging and *ice-ice.* Some farmers believe that charging does not deter *ice-ice* from infecting their crops, while some claim that *ice-ice* can be eluded by periodically removing the cultivation lines from the sea as part of the charging steps. A recently published study technically labeled charging as "inorganic nutrient enrichment" and concluded, based on scientific experiments, that the practice does not "significantly influence the occurrence of ice-ice disease" (Sarri et al. 2022, 99). The same study also claims that charging is not detrimental to the seaweeds' health and their carrageenan yield, a counter to the anticharging sentiments commonly shared among nonfarmers. Yet another study claims that *ice-ice* occurrence is lower in charged seaweeds based on findings from field experiments and seaweed farmers' observations (Tahiluddin, Nuñal, and Santander–de Leon 2022).

Broadly considered, charging is a problem for seaweed farming because it entails intensification and exhaustion. Farmers are trapped in performing the ordeal, which compels them to exert extra labor and capital. The intended outcome of charging is to hasten seaweed growth. However, the crops have become "addicted," as the farmers characterize

it, rendering seaweeds reliant on human intervention to sustain life. The industry's stakeholders have also raised the alarm that the repercussions of charging could "endanger" the seaweed industry (Formoso 2018). The heart of the problem lies in the monocropping of seaweeds that propagate vegetatively. Seaweed research has long recognized the "deteriorating quality" of these varieties, which have exhibited slow growth and susceptibility to diseases (Hurtado, Neish, and Critchley 2015, 1949). One proposed technoscientific solution was micropropagation techniques using tissue culture technology. In the 1990s, experiments were conducted in Sibutu on sporeling propagation as another alternative method (Azanza-Corrales, Aliaza, and Montaño 1996). Inserting foreign DNA, a rather controversial path, is discouraged by phycologists (Hurtado, Neish, and Critchley 2015). In 2020 the Department of Science and Technology helped establish the research facility called the Seaweed Research and Development Center, housed at the Mindanao State University campus in Tawi-Tawi, with the primary aim to improve seaweed production using technoscientific approaches, the same agenda set in motion more than half a century earlier. The university has since maintained a gene bank of seaweed cultivars collected from Tawi-Tawi waters while the development of new strains from these cultivars purportedly resistant to diseases and climate change has landed in the national news (Magbanua 2022). As a commodity birthed by science, the strongest responses to seaweed problems, while not necessarily successful, come from technical and scientific approaches. Today farmers continue to propagate seaweeds vegetatively while science continues to experiment to do away with clonal propagation.

Charging the marine crop into addiction is the outcome of a system that farms the same seaweed varieties that clonally propagate. As one of the original sites of seaweed exploration, the cuttings that Sibutu farmers use today are arguably the same seaweeds experimented with for commercial propagation in the 1960s. Technoscientific experiments—tissue culturing, sporeling propagation, and so on—have yet to address the weakened species constitution of farmed seaweed. In this light, charging can be seen as the farmers' response to science's deficit in solving the issue. Charging has been the strategy farmers have riskily adopted to respond to the weakening productivity of their farmed crop, an unfortunate consequence of a farming system designed to exhaust the seaweeds. Renewed vitality has been channelled through the academic sector to resuscitate the weakening

seaweeds by establishing a research center in Tawi-Tawi. Fortunately, solving the charging problem has not reached an impasse yet, unlike the case of the infamous fusarium wilt that ravaged Mindanao's banana plantation (A. Paredes 2021). One factor that sets seaweed farming apart from plantation crops like bananas is that the production is not company-controlled, operating with centralized plantation management. In contrast, seaweed farming is a household-level production attuned to the maritime orientation of the peoples of Tawi-Tawi.

From the farmer's experience, however, charging the seaweed is a deadlock. Most of them, including Yusup, are left with little choice but to charge their already addicted seaweeds. While science continues to seek solutions to the diminishing state of charged seaweeds, the seaweed industry has put up mechanisms to curb the potential threat of charging. The Philippine government, prodded by the seaweed industry, has set "national standards" on seaweed farming that specifically prohibit the use of inorganic fertilizer (Bureau of Agriculture and Fisheries Standards 2021). Considering the economic importance of seaweeds as the topmost fishery product that provides a livelihood to thousands of coastal families in the archipelagic Philippines, the stakes are too high if the seaweed industry collapses.

By framing the charging of addicted seaweeds as peculiar, I have hoped to demonstrate that considering the point of view of the farmers, the industry's interest, the ecological consequences, and the seaweed's constitution, charging is a precarious practice to continue. On Sibutu Island of Tawi-Tawi, seaweed farmers' chosen terminology to describe their farming practices illuminates something curious about the technopolitical context in which they live; charging and related metaphors like "low bat," for example, might draw on the vocabulary of mobile phone technology. The use of "addict," however, is much more intriguing. During my fieldwork in Sibutu, the Duterte administration was at the height of executing its so-called war on drugs that brutally killed "addicts" in the Philippines through police operations. "Addict" was such a loaded term that being tagged so makes one a "dangerous other" (Lasco 2020, 2) and an "immoral other" (Gutierrez 2023, 4), with the accompanying fatal consequences. On several occasions where I heard the term, it was always mentioned in jest. Perhaps it was to dissipate the tension that the term carries. The use of "addict" can also be interpreted as inherently pejorative. While charging is fraught with dangers such as bringing fragility to the seaweed's

constitution and the multispecies consequences to coastal environments, the metaphor of addict brings to the fore the uneasiness and complexity of human-seaweed relations.

The peculiar case of charging seaweeds to addiction in Sibutu is an important moment in thinking about the environment and lifeways. A huge ensemble of actors and agents—humans and nonhumans alike—are enlisted in this messy entanglement. While my focus in this chapter has only been on the production level, if we follow the commodity chain further, the entanglements become messier still. *Tambalang,* the indigenous seaweed variety from Sibutu, for instance, became an invasive species in places where it was introduced (Bindu and Levine 2011), causing trouble in multispecies relations elsewhere. Yet it is also a commodity of hope, fulfilling the goals of human development and bioconservation agendas (Andriesse 2018; Rebours et al. 2014; Sievanen et al. 2005). Seaweeds, then, continue to inhabit constitutive encounters.

## Notes

1. "Thallus," or "thalli," is a botanical term referring to the shoots or spine-like branchlets (Doty 1973, 60).

2. *Tambalang* is one of the indigenous seaweed varieties that was first "discovered" in the reefs of Sibutu and Sitangkai. This variety was eventually introduced to various seaweed farming systems in the Pacific, in Asia, in Latin America, and in Africa (Neish et al. 2017). Then it was genetically manipulated to produce new strains from the original variety in Tawi-Tawi (Bindu and Levine 2011). *Tambalang* is "predominantly used by the farmers for commercial cultivation, primarily because it is a faster growing species and has better carrageenan quality" (Hurtado, Neish, and Critchley 2015, 1948).

3. The other agal-agal varieties that I documented are *kabkab, suwerte, vanguard, indung-indung,* and spinosum. Some of these local names are also identified in the scientific literature (Tan et al. 2017).

4. The technical literature generally classifies seaweed-farming techniques into two types: shallow-water techniques (e.g., fixed-off bottom, net method, tubular method, and cage method) and deepwater techniques (e.g., hanging long line, free swing, multiple-raft long line, spider web, triangular; Hurtado, Neish, and Critchley 2015).

5. As noted earlier, Sibutu was administratively part of Sitangkai until the former was separated as a municipality in 2006. Thus, reports of carrageenan explorations in the 1970s that mention Sitangkai also include Sibutu Island.

6. McHugh (2003, 6) explains, "The two species originally cultivated in the Philippines were named *Eucheuma cottonii* and *Eucheuma spinosum,* and the industry shortened these so they are often referred to as '*cottonii*' and 'spinosum.' However, botanists have since renamed both species, so that *Eucheuma cottonii* is now *Kappaphycus alvarezii,* while *Eucheuma spinosum* is now *Eucheuma denticulatum*. Unfortunately, all

these names are still in use, so an awareness of them is necessary when reading about carrageenophytes." From *Eucheuma alvarezii,* Doty changed the identification of three identified varieties, namely: *Kappaphycus alvarezii* var. *alvarezii, Kappaphycus alvarezii* var. *tambalang,* and *Kappaphycus alvarezii* var. *ajak-assi*. Hurtado (2015, 1947–1948) clarifies, "At the present time, only *Kappaphycus alvarezii* var. *tambalang* is predominantly used by the farmers for commercial cultivation, primarily because it is a faster growing species and has better carrageenan quality."

7. The dynamics and social complexity of communities in the Sulu Archipelago, particularly among the Tausug and the Sama, are much more complex and nuanced than described within the space limitation of this chapter. For comprehensive ethnographic studies, see Kiefer (1972) and Nimmo (2001).

8. "16-20" is 16-20-0, or ammonium phosphate, the nitrogen-phosphorous-potassium combination of nutrients essential for plant growth, while "14-14" is 14-14-14, a nitrogen-phosphorous-potassium complete fertilizer.

# *HAPUNAN*

## Food Is a Battleground:
## Vulnerable Life and Subversive Fare



# 8 | Foodscapes of the "Undocumented"

## *Scavenging in an Urban Informal Settlement in Manila*

Maria Carinnes Alejandria

> There is something about toasted garlic, soy sauce, vinegar, whole peppercorn, and bayleaf that immediately appeals to a Filipino palette. Closing my eyes, I easily forgot where I was to briefly savor the smell of chicken adobo simmering in a pot placed over a makeshift wood stove. Tatay jolted me back to reality when he informed everyone that lunch was ready. Together with his three grandchildren, we huddled together in his ten-square-meter home. Everyone scooped their steaming rice and topped it with the chicken adobo. Tatay paused, stared at my empty plate, and asked, "Busog ka, ma'am?" (Are you full, ma'am?). Worried that I may offend him, I immediately filled my plate with food and took my first bite of this adobo. I fought the tears that were threatening to spill, swallowed the chicken, and complimented him for the well-balanced flavors of savory and sour. He flashed his toothy grin and said, "We were lucky last night. We also have pizza if you like." (field notes, October 13, 2014)

That was the first time I ate *pagpag,* a label used to refer to food, primarily chicken, that has been collected from the dumpsters of popular food chains like Jollibee. The term is derived from the Filipino word *pagpag,* which is an onomatopoeia referring to the percussive sound of beating off unwanted debris from a surface—in this case, from the collected food. Locals also call it *tirtir,* shorthand for *tira-tira* (leftovers).

The consumption of *pagpag* has been documented in several urban poor communities in Metro Manila, the National Capital Region of the Philippines (Chua et al. 2018; Martinez 2021). The narratives in this



FIGURE 8.1. Gaps in proper garbage disposal and flooding contribute to the shoreline pollution along Aplaya Block. *Source:* Photo by author.

chapter unfolded in a fifty-two-hectare reclamation area called Baseco Compound where I conducted intermittent ethnographic fieldwork from July 2013 to March 2019 to document food insecurity, health access behavior, and flooding experiences in an urban poor estuarial community.

Baseco Compound, an informal settlement in the city of Manila, is often defined as an estuarial community due to its unique position as a landmass cornered by two bodies of water: Manila Bay and Pasig River. Despite these polluted waters and the unfarmable land that was protractedly reclaimed with concrete debris, shells, sand, stones, and trash, the population in the compound was recorded in the barangay census to have reached as many as 64,720 residents in 2020 (figure 8.1).[1] From its initial size of about twenty-five to thirty hectares, which was called the Engineer's Island, its land area now covers fifty-two hectares to include the reclaimed lands of Isla Laki (Big Island), Isla Liit (Small Island), and the breakwaters.

Informal communities started sprawling in the area in the 1960s with the building of stilt houses on the estuary by workers of the then National Shipyard and Steel Corporation (NASSCO), later renamed the Bataan Shipping and Engineering Company (BASECO; Murphy 2012).

As families of the workers joined them from provinces, the compound became a migrant barangay with pockets of ethnolinguistic groups forming kin-based networks in village blocks locally called *purok*.

After more than forty years, through Proclamation No. 145, series 2002, the Philippine government allowed for the disposal of the land to the undocumented occupants. Through a census in 2001, houses were tagged with a number on a sticker bearing the barangay's seal. While other houses near the barangay hall and those constructed by civil society organizations were given a Certificate of Land Allocation (CELA), some had only this sticker as the official documentation to legitimize their residence in the area.[2] However, not everyone got this documentation. Houses were tagged according to their proximity to the barangay hall and whether they were constructed by civil society organizations. Tatay's shed of a house remained untagged even until his death in 2016. He migrated from a province in Visayas and lived in the compound for a total of twenty-three years in the hope of getting employment in the city.

It could be said that the compound has three kinds of residential status: those with CELAs, those with stickers, and those who are undocumented. Some *puroks* have better access to city services like potable water, electricity, cement roads, and garbage collection. This is primarily due to the number of homes with a CELA. Those blocks with more undocumented residents have little to no access to these services. Apart from the pollution issue resulting from poor sanitation services, a key problem in the compound is chronic water insecurity. During my fieldwork, four households owned a direct line of potable water. Due to the high cost of water per gallon, other households are dependent on shallow wells that yield insufficient and contaminated water. This pervading issue of water insecurity through unequitable access to distribution is also discussed in chapter 11 of this volume.

These infrastructural issues are exacerbated by the natural hazards that continuously affect the daily activities of the residents. With two bodies of water bordering the low-lying reclaimed compound, flooding has become the norm. To some extent I saw how locals have been living a seeming double life: a life during dry periods and a life during flooding periods. From their clothing, to the food they eat, to the means by which they gather their food, all of these shift with the tides of the estuary that significantly determine the residents' lived experiences. It is within this premise that this chapter explores the concept of a shifting foodscape in the

compound. The term "foodscape" was initially conceptualized to examine the intersection between communities and their environment that has an impact on the meanings and preferences associated with foods. It also refers to the social systems that determine the processes of creating and accessing the foods available in an ecological setting. However, in contested areas like an urban informal settlement that is constantly affected by hazards, the notion of a depoliticized foodscape needs to be interrogated vis-à-vis the everydayism of ingestive inequality. This chapter contributes to the discourse on the social lives of food by arguing that the consumption of socially stigmatized food, like *pagpag,* has become a form of resistance of a structurally marginalized community against state-sponsored evictions and unjust relocations.

## The Foodscape during Dry Periods

> Tatay and I went to his regular dumpster spot. He called it his *teritoryo* (territory), an exclusive spot where he would collect *pagpag.* Riding his bicycle with a sidecar, it took us about thirty minutes to get to the spot. The guard already knew him and jested that there were significantly more supplies as there were more customers that day. Tatay showed me how to carefully open the trash bags and sift through the crumpled packaging for *pagpag.* Immediately, the revolting stench of spoiled food hit my nose. Despite the vapor rub that I had strategically coated my nostrils with, the palpable smell of decaying food still overwhelmed me. Tatay just shrugged off my visible discomfort and said, "Masasanay din ilong mo" (You'll get used to the smell). He collected *pagpag* for twelve years. (field notes, December 4, 2013)

*Pagpag* collection is a food-security strategy of residents of the compound during dry periods when pathways are not submerged in floodwater and are easily accessible by foot and makeshift pushcarts. Pricing is dependent on the quality of the meat. For chicken *pagpag,* prices ranged from PHP 10 to PHP 40 (US$0.17–US$0.70 in the current exchange rate) per kilogram. Chicken meat with skin typically sold for PHP 40 per kilogram, while *buto-buto* (mostly chicken bones) used as flavoring for sauteed vegetables sold for PHP 10 per kilogram. There were several ways in which *pagpag* was prepared and consumed in the area. The most typical

preparations were adobo (stewed in soy sauce and vinegar), *prito* (fried), chop suey (sauteed vegetables with chicken), and *pastil* (pulled chicken on rice), as these dishes were typically cost-effective. Other types of *pagpag,* like burger patties and nuggets from popular food chains, were also collected and sold in the compound and nearby villages (Martinez 2021).

*Pagpag* consumption is probably the most polarized food-security strategy in the area. Chua et al. (2018) found that one of the key drivers for most who consume *pagpag* is its general acceptability in the community. The idea that others have eaten *pagpag* or participated in the economy somehow legitimizes its consumption. However, there still remains a significant context of stigma from nonconsumers. When I asked Tatay about this, he adamantly defended eating *pagpag* and said that it should not be a source of shame: "Ano ang mas nakakahiya, yun mamatay sa gutom mga bata dahil maarte ako o maging malusog sila? Kita mo naman ang lalakas ng mga yan [pointing to his grandchildren]. Di nagkakasakit. Nililinis naman yang karne at linuluto ng Mabuti bago kainin" (Which is more embarrassing, that my grandchildren die of hunger because I was being picky or that they be healthier? As you can see, they are healthy. They don't get sick. The meat is cleaned and cooked properly before consumption).

Entire households typically participate in the informal economy (Bainto, Pajaro, and Geges 2015). Tasks are often divided according to age and, at times, gender. In the case of Tatay and his household, he was the collector who ventured out of the compound to go to Intramuros every night. His grandchildren and daughter-in-law were expected to help repack the collected *pagpag.* In female-led households, the role of collecting *pagpag* was prescribed to the older mobile female. It was through searching for depth of narrative in this context that I met Aling Ana one night while shadowing Tatay.

Aling Ana was a sixty-year-old migrant from Visayas who had lived in the compound since she was twenty-four years old, following the ever-elusive urban-centric dream of a better life. I noticed immediately how males dominated *pagpag* collection by establishing exclusive access to the dumpsters, while women were limited to what was left behind. Due to this, women found another form of food scavenging—the collection of *retaso* (vegetable cuttings). The term *retaso* often refers to the scrap of cloth discarded by garment makers. This term is quite popular in Divisoria market in the city of Manila, being a prime commercial center for textiles and other types of merchandise that include foods and beverages.

Vegetable wholesale sellers would dump low-quality and near-rotting vegetables every evening. Aling Ana and others would sort through the piles and collect those which were still edible. Some would do the repacking at the dumpsters, while others would bring back to the compound what they had collected for processing and repacking. On a good day, Aling Ana would be able to bring home a sack (ten kilograms) of *retaso.* She would trim the rotting edges and pack the produce for sale by midday. From 2013 to 2019, each package of *retaso,* which weighed around five hundred grams, sold for PHP 10–20. She would save a portion for their household consumption. The income for the day, which ranged from PHP 50–70, would be used to purchase their other needs, like firewood (for cooking), water, rice, and coffee. As turfing in Divisoria became more hostile, older adult women like Aling Ana were made more vulnerable to food insecurity. When *retaso* and *pagpag* were unavailable, the likes of Aling Ana had to resort to borrowing food from their network. The extent of a person's food network in the community is primarily dependent on one's capacity to pay or repay. Aling Ana, being a solo parent to a daughter who has a developmental disability, had a very small network. However, because of her daughter's condition some women in the community would share what they had with her, be it a cup of rice, a sachet of coffee, or a pack of *chichirya* (chips).

The notion and implementation of resource sharing among subaltern communities is often limited to certain members, particularly those who live in close proximity to one another, as highlighted by Parham (2012). This leads to the formation of distinct networks of households that share food resources to combat food insecurity. Among neighbors, especially kin-based clusters, the sense of camaraderie, or *pakikisama,* is particularly strong given the close living arrangements that often result in overlapping houses due to space constraints. This type of spatial configuration also limits the level of privacy enjoyed by each household. This is why some opt to share even their limited resources. Their neighbors will surely know if they get food for their family and will think ill of them if they choose not to share.

This resource-sharing network also included access to turfed areas. For instance, Aling Ana would participate in collecting *retaso* with her peers. As her options for areas to collect *retaso* were limited, she maintained good relationships with them to ensure they would allow her to join when they collected food.

Two older adult women who extended support to Aling Ana were Nanay Joy and Aling Nilda, migrants from Mindanao who had followed their spouses to the city after they had secured employment. Unlike Aling Ana, these two women had a wider food network. Aling Nilda was married to a company driver and had children able to go out to fish daily. It could be said that Aling Nilda was the most food secure of these three women because of her household's capacity to procure and/or collect food. Nanay Joy, on the other hand, was known for being a hustler in the compound. Apart from her daily facilitation of "ending" (an illegal basketball score–based betting system), she was also active in gleaning *tahong* (mussels). If she could not join the fishing trip in the morning, as she provided care for her four young grandchildren, she would wait for the boats to come back and work as a vendor on commission. Unlike *pagpag* and *retaso* collecting, which is dominated by adults, coastal gleaning is an activity common among children.

One of my first observations in the area included the unsupervised children who play and swim in the waters despite the threatening waves. I asked a local if the children are used to doing this, and I was told that they are not scared of the waters as they participate in *sisid* (diving) to catch fish and other seafood for their family's consumption. However, for older adults and those who are incapable of diving, coastal gleaning for *tahong,* crabs, and shrimp becomes a key method of harvesting food from the estuary. Seasonal gleaning has been documented as a key form of food-security strategy among coastal communities in the Global South (Grantham et al. 2021). In the compound, this strategy is prominently performed during nonflooding periods and when there is no announcement on the threat of red tide. Depending on the amount, the seafood collected could either be shared for consumption among a network of households or sold to other households.

"Hanga't may lambat ako di sila magugutuman" (As long as I have my fish net, my family will not be hungry) was the assertion that Tony, the eldest son of Nanay Nilda and the primary provider, said to me in a conversation. Tony has been fishing in the estuary and the nearby bodies of water like Manila Bay for nearly ten years now. Nanay Nilda used to join him in fishing activities until the latter caught tuberculosis. He would usually bring home five to ten kilos of assorted fishes, which he sold to his neighbors. Nanay Nilda sold the fish, but she would often save two or three pieces for their own consumption.

Residents of Baseco Compound starting at age nine would commonly resort to catching or collecting food from the estuary, from the fish to the mussels and crabs that thrive in the area. Foods collected or caught in the estuary are considered less valuable than their market-purchased equivalents. Nevertheless, the residents I interviewed mentioned consuming food harvested from the estuary. Most explained that they purchase fish from the estuary because it is often sold to them at half the market price. In one of my conversations with a local boy who was eight years old at the time, I learned that he helped his *lola* (grandmother), who was their primary caregiver and provider, by participating in *sisid* fishing along the pier and breakwater using a speargun called a *pana.* He claimed that he would at times bring home two or three medium-sized fish that they would eat for the day. Whenever he was unable to catch fish, he would collect *tahong*—an activity locally called *pangangapa.* Through the marine life in the estuary, the locals are able to access fresh, cheap, and nutritious food. Nanay Joy, a *tahong* collector, said in one of our conversations, "Mabuti na kumuha sa dagat kesa puro chichirya kainin namin. Walang sustansya yun! (It is better to collect food from the estuary instead of eating chips. That one has no nutrients!) (see also chapter 9 in this volume).

The collection of food from the estuary is limited by environmental hazards like typhoons and red tide, which makes catch in the area inedible for weeks. Although the last recorded red tide outbreak in Manila Bay was in 2003 and the Bureau for Fisheries and Aquatic Resources has declared Manila Bay free of toxic red tides, the locals of Baseco who are dependent on the marine resources in the estuary have asserted during interviews that occurrences of red tide have affected their collection of *tahong.* One interviewee discussed his worries about this, saying "Lalo na pag nagkaroon ng red tide malason yung mga ano tahong. Yan ang pinakapinapangambahan dito lalo na yung mga kagaya ng alimasag pag tinamaan ng red tide, yung mga shell" (When the poison brought by red tide hits the mussels, crabs and other shellfishes that is what we worry about).

## The Foodscape during Flooding Periods

> She was looking out into the bay when I last saw her. I sat beside her and passed her the *turon* [fried sweet banana rolls] that I bought from their neighbor. I was already telling her what I have been doing that

> kept me from coming to the compound for a week when I noticed that she was crying. I asked her what was wrong, if her neighbors stole her coconut fruit again, a rare commodity in the area. She said, "Naiyak ako kasi tatlong araw na ako di nakakain. Binaha na naman kasi dito. Di ako makalabas para sa retaso" (I cried because I have not eaten in three days. The compound got flooded again, and so I was not able to go out to collect *retaso*). She broke the *turon* in half, saving the other for her daughter. I told her to eat all of it and that I would just buy some food for her daughter. She declined because she believed that it would be abusive of my kindness. I could not convince her otherwise. I told her that I would be leaving again for a few weeks. If she needed anything, just text me. She never did. I was told by her neighbors that a few days after another flooding in the compound Aling Ana looked disheveled and was trying to go into the estuary. She did not know how to swim, and that was why she did not engage in gleaning or fishing. The neighbors did not know exactly what happened. They just saw her fall down. Aling Ana left behind a middle-aged daughter with a developmental disability. No one could tell me where she was buried and what happened to her daughter. All I was told was that there was a new owner of the coconut tree that she had planted. (field notes, April 16, 2016)

The undocumented status of most residents has an impact on their food security, especially during times of flooding when registered houses are given priority in evacuation and receiving food-relief packages. Those who have undocumented houses have to wait to access the four-thousand-person-capacity evacuation center that services the sixty thousand residents of the compound. Most of the locals affected by the floods seem tolerant of their environment. On some occasions, one can even see several children gleefully swimming in floodwater. In fact, in an earlier study in which I participated we found that children are aware of the waterborne diseases present in floodwaters. However, it is not the health risks they fear when they swim in those waters; what they fear most is getting punctured by sharp objects on the ground and drowning (Ancheta et al. 2020). Some collect recyclable materials from the debris brought about by the flood. These are then sold and converted to food items for the household.

Although economic status is often correlated with resiliency during disasters (Frialde 2014; Prashar and Shaw 2012), the resiliency exhibited

by the residents of the compound in the aftermath of disasters goes beyond their socioeconomic stability. In my previous work (Ancheta et al. 2015; M. C. Gonzalez 2018), I observed that the resiliency of the locals is determined by their sociocultural capital. A household's survival during difficult periods is determined by the extent of its connection with other households or social organizations, which manifests as *pakikisama* (friendly interpersonal relationship; Saito 2010, 1) and *pagdamay* (sharing fate; Agpalo 1999, 51). Dalisay (2003) also alludes to the intersection between disaster and resilience within a community, as she narrates how patterns of spending have been reoriented to accommodate periods of scarcity known as *inagosto.* In the compound, periods of flooding translate to inaccessibility of some food sources like *retaso* and *pagpag.* However, they bring about other sources of food from the estuary—fishes.

The types of fish my informants consider valuable are those sold in the market and not caught in the estuary. The older adults identify *bangus* (milkfish, *Chanos chanos*), tilapia (*Oreochromis niloticus*), *galunggong* (round scad, *Decapterus macarellus*), *tulingan* (mackerel tuna, *Euthynnus affinis*), and *alumahan* (striped mackerel, *Rastrelliger kanagurta*) as valuable and expensive and therefore rarely bought and consumed. For example, a kilo of *bangus* is almost as expensive as buying a kilogram of pork. Even *dilis* (anchovy) is expensive at PHP 86.96 (US$1.85) per kilo in 2016.

Most residents cannot afford the food items discussed. Some fisherfolk in the area catch tilapia in the estuary, but locals believe they are *takas* (escapees) from fish pens in Rizal and Laguna. Saguin (2018) noted this intersection as a form of *metabolic flow* that punctuates the compounding issues of inequality and urban resource management in the Global South. Despite government warnings on the potential serious health threats of consuming food from the Pasig River, the residents continued to patronize the estuary-caught fishes and shells of their neighbors. Apart from supporting their network, these foods are 40 percent cheaper than those sold in public markets.

In the aftermath of typhoons and heavy monsoons, the prices of typically consumed fishes like *bangus* and *tilapia* deflate in Baseco as the Laguna Lake overflows and fishes from fish pens escape to the Pasig River. As Nanay Joy attested, "Nakakabili ako dito ng bangus pag-umuulan kasi ang mura" (I get to buy milkfish here in the compound during rainy seasons because they're cheap). She then sells these to other fish vendors in the market.

## The Estuary as a Place of Resistance

The lack of socioeconomic infrastructures to accommodate the in-migration and natural increase in urban centers has been documented to have spawned two issues: (1) increased informal employment due to the loss of employment in agricultural sectors (Asian Studies Centre 2009); and (2) the "predominance of informal modes of urbanization" (Crush and Battersby 2016, 6), or what other literature refers to as "slumification" (Carmody and Owusu 2016; Detmers, Heidemann, and Sandten 2011). Manila, being a megacity, faces the crisis of food insecurity within these two frames. Most of the migrant residents of Baseco Compound are engaged in informal labor due to their displacement from their economic activities in the rural areas prior to their migration to the city. The lack of efficient inclusive growth policies in the country has propelled the massive migration of rural dwellers to urban areas, especially Metro Manila. With an urban development plan that neglected affordable housing for a growing population, cities in Metro Manila witnessed the increase of informal settlements built along hazard zones as both migrants and nonmigrants individually resolved their housing insecurity. As such, food insecurity in the city is exacerbated by neoliberal policies on urban development that cause disenfranchised citizens to take residence in informal settlements situated in environmentally hazardous areas where access to nutritious, safe, and socially acceptable food is limited. Baseco Compound is a classic example of this phenomenon. I refer you to chapter 10 in this volume for more discussion on urban foodways.

The unique positionality of Baseco Compound as an estuary bound by two of the country's largest bodies of water have made it highly vulnerable to weather perturbations. Consequently, this level of risk has made its residents far more vulnerable to food insecurity, as their attempts to grow crops or even raise animals are often thwarted by constant flooding. As Aling Nilda lamented, "Basta pag baha na, wala nang diskarte mo" (Your strategies will all be useless when flooding occurs). Due to the lack of gardening or cultivation sites in the area, residents resort to utilizing the available resources in their environment, which typically consist of polluted waters, dumpsters, and urban spaces. When Tatay was still alive, he would often tell me how he had developed good relations with the crew of the fast-food chains that he frequented to collect his *pagpag*. He said that to gain their good graces, he took it upon

himself to sweep up trash around the areas of their restaurants. As a favor, some of the crew reserved days' worth of trash for him. I remember Tatay saying "Kailangan alagaan ko yung lugar" (I need to take care of the place). To some extent, caring for the place where he *harvested* his food appealed to me as an urban substitute for gardening. I told him this once and he laughed, agreeing that in that case he could be called a *magsasaka ng pagpag* (*pagpag* farmer). The parallelism drawn by Tatay between a traditional farmer and his *pagpag* collection in the dumpsters of beloved food chains invokes a critical note on food production in urban spaces. In a place where land is scarce for traditional farming, such that Aling Ana's coconut tree was seen as a valuable possession, alternative means of food production, albeit socially polarizing, were developed. This display of agency was a response to the persistent threat of hunger born out of a highly inequitable distribution of food, producing hierarchies of consumption. While paying consumers dispose of their food excesses, those who lack the financial capacity to participate in the socially accepted process of food retail consumption collect the scraps, which are remade to become their meals.

Just like *retaso* and *pagpag* collection, I consider the collection of *tahong* (mussels) and other seafood in the estuary to be related to scavenging given the condition of the water as a dumping ground for sewage and garbage. The intake of seafood caught in the estuary poses health risks due to the toxicity of the water brought on by pollution. In spite of this, locals still use this food collection strategy. Eighner (2013) reframed the concept of scavenging as "a modern type of self-reliance," as individuals threatened by food insecurity assert their agency by redefining what is socially acceptable as food. Scavengers develop "a moral sense of one's place" through habits that make use of the physical characteristics of their surroundings, and this leads to the acceptance of the locations and behaviors connected with scavenging (Barnard 2016).

Scavenging had been normalized in the worldview of Tatay and Aling Ana. They went through their daily collection of *retaso* and *pagpag* as though they were merely harvesting food from their garden. Studies in both the Global North (Snell-Rood 2013; Tibbets 2013) and the Global South (Kimani-Murage et al. 2014; Mudege and Ezeh 2009; Snell-Rood 2013) have identified scavenging as a means of coping with food insecurity in populations where state support to end hunger is lacking.

Popular perspective would describe this narrative of estuarial dependency for survival as Filipino resilience. However, I assert that the consumption of socially stigmatized food by the residents of Baseco Compound is a result of their outright dispossession as "unwelcomed" members of the urban center. The state's consistent and deliberate neglect of their land tenure in a hazard-prone location and their need to access livelihoods that could alleviate their constant struggle toward food security create a structurally violent environment that further marginalizes them in society. As Ugelvik (2011, 1) frames, "The daily meals thus serve as painful bodily manifestations of the power the institution holds over the individual." However, the very same estuary that has been the source of uncertainty for the residents during flooding has become their key point of resistance. The unwanted food from the estuary has become the residents' fuel to continuously assert their right to the city—their nondisposability. The resources from their peculiar foodscape have mitigated the gaps in food subsidy that were expected to send them back to their provinces.

## Foods of Adversity and Remaking Meanings of Food and Space

What makes a food distinctively Filipino? Fernandez (1994) notes the interconnection between the immediate environment and the knowledge gained from other food cultures in the creation of iconic Filipino dishes. In this chapter, I presented the lived experiences of older adults and their households in a reclamation area that remains inhabited by undocumented settlers. Through the processes they created to acquire, produce, and consume food was born a critical narrative on the social construction of food. It is within this narrative that I framed the pervasive impact of ingestive inequality such that while the Philippines has recorded a significant increase in food insecurity among households, marking it as a serious health threat (Global Hunger Index 2019), the main food franchise from where most chicken *pagpag* comes from—Jollibee Foods Corporation—has recorded a 15 percent increase in gross sales, reaching US$4.8 billion (Lopez 2020).

The consistent politics of neglect that the state accords the Baseco Compound residents by treating them as undocumented settlers has

driven them to aspire to nutritional well-being beyond what is socially acceptable. The consumption of *pagpag, retaso,* and other food from the estuary reflects the residents' desire to attain well-being beyond what is made available for them. This is evident in the way they have shunned dependency on *chichirya* as a staple food source despite its sheer affordability and accessibility, arguing that "real" food like *pagpag* is much healthier while remaining cognizant of the potential diseases they could get from consuming such. The "realness" of *pagpag* is based on its closeness to natural ingredients as opposed to the "artificial" ones that make up *chichirya*. In exploring their culinary choices, we uncover not just a tapestry of gastronomic preferences but a poignant reflection of the disparities ingrained in the very act of nourishment. The residents' deliberate selection of certain foods over others speaks to a larger narrative of ingestive inequality in which socioeconomic and political factors shape not only what is available but also what is deemed "acceptable" in the realm of sustenance. Drawing from social inequality theory, we can interpret these culinary choices as strategic responses to the limitations imposed by the state and society. The differential access to resources, including nutritious food, becomes a tangible expression of the broader power dynamics at play.

This is not to assert that the forms of procuring food described above are part of the residents' aspirations for quality of life. There remains a desire to eventually benefit from socially acceptable food, just as they aspire to be included in the city they have lived in for a significant period of their lives. This type of parallelism in the remaking of meanings between food and space among Baseco residents raises the problematic on resilience as a trope. C. J. Alvarez (2019) discussed the policy of disaster resilience in post-Ondoy Manila that has created further threat of displacement of subaltern communities,[3] not to mention that offers of relocation in the suburban fringe are often accompanied by gaps in social services and livelihood opportunities (Recio and Dovey 2021). The decision of the residents of Baseco to continue to reside in a highly hazard-vulnerable location with seasonal accessibility to food sources is a matter of resistance to the very concept of their disposability. It becomes a form of resistance due to the active construction of means to adapt to the imminent threat of eviction premised in the inhabitability of the landscape.

Utilizing and reappropriating what is available in the environment to address their household needs, be it ingredients for food or supplies for

reclaiming a flooded area, have become part of the lifeways of the residents as they cope with gaps in government services in their area. It is within this framework that residents like Tatay, Aling Nilda, and Aling Ana rebranded *pagpag, retaso,* and food from the estuary as staple food and the contested land, the Baseco Compound, as their home.

## Notes

1. A barangay is the smallest political unit in the Philippines. It is equivalent to a village and is led by a set of elected officials.
2. Gawad Kalinga and Habitat for Humanity constructed around four thousand concrete homes along the entrance to the compound.
3. Typhoon Ondoy (international name Ketsana) devastated Metro Manila on September 26, 2009.

# 9 | Sirá-Sirá Stores

## *Food Access in Times of Crisis in Capiz*

Anacorita O. Abasolo and
Marvin Joseph F. Montefrio

In the first few weeks of our field research in Capiz, we asked owners of *sari-sari* stores (home-based neighborhood stores), "When did you 'open' your *sari-sari* store?" Surprisingly, almost all our respondents found it difficult to answer this question. Nanay Mira, the owner of a small *sari-sari* store in front of the house where we stayed, paused and looked puzzled before replying:[1] "Wait, I am not sure! You see, I started my *sari-sari* store in 2010, but when super typhoon Yolanda came in 2013, I closed my store. Then in 2016 I opened it again, but then another strong typhoon came in 2019, so I closed my store again. In early 2020 I decided to reopen, then here comes the COVID-19 pandemic. I was afraid, so I closed my store again. You see, it's a *sirá-sirá* store, not a *sari-sari* store!" *Sirá-sirá* is a word play on the Filipino term *sari-sari* (variety or miscellaneous), which we heard numerous times throughout our field research. The word *sirá* in Hiligaynon, the dominant language in Capiz, means "to close," which locals use to capture the fact that *sari-sari* stores are often temporarily closed due to limited stocks. Nanay Mira's depiction of her *sirá-sirá* store illustrates the precarious nature of these home-based microenterprises. However, extended conversation with her revealed a paradox—stores that are vulnerable to environmental and health crises and prone to closing down also play an important role in providing households access to food during those times of crisis. Compounding that paradox, as conversations with other interlocutors revealed, are issues of access to good nutrition. Households living in precarity increasingly depend on the cheap, processed food sold in *sari-sari* stores.

*Sari-sari* stores (also known as *tyangge* in Capiz) are an identifiable feature of the urban and rural Philippines.[2] They are ubiquitous, with more than a million estimated to be operating nationwide. *Sari-sari* stores are home-based microenterprises that carry a diverse inventory of everyday commodities and are typically managed by women (Bonnin 2006; Dannhaeuser 1977, 1980). Some of them are built into the house where the family resides, while others are detached as stand-alone structures often made of native materials such as sawali or *amakan* (woven bamboo strips), nipa (*Nypa fruticans*), and cogon (*Imperata cylindrica;* see figure 9.1). Regardless of their setup, they are typically small, averaging about five square meters in floor area, and are located adjacent to or near housing clusters. *Sari-sari* stores commonly have an opening or a window covered with an iron mesh or screen, where buyers and patrons, often neighbors, pick their goods and conduct their transactions. Displayed right behind the screen or mesh is a wide, colorful assortment of *paninda* (items for sale), which they typically purchase at a wholesale price from



FIGURE 9.1. A typical *sari-sari* store in Capiz built adjacent to the owner's house. *Source:* Photo by authors.

municipal urban centers or the nearby capital city of Roxas. Items for sale include candies carefully sorted and kept in repurposed glass and plastic jars, as well as tidbits, *chichirya* (snack foods such as chips), and sachets of corporate-branded sundries—Nescafe 3 in 1 coffee, Milo, Tide laundry bar soap, Palmolive shampoo, and so on—hanging on the wire mesh or a *sampayan* (clothesline). Bulkier items such as Lucky Me! instant noodles, Ligo and 555 canned sardines, and other bottled condiments such as *toyo* (soy sauce), *suka* (vinegar), *patis* (fish sauce), and *mantika* (cooking oil) are displayed on a DIY wooden shelf behind the room. Owners who can afford to pay a higher electricity bill put a small refrigerator inside the store or their house to keep beverages for sale, like Coca-Cola and San Miguel beer, cold. *Sari-sari* stores in rural Capiz also sell fresh foods, such as *bigas* (uncooked rice), *itlog* (fresh eggs), and daily harvests of fruits and vegetables from the store owner's backyard.

It is not just the diversity of *sari-sari* stores nor the items they sell that make them uniquely distinct and functionally important in Philippine society, especially when compared to supermarkets, convenience stores, or *palengke* (wet market) stalls. Situated in housing clusters, *sari-sari* stores are easily the most omnipresent, accessible, and flexible establishments to purchase food and everyday items, as well as exchange information, stories, and gossip. In rural communities in Capiz, it was common for us to find *sari-sari* stores situated every five or so houses from each other. Most Capisnons do not have to walk too far to purchase a food item and catch up with their neighbors. These stores are accessible not only in terms of spatial proximity but also in regard to social class. One indicator of class accessibility is the prevalence of prepacked items, such as cooking oil and sugar, sold in small sachets to make these everyday comestibles affordable to consumers who, in most cases, are underprivileged. *Sari-sari* stores in Capiz are highly flexible too. Patrons knock on the owner's home to request emergency purchases, even after store hours. More importantly, *sari-sari* stores provide credit (see also Matejowsky 2007a; Ruiz Tafoya 2023), usually in a form that allows patrons to get basic goods like food items in moments of strife. Since most patrons are neighbors, many of whom the owners consider close acquaintances and friends, extending credit is not a difficult request to grant. These unique attributes have allowed *sari-sari* stores to proliferate and remain popular in Capiz, owing to the widespread patronage of the less privileged classes.

In the last four decades, much of the scholarship on *sari-sari* stores has analyzed the economic and noneconomic functions of these microenterprises in Philippine society. These stores play a major role in an owner or patron's household budget (Chen 1997; Dannhaeuser 1980; Silverio 1975), and they also act as a space of interaction that shapes and sustains key social relations in the neighborhood (Matejowsky 2007a; Turgo 2013). Another critical function of *sari-sari* stores is food provisioning. In a country like the Philippines, situated along the typhoon belt and prone to natural hazards, it is important to examine such a function in relation to the environment. A few studies have established this link. Montefrio and Dressler (2019) allude to the role of *sari-sari* stores in mediating rural food security through credit in the context of changing upland environments. Ruiz Tafoya (2018), on the other hand, suggests the increased significance of the provisioning role of *sari-sari* stores during environmental calamities. Beyond the Philippines, the role of neighborhood retail establishments in environmental crisis management has gained attention in academic and policy discourses (see, for example, Murao and Iwamoto [2005] and NACS [2021] on *konbini* in Japan; Hinderaker and Schlegelmilch [2020] on small grocery stores in the United States). The emergent framing seems to suggest an optimistic normative view that such establishments could and should be leveraged for disaster response and crisis management.

In this chapter, we present a complex picture of *sari-sari* stores. On one hand, they provide low-income households food relief after a super typhoon or during a pandemic. On the other, they are vulnerable to the same shocks and are unable to ensure access to nutritious foods, especially among precarious rural populations. We therefore argue that *sari-sari* stores can both be a relief to an environmental crisis and a symptom of rural precarity—a condition in which rural populations face insecure livelihoods and restricted agency in shaping their futures amid uneven agrarian political economies. We build on the works of Montefrio and Dressler (2019) and Ruiz Tafoya (2018) in exploring the role of *sari-sari* stores in mediating households' access to food but also in putting them in conversation with the emerging scholarship on climate precarity (Nataranjan, Brickell, and Parsons 2019; Nataranjan and Parsons 2021).[3] Our findings contribute to our understanding of the way neighborhood food retailers like *sari-sari* stores mediate food security and are affected by

environmental and climate crises—an important form of knowledge to gain given the many cognates of *sari-sari* stores in other parts of the world (see Bromley 1998 for Mexico; Coen, Ross, and Turner 2008 for Bolivia; and Ligthelm 2005 for South Africa).

## Studying Capiz

We set out to study food security and extreme weather events in Capiz and Roxas City, the provincial capital, from June 2021 to March 2022, with a follow-up visit in July 2023. We were drawn to this province in the Western Visayas region of the Philippines because of its rich agriculture and marine and coastal resources. *Capisnons* (people living in Capiz) take pride in Roxas City's reputation as the nation's seafood capital. Curiously, however, Capiz has not been a popular geographic interest among scholars of the Philippines, and there is still a dearth of published scholarship on the province's foodscape and environment.

Capiz offers diverse geographic features that have allowed for a vibrant agricultural and fishing economy. This was evident as soon as we traveled by land on one of its main throughways from Roxas City to the neighboring municipalities. On one side we found sprawling rice, coconut, and sugarcane cultivation, while on the other the province's expansive coastline faced the Sibuyan Sea. The major portion of the province's land area is devoted to lowland and upland agriculture, making it one of the largest rice and corn producers in the region (Provincial Planning and Development Office 2013; PSA 2020). Meanwhile, the coastal waters of Capiz constitute one of the richest fishing grounds in Western Visayas (PPDO 2016). As one would imagine, Capisnons enjoy for a modest price an abundance of sumptuous seafood, including blue marlin, tuna, prawns, oysters, shrimps, crabs, and eels, all of which are sold in the markets of Metro Manila for premiums. The province is also known for other food and craft industries such as oyster sauce, dried fish, and the famous Capiz decorative products made from the shell of the windowpane oyster, *Placuna placenta*.

Agriculture and fishing are the lifeblood of Capiz, and almost 80 percent of Capisnons depend on them for their income; one-third of the province's income hails from food production (PPDO 2016). Ironically, however, the abundance of agricultural and marine resources in Capiz

has yet to equitably translate to greater well-being among Capisnons. While the incidence of poverty in Capiz is lower than the average in the Philippines, it has increased remarkably in the last few years.[4] Subsistence farmers and fisherfolk are especially strapped. When there is crop failure or a dismal fish catch, they tend to look for other employment opportunities and supplement their incomes with nonagricultural employment. In times of shortfall, they engage in multiple agricultural and nonagricultural jobs, practice coastal gleaning, and put up *sari-sari* stores if they have access to credit. Many can be classified as rural precariats whose livelihoods are insecure and incomes, unstable (Nataranjan, Brickell, and Parsons 2019; refer to chapter 8 in this volume on the urban precariats). Some are more precarious than others, such as the small fishers residing in poorer coastal communities in Capiz; we discuss them in more detail below.

Precarity among farmers and especially the fisherfolk becomes even more apparent with Capiz's vulnerability to extreme weather events. The province is chronically affected by typhoons, averaging about two to three strong storms a year.[5] In the last ten years alone, the province was hit by two super typhoons—Yolanda (Haiyan) in 2013 and Ursula (Phanfone) in 2019—which left lasting impacts on the lives of Capisnons. The trauma caused by these two calamities was evident in our conversations with local community members. Even less intense weather events, such as a low-pressure area, can induce livelihood- and life-threatening hazards such as massive floods, coastal storm surges, and landslides. A number of storms less powerful than Haiyan and Phanfone had caused floods in lowland municipalities, affecting rice farmers and fishpond operators. Just after we concluded our field research, tropical cyclone Agaton (Megi) hit the Western Visayas region, causing floods in several municipalities where we had done our research. The provincial government has recognized that typhoons are one of the major causes of low crop production and disruption of daily fishing activities, contributing to the poor living conditions of Capisnons (PPDO 2016). With more powerful tropical cyclones predicted to have an impact on the Philippines in the future (Cinco et al. 2016; Ying et al. 2012), there is much concern about how climate change will worsen poverty and rural precarity in Capiz.

In the context of existing precarities and extreme weather, we examine more closely the complicated roles that *sari-sari* stores play in food provisioning in Capiz. Our analysis in this chapter draws primarily from

interviews conducted with fifty-two *sari-sari* store owners in ten barangays located in five coastal municipalities in Capiz, as well as participant observation in *sari-sari* stores for the entire duration of our field research.[6]

## The Precarity of Sirá-Sirá Stores

Capisnons' use of the moniker *sirá-sirá* best encapsulates the instability of *sari-sari* stores. Here we extend the definition of precarity to include the instability of *sari-sari* stores and discuss several factors mediating this condition. First, as a home-based business, *sari-sari* stores are contingent on how well households manage their finances, which, in the case of most rural Capisnons, are already constrained to begin with. The capital needed to put up a *sari-sari* store has increased significantly over the years. Some store owners we interviewed claimed that in the 1990s, five thousand pesos was sufficient to start a sizeable *sari-sari* store with a wide variety of food and nonfood items.[7] Nowadays, this amount can give you only "basic commodities" such as canned goods, instant noodles, and some instant coffee and milk at best. Most owners we talked to have relied on hard-earned savings from selling their own produce and the income they get from on-farm labor activities such as *pamugon* (working in a farm or in fishing), *hilamon* (weeding or removing weeds in the rice field), and *pag-ani* (harvesting). Others have tapped into income earned from off-farm labor, such as wage labor in Roxas City, and remittances from relatives working abroad.

Some owners, however, find incomes from their existing livelihoods insufficient to start the business. As a result, they supplement with (and in some cases, rely on) money borrowed from lending or microfinancing institutions. Based on our conversations with the Capisnon fisherfolk, borrowing from microfinance has become more pervasive since typhoon Yolanda. As one store owner explained, "We don't have a lot of savings, so we borrow from microfinance, and then we just try our best to sell to pay our loans every week." Sustaining the store operations requires rotating capital, and when this capital is not available, most store owners continue to rely on microfinance institutions, increasing the amount of borrowed money. Sitting on debt, these households face difficulty replenishing stocks when dealing with (un)expected major expenses—such as school tuition fees, housing renovations, healthcare needs, fishing gears and nets

when these items are accidentally lost or damaged, and pesticides when there is a sudden outbreak of pests—resulting in the temporary closure of their stores. Households prioritize these major expenses over the longevity of their *sari-sari* stores. Their stores can reopen anytime as long as enough capital is available, while fishing gear, for example, is absolutely necessary and cannot be delayed.

Store owners manage not only their own credit but also the credit of their patrons—and this bears implications for the precarity of *sari-sari* stores. Patrons usually request credit during times of chronic troubles (e.g., poor harvest, limited fish catch, delayed wages and remittances) and acute crises (e.g., crop failures due to drought, typhoon damage, and the COVID-19 pandemic). During our field research, many store owners said that turning down requests for credit from neighbors was challenging, corroborating Ruiz Tafoya's (2023) observations in Payatas. Store owners typically maintain a *listahan* (list) of the items that patrons purchase on credit and set a maximum amount of goods to lend (averaging about PHP 1,000 or around US$20 per person), with a set weekly deadline to pay the credit in cash. However, many debtors are unable to repay debts on a weekly basis and request extensions. When debt servicing delays compound, store owners then face the difficulty of rotating their capital, putting their business at risk of closing down. Jana, a store owner, expressed this concern: "It's unavoidable lending to your neighbors. . . . Sometimes the repayment is monthly, so if you don't have enough capital, your *sari-sari* store will sink." When the *sari-sari* store closes down, some owners still try to demand payment for the unsettled debts left by debtors, until eventually these debts are forgotten.

Second, environmental crises contribute tremendously to the precarity of *sari-sari* stores, especially in a province like Capiz where typhoons are common. *Sari-sari* stores are vulnerable to typhoons not only because of the increased demand for credit from patrons in times of crisis but also due to the direct impacts of typhoons on the owners themselves. In the last ten years, super typhoons like Yolanda (2013) and Ursula (2019) inflicted extensive damages to public and private infrastructure. Many houses and *sari-sari* stores were blown away and flooded and store stock damaged and looted. The extent of damage was perhaps expected, given that most *sari-sari* stores in Capiz are made of frail native materials. One store owner, Diana, lamented, "There were three typhoons—Ruping, Ursula, and Yolanda—that wrecked my store. I had those stores for a

time, yet every typhoon everything is swept away. I have to rebuild my store using nipa and bamboo." Another store owner, Yoli, recounted, "We thought we would die during Yolanda. If we did not relocate, we would have died. Our house and store were destroyed, [and] our stocks got damaged, either soaked or washed away."

*Sari-sari* stores affected by typhoons close indefinitely and operate only when the house is rebuilt and when start-up capital is available. Reopening stores after a typhoon can take a long time. Many of those affected by super typhoon Yolanda, for example, took at least three years to reopen their store; others were able to start only recently, almost nine years after. Unfortunately, in the past decade the two super typhoons that hit Capiz made it extremely difficult for *sari-sari* store owners to recover. As one owner, Emma, lamented, "After Yolanda, our house and the roof of our *tyangge* were damaged. After Ursula, our home and *tyangge* once again got damaged. Our goods were spoiled, the rice got wet. We just borrowed money from the bank and lenders just to fix the roof of our *tyangge* after Yolanda and Ursula." While *sari-sari* store owners in Capiz are familiar with the struggles brought about by typhoons, the COVID-19 pandemic exposed Capisnons to an unprecedented crisis. In 2020, at the height of the pandemic lockdowns in the Philippines, most owners closed their stores immediately for fear of contracting the virus. Meanwhile, those who decided to keep their stores open struggled to maintain their stock, as traveling from their barangay to the nearby city was prohibited. Requests for credit intensified, as the majority of the daily wage earners and workers lost their jobs and food insecurity intensified. *Sari-sari* stores became the immediate source of the daily food needs for the owners' families during the on-and-off lockdowns while struggling to find capital to sustain the stock. As one store owner recalled, "During COVID, it was really so hard because we were running short of funds. We were borrowing money [from lenders] just to maintain the stock of our *tyangge,* which our family just consumed anyway for our day-to-day needs." The higher incidence of credit among patrons, the diminishing cash transactions, and the growing need for owners to borrow money made it extremely difficult to sustain the *sari-sari* stores. Those who attempted to keep their stores open in the early months of the pandemic eventually decided to just close them down.

It is a combination of their generally weaker infrastructure, the unstable income flows of their owners, their credit-provisioning practices, and

rising debt that makes *sari-sari* stores so precarious relative to other food retailers such as grocery and convenience stores. These other retail spaces are distinctly different from *sari-sari* stores in several ways: they are typically located in concrete buildings with galvanized iron rooftops; they have a larger footprint for stockpiling items; they are owned by individuals, families, and organizations with greater access to economic and social capital; and they rarely sell comestibles to consumers on a credit basis. Moreover, grocery and bigger convenience stores are plugged into larger supply chains and able to take advantage of wholesale prices, while *sari-sari* stores often purchase their stock from the former on a standard retail price.

In the early stages of our analysis, we identified *sirá-sirá* stores as *ephemeral,* meaning they last only for a very short time. Later we realized that these stores can also be persistent. We encountered families who have strived to reopen their stores by saving money, borrowing from lending and microfinancing institutions, and selling assets, even if the process of rebuilding takes months if not years. Hence, any store may be insecure and at risk of closing down, but its ability to bounce back, as well as the tendency for new ones to open, allows for the constant presence of *sari-sari* stores in any given community. We are careful not to refer to this phenomenon as "resilience" to ensure that we do not replicate the problematic discourses associated with the term (see Alejandria and Smith 2019). Instead, we prefer to describe it as "precarious yet persistent." The persistent presence of *sari-sari* stores has important implications for their capacity to contribute to households' food access in times of crisis.

## *Sari-Sari Stores and Food Access*

Opening and maintaining a *sari-sari* store that sells a wide array of goods can be a complex endeavor, especially in geographies prone to environmental crisis. It is unsurprising then that these food-retailing spaces are precarious. But why do households continue to put up *sari-sari* stores even if they are aware of their *sirá-sirá* nature? Why do they persist in reopening one even after closure? Store owners draw from multiple motivations ranging from supplementing incomes to obtaining cash for daily expenses (e.g., student and transportation allowances) and ensuring daily access to food. It is the access to food, especially in times of crisis, we focus on.

Many owners we conversed with attested to the role *sari-sari* stores contribute to their household's food security. One store owner, Jonalyn, said, "It's only been three years since I started our *tyangge*. This is how I earn for our children who are studying, and to ensure we have food as well. *Sari-sari* stores are of great help." Aning likewise attested, "I don't have much income to contribute, because I am just taking care of our child. [Our *sari-sari* store] seems to contribute to our daily needs, especially now that life is so difficult. Even if it's just little by little, we still have something to get from it." These owners stock food with longer shelf lives, such as canned goods and instant noodles, which their families consume whenever there is a need.

The contribution of *sari-sari* stores to food access goes beyond the owner's household. For instance, *sari-sari* store owners' practice of providing credit can ensure access to food for those facing chronic and acute financial difficulties and whose sources of livelihood are precarious. The food items commonly purchased on credit are rice, canned sardines, instant noodles, instant coffee, and eggs. Food-as-credit relations are more evident in the coastal communities, especially among the small fisherfolk. We noticed that fisherfolk always face livelihood uncertainty, often returning from a day of fishing with no guarantee of earning enough to ensure adequate food for their family. When fisherfolk struggle with a limited fish catch, they resort to begging for credit at a neighboring *sari-sari* store.

The role of *sari-sari* stores in providing immediate access to food becomes more pronounced in times of crisis. When super typhoons Yolanda and Ursula struck, rural households and communities relied heavily on *sari-sari* stores as an immediate source of food and other basic necessities, mostly again in the form of credit. Farmers relied on food as credit as their rice fields and gardens were devastated. The fisherfolk, on the other hand, suffered the most as their banca (small fishing boats) and fishing nets were destroyed and lost. One *sari-sari* store owner in a coastal community recounted, "After a typhoon, [I am a] hundred percent sure there will be somebody who will come to us to ask for credit because they don't have money and they cannot catch fish." Until now, coastal dwellers who lost their fishing gear during the super typhoon Yolanda in 2013 were still saving to buy a new one, and some purchased *banca* in installments. In anticipation of the impacts of typhoons, some households avail of the food-as-credit provision even before a typhoon strikes. "There are those

who borrow even before a typhoon hits us, but they pay it back when they get money," explained one *sari-sari* store owner.

Our interlocutors also emphasized how *sari-sari* stores became a relief during the COVID-19 pandemic. While the majority of the *sari-sari* stores decided to close down during lockdowns, a few opted to stay open so their neighbors could continue to have access to basic goods. For subsistence farmers and fisherfolk, securing their family's daily food needs during the pandemic was a priority, even if it meant obtaining them through credit. One store owner, Evelyn, who is also a farmer, said, "The *sari-sari* stores helped so much during the pandemic, because it was helping us meet our daily needs. . . . It is where we get our daily needs for rice and viand." Another store owner, Jana, emphasized the kinds of food purchased during the pandemic: "What people were mostly buying during the pandemic were food. Rice. Bread. Milk. Coffee. Everyday essentials."

The food-security functions of *sari-sari* stores during times of crisis extended beyond their neighboring households. There had been instances when barangay officials purchased foodstuff from *sari-sari* stores for their relief operations, especially when roads became inaccessible after a calamity. Store owner Aning was contacted by their local government officials to aid in the relief effort after typhoon Ursula hit the province. "Our barangay captain bought the remaining rice that was not spoiled, and also noodles and sardines, which they then gave away to people," she recalled. During the pandemic, we observed how barangay-level relief efforts bought stock (mostly canned goods, rice, instant noodles, vitamins, and medicine) from neighborhood *sari-sari* stores to distribute to quarantined households.

The benefits of *sari-sari* stores in preventing hunger are evident. However, food access is also about the capabilities of people to "acquire appropriate foods for a nutritious diet" (FAO 2006, 1; see also Pinstrup-Anderson 2009). The impetus to consume processed food with lower nutritional content like canned sardines and instant noodles becomes acute during crises. Ruiz Tafoya (2018) attests to this phenomenon, mentioning that in urban-poor communities highly vulnerable to crisis, packaged processed foods sold in *sari-sari* stores become associated with survival. In the coastal barangay we visited, fisherfolk facing livelihood precarities were reliant on *sari-sari* store credit and the processed foodstuff typically found in these stores for their daily food consumption.

Montefrio and Dressler (2019) illustrate a similar phenomenon in Palawan, where Indigenous swiddeners laboring in oil palm fields become dependent on low-nutrition food stuff they purchase on credit from cooperative-run *sari-sari* stores. Rather than consume fish they catch from the sea, the fishers we encountered in Capiz typically sell all their catch and use the money to buy *bigas* and canned sardines from *sari-sari* stores. They depend on *bigas* from *sari-sari* stores because most of them do not have fields to grow rice.

Some of our interlocutors are aware of the poor nutritional value of the processed food sold in *sari-sari* stores; in fact, they dissuade their children from consuming too much *chichirya* (see chapter 8 in this volume on nutritional perceptions of food among urban precariats). Others have no choice but to just find ways to supplement the processed foods they buy from *sari-sari* stores with whatever they can get that they deem "nutritious." Lina, for example, explained that "when we don't have *ulam* (viand), my children open a can of sardines and cook it up with eggs. Sometimes they cook instant noodles mixed with *malunggay* [*Moringa oleifera*], so at least we can have a nutritious meal."

Despite these attempts, the prevalence of processed food low in nutrition is concerning. In certain coastal barangays in Capiz, *sari-sari* stores selling almost the same goods—rice, canned sardines, instant noodles, and so on—were just a few houses apart. When asked the reasons why they tend to sell similar goods, one store owner shared, "These items sell fast, and if the stocks run out in other stores they come to us." A more systematic nutritional study at the household level is warranted, but we raise the concern now of whether the proliferation of processed foods in *sari-sari* stores forewarns a shift in rural people's diet from fresh to low-nutrition foods. We also wonder if there are particular rural populations more predisposed to such shifts, such as those living in coastal communities whose livelihoods are primarily dependent on fishing.

In the literature, fisherfolk in coastal communities in the Philippines are depicted as having a more marginalized situation than those dependent on terrestrial livelihoods (Gaillard et al. 2009), due largely to the confluence of multiple stressors related to livelihood precarity, market instability, coastal resource management issues, and vulnerability to environmental hazards, among others. Scholars have called this combined effect the *coastal squeeze* (Andriesse and Lee 2021; Gupta and Bavinck 2017). The fisherfolk then endure what Natarajan, Brickell, and Parsons

(2019) refer to as *climate precarity,* when the precariats are embroiled in debt reinforced by uneven agrarian political economies and fueled by environmental change, ultimately limiting their choices in life. In the case of Capiz, there is a risk that the food choices of the precarious fisherfolk will increasingly be limited by whatever *sari-sari* stores can offer, thus affecting their health and well-being in the longer term.

The experience of Nanay Mira from our opening vignette represents the complications of managing *sari-sari* stores in a time of climate uncertainty and rural precarity. Super typhoons made it difficult for her to sustain her *sari-sari* store, but these crises also did not stop her from reopening and keeping it running, even after the pandemic. We wondered about her persistence. Perhaps she and her family saw their *sari-sari* store as a way to temper their precarity and prepare for whatever surprises come their way, whether they be more frequent and stronger typhoons or other shocks nature throws at them. For her and the many other owners in Capiz, *sari-sari* stores are not just there to help diversify household incomes; they are also there because they act as "stores" where easily stocked food items can be kept and used in times of crisis. From the perspective of neighboring households, they can access the "stores" in times of crisis with the help of the food-as-credit provision. From the perspective of the local government, they can use these "stores" as a source of food relief for hard-to-reach localities affected by calamities. Interpreted in these ways, *sari-sari* stores appear indispensable in providing food access to people at risk of acute hunger in crisis situations.

However, we also interpret *sari-sari* stores as possibly a symptom of a larger issue—one that points to the worsening precarity of rural populations in times of extreme environmental changes. Although *sari-sari* stores remain ubiquitous in rural communities in Capiz in spite of their vulnerability to crises, we recognize that capacities to reopen these stores often hinge on external sources of capital, such as remittances and microfinance loans. The scholarship on climate precarity does warn us about how circuits of debt make a precariat even more precarious. While we have yet to examine debt in detail, one concern we have is whether *sari-sari* store owners get mired in debt cycles and traps. Moreover, the tendency for *sari-sari* stores to stockpile processed foods like canned goods and instant noodles can be a sign of rising precarity in a community. The combination of stockpiling cheap, processed foods with the food-as-credit provision

increases the popularity of *sari-sari* stores among the precariats who find relief in these microenterprises as a means of addressing not just acute but also chronic impacts of environmental change. The growing demand for such provisions possibly encourages the proliferation of *sari-sari* stores in vulnerable communities. Our concern is that if these trends continue, we might see the precariats' access to nutritious food eroding and their diets shifting toward unhealthy eating habits and chronic malnutrition.

Beyond the Philippines, our findings suggest the importance of recognizing the complicated role of neighborhood food retailers throughout the world in mediating food security in the context of environmental and climate crises. Part of what makes it complex is the broader political economy where these food-provisioning establishments are situated. In this chapter, we brought in the dimension of rural and climate precarity to complicate the optimistic narrative that these institutions will adequately feed us in times of environmental crisis.

## Notes

1. We use pseudonyms throughout the chapter.

2. *Sari-sari* stores are also called *suking tindahan* (*suki* in Tagalog means "regular patron" and *tindahan* means "store") and *tindahan sa kanto* (*kanto* in Tagalog means "around the corner").

3. We define "access to food" as access to "adequate resources (entitlements) for acquiring appropriate foods for a nutritious diet" (FAO 2006, 1; see also Pinstrup-Anderson 2009). Food access is one of the dimensions of food security, which includes availability, utilization, and stability.

4. Poverty incidence (the proportion of families/individuals who have a per capita income that prohibits them from meeting their individual basic food and nonfood needs) in Capiz increased from 6.2 percent in 2018 to 9.5 percent in 2021. Capiz is third among the six provinces in Western Visayas with the highest increase in poverty incidence from 2018 to 2021. In comparison, the average poverty incidence in the country is 18.1 percent (PSA 2022b).

5. We based this on the annual tropical cyclone tracks from 2017 to 2021 of the Philippine Atmospheric, Geophysical, and Astronomical Services Administration (PAGASA 2021).

6. A barangay is a territorial and administrative jurisdiction that constitutes the most local level of governance in the Philippines.

7. This corroborates with Chen's (1997, cited in Matejowsky 2007a) estimate of PHP 5,000 in 1997.

# 10 | A Pantry of Things

## *Care Work and Carceral Arrangements in Food (and) Activism*

Ezekiel Sales

Sunday morning, a week after a historic Easter in lockdown, a group of volunteers loaded relief packs for delivery to communities in the municipality of Norzagaray in Bulacan Province. The affected were only one community among the vast sea of Filipino people left without a choice but to wait for the government's *ayuda* (aid) due to the rigid lockdown protocols. "Rigid," all told, is a euphemism for what had been one of the longest COVID-19 lockdowns to take place in the world. Despite the spread of the COVID-19 virus and the military restrictions on mobility, the volunteers making their way to Bulacan continued to travel across a landscape dotted with obstacles, ensuring the arrival of aid. Who would have expected that those same volunteers would, later that day, reappear on the news as the detained Norzagaray seven, arrested while conducting relief operations and carrying government-issued food passes? The volunteers were said to be carrying "subversive materials." They were in fact COVID-19 primers designed by Sama-Samang Artista Para Sa Kilusang Agraryo (SAKA), a group of artist advocates for agrarian reform, and *Pinoy Weekly,* an alternative news press covering issues faced by marginalized sectors. Calls for their release reverberated in social media with the hashtags #FreeSagipKanayunan7 and #TulongHindiKulong (Aid, Not Imprisonment).

The vibrant food distribution system these Norzagaray 7 were part of was Sagip Kanayunan, Tulong Anakpawis's mutual-aid initiative, one among many civil society initiatives that filled in the gaps of the ailing rounds of the government's recovery program. The relief operations

sought to connect landless farmers' produce—with the help of the Kilusang Magbubukid ng Pilipinas (Peasant Movement of the Philippines)—with communities in dire need elsewhere by selling the produce in small towns and cities through the *bagsakan* (wholesale) markets or rerouting them for further operations. Other initiatives, such as Lingap Maralita (Care for the Poor), similarly tended to the urban poor and homeless by bringing fresh organic produce from small organic farmers in rural areas (Montefrio 2020a). Likewise, *kusinang bayan* (community kitchens) sprouted in various neighborhoods, utilizing fresh produce obtained from either farms or local vendors at the same community (FTFT 2021a). Others started growing their own organic food on vacant lands and in recycled containers. Such low-cost input and safer methods of gardening were championed by women in *tanimang bayan* (community gardens) under the model of agroecology (Garcia 2021b; see also chapter 12 in this volume).

Apparent in the mutual-aid initiatives like *tanimang bayan* and *kusinang bayan* is care work. In Sitio San Roque, Quezon City, as well as the housing sites in Pandi, Bulacan, members of Kalipunan ng Damayang Mahihirap (KADAMAY), an alliance of urban-poor organizations, speak of gardening as a source of food and additional income during the economic onslaught of the pandemic (Garcia 2021a, 110). Such work done by groups like KADAMAY and various initiatives such as Lingap Maralita, Sagip Kanayunan, and Tulong Anakpawis exhibited forms of preservation that persisted amid precarious socioeconomic and environmental conditions. The absence of social safety nets for marginalized communities prior to the pandemic speaks to the disposability of these populations in the eyes of the state. The aggressive privatization and conversion of lands have also led to shortages in local food production, making the Philippines more dependent on imports. Mutual-aid networks then had to step up to address these gaps that were brought to the fore during the hard lockdown and deliver the everyday needs of the marginalized. Furthermore, these networks employ a form of care work or labor not just entrenched within food activism but also accountable to the everyday domestic economy. Their activism recognizes the nature of frontline/essential work and its invisibility and (de)valuation in the current neoliberal capitalist regime (Federici 1975).

The mutual-aid networks that have emerged in pandemic-stricken Manila have interlaced the already established movements in both

agrarian and urban landscapes—such as MASIPAG, the Lumad *bakwit* schools, KADAMAY, Slow Food, and Art Relief Mobile Kitchen, among many others—that have been operating for years before the pandemic. Radical agroecological movements of reclaiming rights over land, such as the fugitive practice of *bungkalan* (literally translates "to cultivate"; Garde and Manzano 2017), for example, have emerged in response to the growing number of rural precariats born out of the lingering presence of haciendas, the rampant expansion of plantations, and land grabbing, among others (Schoenberger, Hall, and Vandergeest 2017). Those who practice care work through *bungkalan* and similar forms of activism have been identified as terrorists and suffered human rights violations (De Guzman et al. 2022; Dressler and Smith 2022).

Preservation and disposability reflect the image of a "pantry of things" where certain foodstuffs are made to extend their shelf life, while others are neglected beyond expiration for disposal. Both preservation and disposability breathe a dynamic of struggle to life and a reaction of the state to those who commit to such. In this chapter, I look at the dynamics of social preservation through a political economy analysis of care networks that have formed around commitments to food activism. Furthermore, I consider the notion of social disposability as it manifests in the carceral geographies of urban and rural landscapes. Carcerality figures strongly in preservation and disposability in the context of food activism in the Philippines. Existing scholarship on carceral geography—which examines the circuits of immobility exemplified by crackdowns on activists, closures of schools, overcrowding of prisons, and the carceral conditions in both urban and rural life—draws one's attention to lockdowns as another important site of analysis (Gill et al. 2018; Moran 2015). During the pandemic lockdowns in the Philippines, the state responded with guns and military presence to "discipline" the movement of bodies in space through social distancing and curfews, leaving the majority of people to fend for themselves to address food insecurity and healthcare needs. The situation created a need for the widespread organizing of mutual-aid networks.

The stories I recount in this chapter were based on interviews with food activists, my participation in mutual-aid networks, and current literature on food movements in the Philippines. I interviewed members of urban-poor communities where food organizing took place, as well as leaders of mutual-aid movements. I also visited *tanimang bayan* sites and participated in *kusinang bayan* initiatives in Manila, which allowed

me to learn about the health, food, and dwelling concerns of the urban poor and the carcerality they experience. Finally, I dove into the works of one acclaimed advocate of *bungkalan,* Angie Ipong, to explore the accounts of doing care work in harsh environments such as plantations and prison sites (Bueno 2018). All the stories I put together, in this pantry of things, point to the disconcerting yet hopeful unfolding of preservation and disposability in food activism spaces. I argue that the state's response against people involved in the mutual-aid networks of community pantries, *kusinang bayan, tanimang bayan,* and *bungkalan* shows how carcerality, especially in this time of heightened authoritarianism and militarism, undermines the care work needed to preserve the lives of the disposable. Notwithstanding the treacherous path ahead for these networks, spaces of care endure amid the tightening of urban and rural carceral geographies.

## Community Pantries, *Kusinang Bayan,* and Urban Carcerality

"If the state doesn't even value people's lives, then how much more with food? It's as if we are treated disposable," said Ana Patricia Non. Our interview ended late at night, way past dinnertime. Everyone helped carry the kitchen wares—used to cook for around a hundred families who had lost their homes from a fire that ravaged their local villages in Quezon City—to wash. Volunteering in this community kitchen provided me the opportunity to converse with Non, who goes by the nickname Patreng.

The community pantry movement that mushroomed throughout the archipelago got its inspiration from Patreng's seed actions down the street of Maginhawa, Quezon City. "I just set it up in place, without expecting anything big to happen next," she said. A humble wooden rack placed on the sidewalks, the concept uncovered an untapped means of organizing and distributing food surplus. Patreng's motivation for setting up the pantry was triggered by her family's furniture business closing down and the family facing difficulty surviving the lockdown. Bearing the hardships of city life during the pandemic and reliance on food rations provided by the government, which were mostly high-sodium processed foods of low nutritional value such as canned goods and instant noodles, made her think about the concept of *food security* (see chapter 9 in this volume).

The amount of government rations, which did not distinguish the number of people living in a household, prompted her to think about the many other households not too far away from her that were most likely in need of food.

With the support of friends calling for donations and sharing her initiative online, Patreng's humble community pantry eventually went viral on social media, bringing together crowds on her street. The community pantry displayed an assemblage of items such as canned goods, instant noodles, vegetables, and rice for anyone to receive. A signage hung on a nearby post bore its mantra: "Magbigay, ayon sa kakayahan; kumuha, ayon sa pangangailangan" (Give what you can, take what you need). Soon after, many more community pantries were set up in various localities, carrying the same signage. Donors started flowing and sidewalks were marked with long lines as the number of people gushed to take part in the community and give (figure 10.1). Community pantry social media groups were then launched to help with the logistics and start a digital network of volunteers and organizers. Thus, the Community Pantry PH movement—a clustered body of community pantries nationwide acting independently but with the common intention of providing community care via the distribution of food and other services—was born. On their Facebook page,




FIGURE 10.1. Multichannel sound and video installation of Kiri Dalena's *Pila* (2022) for Documenta 15 showing the lines of neighborhood people who wait overnight for the community pantry to open at dawn. *Source:* Photo by author.

the CP/PH described community pantries as "spontaneous activities that arose to help families experiencing hunger and have no one to turn to," with emphasis on the role of "caring . . . sharing . . . and drawing from our community or *bayanihan* spirit to join and collaborate to solve a social challenge."

Community pantries continued to gain prominence against the backdrop of stringent COVID-19 protocols and the Philippine government's unrelenting crackdown on activists. Organizers of the CP/PH movement faced numerous incidents of threat from state forces. The mode of crackdown operated in a loose modus of labeling certain individuals or groups as "Communist terrorists" through the act of red-tagging. Galvanizing such crackdown operations and red-tagging was the Anti-Terror Act, which was legislated during the pandemic lockdowns. The law relies on a broad definition of who is considered a terrorist and permits law enforcers to wiretap and freeze bank accounts as part of heightened surveillance (McCarthy 2021). Red-tagging is a serious matter, as many activists have been arbitrarily detained, with others falling victim to extrajudicial killings (Marasigan 2022). In the same year the Anti-Terror Act was legislated, a number of activists were gunned down by anonymous personnel (Atienza 2020; Burgos 2020; Regencia 2020). Even before the Anti-Terror Act, the National Task Force to End Local Communist Armed Conflict (NTF-ELCAC), an agency that campaigns for the end of so-called Communist rebel influences, had already been receiving a large sum of the national budget for conducting a whole-of-nation approach to the problem of insurgency. The allocated budget of NTF-ELCAC has been questioned numerous times in House and Senate hearings (Peña 2022).

Many from the general public who benefited from the community pantries were discomforted by the fact that well-meaning people devoting themselves to the service of others were being red-tagged and labeled as undifferentiated from armed rebels. The injudicious labeling, along with the social-distancing concerns associated with the long queues of beneficiaries stretching across multiple streets, heightened the police presence. Experiences of intimidation were documented and even brought to national media, as the spokesperson for the NTF-ELCAC compared the movement to "Satan giving an apple to Eve" (Sadongdong 2021). For a time, there was a vigorous exchange of statements in the public sphere regarding the organizers and the police and military officials, until the spokesperson resigned due to the controversial hearings regarding the

alleged use of the NTF-ELCAC budget to support the vilification of individuals and groups like the CP/PH organizers (Bolledo 2021; CNN Philippines 2021).

The diminishing mobility and entrenched marginalization of essential workers goes hand in hand with the rising state expenditure of neutralizing a fomenting social movement geared toward food activism. With the government taking a more disciplinary approach to the pandemic, healthcare and public transportation became widely inaccessible to the public. Many had to walk miles to get to their workplace because public utility vehicles were not available. Desperate to make a living, many violated lockdown measures and were consequently detained by the police and military. Even mutual-aid initiatives were curbed out of suspicion by the carceral state for violating lockdown measures and allegedly being fronts for rebel groups. These developments exacerbate the decades of social immobility that essential workers have experienced in the Philippines and have served as a major reason behind the exodus of Filipinos to more affluent countries such as those in the Global North. This mass exodus has been justified in professionalizing terms by characterizing certain jobs as a "vocation" and naturalizing Filipino subservience as a "heroic" trait, both of which serve to justify low wages (Encinas-Franco 2016). Although the government's healthcare system and other social services have already suffered decades of disinvestment, its militarized response to care workers filling the gap in social services illustrates how the state has turned a blind eye to long-standing structural issues. For example, with hospitals mostly understaffed, the government issued a deployment ban in the early months of COVID-19 to prevent nurses from going abroad to work for higher pay despite the long history of dismal compensation given to nurses in the country (Ortiga et al. 2022).

In the face of red-tagging efforts and other oversights of the government, the CP/PH community became even stronger. At the risk of vilification by the police and military, more and more people continued storming various drop-off points for goods and donations while observing health measures to express their solidarity with fellow citizens. Many from the public who were not directly connected to the CP/PH stood up to defend the cause. Soon enough the movement became recognized by local government units, with the latter providing community pantries with amenities for the drop-off of donations, guarantees of safety amid constant police and military intimidation, and words of praise (Calalo

2021). During the pandemic crisis, the media closely documented the *bayanihan* efforts emerging from the CP/PH and other similar movements. Reflected in this scenario is the village ethos of *bayanihan* (Bankoff 2020), or the spirit of communal cooperation that has existed since precolonial times. Patreng described *bayanihan* with the familiar image of everyone "carrying the house, grounded in land, grounded in reality—nobody on top." This image preserves the symbiotic nature of community, a cultural complex often projected during or in the aftermath of disasters and easily touted as a gesture for resilience. Amid the co-optation of resilience by people in power to avoid accountability for impending disasters, the CP/PH movement did not fail to highlight the dire political economic conditions that gave rise to its exponential spread. Running parallel to the community pantries, albeit much longer, were the *kusinang bayan,* or community-kitchen initiatives. Every Sunday, the Pinagkaisang Lakas ng Mamamayan (PLM), an alliance of urban-poor citizens calling for housing rights, livelihood, and socioeconomic aid, conducted their *kusinang bayan* from the food-insecure hills of Payatas, Quezon City, to Manila's urban fringes bordering Rizal Province (Y. Tan 2022). The level of food insecurity was so stark in these urban-poor areas that some resorted to foraging leftovers such as *pagpag* to make up for their meals (Sturrock 2019; see also chapter 8 in this volume). The weekly enterprise was supported by the food justice network Food Today, Food Tomorrow (FTFT), hosting a diverse range of volunteers, activists, and chefs and bridging organic farmers from the countryside to the urban poor. The FTFT was initiated in November 2020 with the distribution of gardening kits to locals and the conducting of agroecological workshops over four months. The results turned out to be vibrant: in 2021, the FTFT was able to bring five thousand kilograms of organic fresh produce to community kitchens, helping distribute more than twenty-two thousand meals (FTFT 2021b).

Members of the PLM conducted their weekly *kusinang bayan* by blending different political campaigns with the aromatic atmosphere of the cooking space. During outdoor cooking sessions, banners hung around the urban environment that read "Ayuda Hindi Limos" (Mutual Aid, Not Charity), "Junk oil deregulation law," and "Russia-Ukraine Crisis 'Wag Gawing Dahilan sa Pagtaas ng Presyo!" (Russia-Ukraine Crisis, Not a Reason for Soaring Prices). These catered to the group and its audience with a discourse of war overseas, petrocapitalism, and imperialism in the cooking space. The multiple issues brought to the table showcased

the embodied entanglements of their lived experience and the world economy at large. In this way, the convergence of political organizing and of care work by groups like the PLM and other urban-poor organizations like KADAMAY emphasized the deep entwinement of social reproduction as it operates through cooking and through the building of a more just economy more broadly (Slow Food 2021).

Similar to the experience of community pantries, members of both the PLM and KADAMAY have confronted the threat of red-tagging. There were instances when members of the PLM who volunteered to round up households to get food packs and aid were accused of being "NPA returnees."[1] In several instances, members of the media and the military were already present to cover these encounters (Umil 2022). Before the Anti-Terror Act was railroaded, the former secretary-general of KADAMAY Carlito Badion was found dead in Leyte, his body burnt and bearing signs of torture (Marquez 2020). KADAMAY has also been unfairly blamed for staging the spontaneous protest in Sitio San Roque, Quezon City, early in the pandemic (Luna 2021). The protest went viral due to the violent response of the police when in fact a different group had initiated the protest. Despite these red-tagging efforts, the groups continued fervently with their initiatives. The PLM has remained steadfast in conducting its *kusinang bayan* every Sunday while KADAMAY in San Roque has carried on with its *tanimang bayan* initiatives. It even held a Food Farming Freedom event at the site where chefs, food sovereignty advocates—such as the FTFT and Magsasaka at Siyentipiko para sa Pag-unlad ng Agrikultura (Farmers and Scientists for Agricultural Development; MASIPAG)—and urban-poor community leaders from Quezon City gathered for a community-powered fiesta to affirm each other's struggles for housing and land and to reflect on how those initiatives intersected with the struggles for food justice (Good Food Community 2023; Dukha 2019).

We see how the expanse of care work in community pantries and *kusinang bayan* brought to fore not just food security and justice but also concerns for the general well-being of the vulnerable and precarious. Not least, of course, were concerns for safety: "Is the community safe? What about the kids? Do their parents have work? Can we be sure that nobody becomes a victim of *tokhang* [extrajudicial killings]?" Patreng once told me, emphasizing the importance of safety and social justice, "We need to assert these. We can't fight for long if our stomachs are empty. *Kain muna tayo* [Let's eat first]."

## *Bungkalan* and the Carcerality of Agrarian Landscapes

The vibrant initiatives in urban spaces are not far separated from the food movements emerging in the country's rural landscapes. Against the grain of the carceral geographies of the hacienda and the plantation, movements of care work create environments that preserve life and combat processes that render the rural precariat disposable. Nothing encapsulates this better than *bungkalan,* a radical agroecological practice closely associated with its fiercest advocate, the political prisoner Angie Ipong.

In her books *Red Rose for Andrea* (2012) and *Garden behind Bars* (2009), Angie Ipong tells the story of how growing up in a peasant family, participating in the agrarian struggle, and being exposed to the harsh environments in prison led her to the idea of *bungkalan.* Through her parents' unceasing work on the farm, she was able to get a degree in history at Ateneo de Naga University. After entering the workforce as a teacher, she had the opportunity to travel around the globe and develop her ideas in agroecology. She visited the Asian Rural Institute in Japan and the Food First Policy and Earthwork in the United States, which equipped her with skills and knowledge in ecology, ecumenism, and conscientization (Ipong 2009, 34). Upon return, she immersed herself in the social lives of the peasantry in Tagum, Davao del Norte, a plantation-dominated province in Mindanao. She took part in conscientization programs, a process of critical inquiry into how the world is shaped by political realities and where oneself is in today's historical milieu, among farmers, workers, and Indigenous Peoples like the Lumad, who experience structural violence and land-grabbing by multinational agribusiness and mining corporations (see chapter 12 in this volume). She also had first-hand experience with being a laborer on Del Monte's plantation (see chapter 5 in this volume).

Mindanao, the southern region of the Philippines where Ipong committed herself to the peasant struggle, is a landscape that combines a disconcerting dual image of agricultural abundance, on the one hand, and high poverty incidence, on the other. The region has long been a hot spot for violence related to tensions over land tenure, issues exacerbated by the expansion of agribusiness plantations. Especially affected are the Indigenous Lumad and Moro, who beginning in the American colonial period were thrown into a relentless cycle of marginalization by the influx of landless Christian migrants from Luzon and Visayas. The process of internal migration and settlement, matched with the introduction of laws for

the privatization and expropriation of land, rendered the island open to the developing global market of the twentieth century (Vellema, Borras, and Lara 2011). Economic plunder brought about by multinational companies in large-scale mining and industrial agriculture further displaced the Indigenous Lumad and Moro, causing social unrest among those dispossessed of their ancestral domain (Reap Mindanao 2016; Yambao et al. 2022). The environmental degradation accompanying these developments, as well as the increased presence of paramilitary/military forces, brought about "wars of extinction" to the already marginalized Lumad people (Alamon 2017). We then see how the disposability of Indigenous bodies throughout agrarian spaces was deemed necessary for the preservation of export-oriented market economies geared toward food and labor production. It was in this context that Angie Ipong committed herself to the project of genuine land reform and became a vociferous critic of the regime of plantation agriculture in Mindanao.

The conditions in Mindanao broadly reflect those in the rest of the archipelago, where the majority of poor farmers do not own the land they till. Landlord elites extract value from their hard labor by offering them meager wages. Small farmers who have managed to acquire land, on the other hand, often succumb to the growing prices of synthetic inputs, the prevalence of imported agricultural products, the presence of syndicate middlemen, and the devastation caused by typhoons brought by climate change. Moreover, they become mired in opportunistic contract-farming schemes. They get forced to sell their land in part or whole in order to find other means of capital for their family. The passing of the Comprehensive Agrarian Reform Program over three decades ago carried with it the promise of remedying these issues. Unsettled disputes and long histories of elites circumventing redistribution, however, mean that the colonial legacy of the hacienda carries on today. The dire situation of rural precariats has forced many to migrate to cities, other islands, or even other countries to work as domestic helpers, rearing other families' children and following value where the neoliberal economy has placed it (Tadiar 2022). It was these harsh realities that galvanized much of the political organizing work in which Ipong engaged.

On March 8, 2005, International Women's Day, Angie Ipong was abducted by elements of the state, who forced her to board a silver van without a warrant of arrest. She documented experiences of maltreatment and torture during the interrogation process, including going on a hunger

strike for twelve days in protest of her condition (Ipong 2012, 23). Ipong, already a senior citizen during that time, went through the intense ordeal of getting beaten up and molested in the hands of her interrogators. It was not inconsequential to Ipong's experience that the Philippines is said to have one of the most congested penal systems in the world (Narag 2018). In just two years since President Rodrigo Duterte began his war on drugs in 2016, the number of persons deprived of liberty increased by 64 percent of the already exceedingly high number—215,000 detainees occupying a space intended for no more than 40,000. The campaign, which caught the attention of the International Criminal Court for the thousands of extrajudicial killings, rendered a list of a population of "addicts" expendable in spite of the questionable process of including names (Lasco 2021). As of March 2020, the total number of inmates in 467 jails nationwide exceeded their normal capacity by 534 percent (Dela Cruz 2022). The latest data from the rights group Karapatan (2022) show that of those incarcerated more than 800 are political prisoners like Ipong.

For six long years until she was released as innocent, Ipong experienced the life of a prisoner with almost no access to nutritious food and medical services, limited access to hygienic necessities such as water, and the unending postponement of court hearings. The ordeal she and the other inmates suffered extended from psychosocial to physical and health threats. They were not getting what is required for persons deprived of liberty according to human rights standards, as the budgetary allocation for such needs from the Bureau of Corrections are abjectly scarce. Ipong wrote her two books to cope with the time she served in prison, texts that would soon become a source of inspiration to many engaged in the agrarian struggle, in and out of prison. She served five years in the Pagadian Jail and a year in the Misamis Oriental Prison Jail before she was granted release in 2011.

How did Ipong survive her harrowing experience as an unjustly incarcerated political prisoner? It was while enduring the miasma of poor ventilation and meager food servings in her cell that she forged plans to seed the "barren, empty space in the jail compound" and turn it into an organic vegetable garden (Ipong 2009, 17; 2012, 107). The idea materialized when authorities gave her permission to cultivate small plots on a portion of land in the Pagadian Jail. Soon after, she managed to convince other inmates to grow food with her. Seeds were collected through visitors, allowing inmates to grow a wide variety of vegetables. In the Misamis

Oriental Prison Jail, plots were cultivated on empty land near the basketball court, while others used plastic containers and pots to grow their vegetables. Medicinal herbs such as *gabon* (*Blumea balsamifera*), *hilbas* (*Artemisia vulgaris*), *herba buena* (aromatic mint), oregano (*Origanum vulgare*), and pandan (*Pandanus amaryllifolius*) were also grown to cater to medical use.

Harvests of vegetables started making their way to the building's kitchen and spurred inmates to come up with new recipes. The small prison budget for food—roughly PHP 50 per day per inmate (US$0.90)—challenged them to create a menu that would be cheap to serve yet composed of nutritionally rich ingredients fresh from the garden (Ipong 2009). This collective effort showcases the importance of food justice, often restricted throughout incarceration sites.

Angie Ipong learned of her release on a Thursday morning in 2011 while tending the bitter gourds in the prison garden. After six years in prison, all charges against her were dismissed due to insufficient evidence. But while enjoying her newfound freedom, Angie did not lose sight of the realities of the carceral geography existing beyond prison walls. In her words, "If I was able to plant in jail, we could do it outside. Here outside is a bigger jail" (Bueno 2017). She returned to a disputed property long infamous for evading land reform, where she saw the need to feed agricultural workers who endured months in the picket lines. At that moment she dedicated herself to a form of protest and advocacy known as *bungkalan,* a collective movement of fugitive farming whereby properties unjustly claimed by the elite or unfairly devoted to export-oriented agriculture are reclaimed for the cultivation of garden vegetables for the consumption of agricultural workers and their families. Alongside others in the struggle for agrarian justice, she helped prepare *Bungkalan: Manwal sa organikong pagsasaka* (Bungkalan: A Manual for Organic Farming) and has since dedicated her energy to promoting its principles and methods among communities around the country.

Inspired by Ipong, *bungkalan* has since become one means by which rural precariats facilitate care work and assert their right to food and land justice. Done at various sites such as contested agrarian lands, schools, and even prisons, *bungkalan* serves as a critique of the lingering colonial legacies of plantations, akin to those of prison labor, where plantation workers and farmers find it almost impossible to escape the cycle of poverty and debt. *Bungkalan* aims to subvert the totalizing logic of plantations that

cater to landlords and market crops rather than human flourishing. Echoing what Sylvia Wynter (1971) calls the *plot system, bungkalan* has grown similar to the community pantry and *kusinang bayan:* people from various sectors cultivate lands that were once unproductive into something life-giving (Lien and Camacho 2022).

The practices of nurturing care persist in the face of carceral geographies that continue to put care workers at risk. The experiences of the *bungkalan* movement in Mindanao's Lumad schools are exemplary. Advocate groups like Save Our Schools were first compelled to set up schools for Lumad groups in far-flung areas, where the lack of access to basic services was acute and the distance from institutions accredited by the Department of Education often meant that children went without a formal education. The curriculum introduced in Lumad schools is founded on principles of agroecology, which sync Lumad learning with their sensibility of belongingness to land (see chapter 12 in this volume). In 2019 many of these schools had their license revoked, were forcefully closed, and were even threatened with bombing due to red-tagging (Beltran 2019). Individuals directly associated with these schools and those practicing *bungkalan* elsewhere in Mindanao have been harassed, detained, and even killed. The Sagay Massacre in 2018, which led to the killing of nine farmers conducting *bungkalan,* is a case in point (De Guzman et al. 2022). In this climate the schooling system had to adapt to a more mobile setup to escape peril. Lumad groups evacuated their lands and transferred to safer places to continue their education. These places were later referred to as *bakwit* (evacuation) schools, housed within other schools, universities, churches, and seminaries that offered sanctuary (Caruncho 2019; Wright 2020). This translocal network of solidarity makes apparent the fruitful essence of care work extended to those being violated for engaging in similar efforts of setting up schools and agricultural initiatives in their ancestral domain. Central to the struggle of food movements is the network of care they receive in places that may function as tactical shatter zones to the carceral state (Scott 2009).

In this chapter I have shown how environments for food and dwelling constitute carceral geographies for the workings of the current food system. The stories about care work here exhibit a fresh mode of making life and a more sensible way of thinking about value despite the hinges of a carceral state. The main thrust that these stories provide is the act to

reverse the current order that renders bodies and environments disposable. It is through the creative production of spaces—whether through community pantries, *kusinang bayan, tanimang bayan,* or *bungkalan*—that food activism employs a kind of care work that derives its spirit from the end goal of replacing a system designed toward havoc.

As the world economy strives to bounce back from a standstill, history is left at the crossroads of either going back to the business of how things have always been or sliding to a new normal. The pandemic has further disfavored the poor and even benefited the elite, worsening social inequalities. As we are ushered into the new normal, new threats loom large with the postpandemic recession and skyrocketing prices for oil and food. Those who have struggled, even in the new normal, remain disposable in the eyes of the state and the neoliberal market. The social ferment that builds up from entrenched and emerging conditions of disposability further triggers the carceral state to respond with intimidation and arrest. Despite the intensifying apparatus of the carceral state, mutual-aid networks are able to sustain their efforts to preserve life using methods ranging from community pantries, kitchens, and gardens in urban-poor communities to agroecological movements in prisons and Lumad schools. Hope in carceral geographies can be seen in the vines of bitter gourds growing through bars and barbwire, the makeshift facilities of community pantries that accommodated hundreds of donors and receivers during the hard lockdown, the urban poor sustaining the *kusinang bayan* despite the lack of social amelioration and threats of demolition, and the Lumad pushing to incorporate *bungkalan* in their education. And even if the carceral state hits harder, preservation finds a way.

## Notes

1. The New People's Army (NPA) is the armed wing of the Communist Party of the Philippines.

# 11 | Producing Potability

## *Manila Waterworks in Colonial and Contemporary Counterinsurgency*

Cla D. Ruzol

I was eating my lunch in the engineering department of the Metropolitan Waterworks and Sewerage System Corporate Office (MWSS-CO). The lights of the already dimmed room turned off exactly at midday for one hour to conserve electricity, as ordered by a government memo. I was sitting in an old office chair with worn-out padding and a back rest so permanently reclined that if I were to rest my shoulders, I would feel like falling. I stood and walked toward the pantry enclosed in a corner of the same room to wash my lunch box. A colleague walked into the pantry to get some water only to find the water dispenser empty.

"Oh no," they uttered quietly. "There's no more water."

"You can get water from the tap. I do," I said. I then attempted to reassure them with confidence. "That's where the utility staff are getting the drinking water for the dispenser."

"Really? Maybe I'll come back later," they said.

I never did see them go back to get water from the tap.

When I started my fieldwork, no one I knew drank from the tap. I did not until I learned from the engineers at the waterworks office that the water distributed by its two private concessionaires should be and is potable. They told me they did not believe it themselves until they saw the utility staff refill the dispenser from the faucet. I stopped buying distilled water in the iconic blue jugs and started drinking straight from the tap. This horrified my sibling, who was living with me at the time and insisted on buying bottled water, even as I was deliberately changing my drinking ways. Upon learning that the tap water was in fact potable, I realized my

bottled water costs were higher than the minimum water bill, doubling my monthly expenses for water consumption.

It was bewildering to discover that the technobureaucrats of the waterworks office, whose very mandate was to provide safe drinking water to Metro Manila residents, also avoided drinking faucet water. The MWSS, which maintains concession agreements with the two private corporations Manila Water and Maynilad, services approximately twenty million people in Metro Manila and parts of Cavite, Rizal, and Bulacan Provinces. In instances when I found out that colleagues from the water agency did drink tap water, they would almost always inform me right away that it was because they lived near the filters. An engineer employed at one of the two private concessionaires revealed to me that his company would rather support investments in new sources of water, such as building dams, than work to improve the "patchwork" of the incomplete and unfinished pipe system that leaked nonrevenue water or potable water that was produced but wasted before reaching consumers (see also Garrido 2019; Saguin and Alvarez 2022).

Several scholars have written about the topic of water privatization in Metro Manila (e.g., Chng 2008; Cheng 2015; Torio 2020), the largest in the world and deemed a success among governments and the private sector (see Miraflor 2019; Magno 2019). Building on these works, I attend to the state's apparent fixation with infrastructural investments in new sources of water while it continues to fail at convincing the public that tap water is potable. What then is the purpose of the redundancy of big infrastructures that convey water from the mountains to the cities when potable tap water continues to be doubted? This question is especially important because the water consumers themselves are paying for the capital investments in the construction and logistical bureaucracy that enables the processing of permits and consents. Such investments were initially funded by foreign loans, public-private partnerships, or private concessionaires but would eventually be allocated in the water tariff. While both the government and the private concessionaires attempted to popularize the safety of tap water in the Philippines, a wide literature on infrastructure studies based elsewhere in the world suggests that infrastructures serve a different, more appealing outcome. A historical approach to technologies and infrastructures shows that colonial relations continue in former colonies (see chapter 4 in this volume). The production of hypermodern, spectacular

infrastructures as a result of state-led reforms in historically colonized "developing" countries is seen as crucial to joining the "developed" world. In Jakarta the colonial control of water was reinforced in a guided modern democracy and its conjuncture with neoliberal strategies of water supply linking elite urban spaces (Kooy and Bakker 2008). In Mumbai, access to water pressure is regular when citizens are recognized as "good consumers" who follow bureaucratic procedures and use the correct language in paying for water (Anand 2017). Numerous accounts document military influences on water use and their major contribution to environmental problems (C. H. Alvarez 2016; Liebman 2005; Oliveira 2018) and infringement on traditional rights (Kipgen 2016; Marzec 2014).

The construction of large dams has been met with the repression of and resistance from affected communities, alongside the criminalization and violent targeting of activists in the Philippines and around the world (Talamayan 2021; Del Bene et al. 2018). This is comprehensively documented, for instance, in the assassination of Macli-ing Dulag, who led the antidam resistance during the Ferdinand Marcos Sr. dictatorship (1965–1986; see Delina 2020; Doyo 2015). I adhere to Walsh's (2018) use of the administrative idea of the "Police" in eighteenth-century Europe and the Americas to govern social tensions around water use (see also C. J. Alvarez 2019). To police, as the term is used today and described by Walsh, means an institutional suppression and subjugation of territories and population, in which sources of water such as rivers and man-made reservoirs reside, suspected of engaging in misbehavior, social tension, insurgency, and "semisavage" ways.

Contributing to this literature, I focus on the parallels in the tangible and symbolic roles that hydroinfrastructures played in Philippine society between the colonial and the contemporary period. My work on the colonial period was based on archival records from late nineteenth- to early twentieth-century warfare. The contemporary component of this work is based on my ethnography of an ongoing dam-building project from 2021 to 2023, in which I followed the technobureaucrats of MWSS-CO implementing the New Centennial Water Source Kaliwa Dam Project in the provinces of Quezon and Rizal. The project is framed by the Philippine government as the solution to the impending water crisis in Metro Manila. This ethnography constitutes my firsthand observations as a researcher who was given consent to conspicuously accompany my interlocutors in their daily office work, technical meetings, land negotiations, site visits, and consent-seeking workshops, among other activities. Before this, I was a keen observer of the events surrounding this project since

2017 through networks in the university, civil society, and local politics at the dam site.

As I argue below, water infrastructures were utilized in a very material and purposeful way to control insurgencies against colonial and imperialist powers at the turn of the twentieth century. Recently, policing what the Philippine state considers subversiveness has been directly empowered by the characteristically military strategy employed by the authoritarian regime of Rodrigo Duterte (2016–2022). Duterte appointed military and police personnel as his executives and enhanced the counterinsurgency government program called the National Task Force to End Local Communist Armed Conflict (NTF-ELCAC). Sales (chapter 10 in this volume) describes the extent of these "antiterrorism" operations in citizen-led food movements during the COVID-19 pandemic lockdown, while Tandog, Banta, and Alvarez (chapter 12 in this volume) also cite the red-tagging of Lumad communities in Mindanao practising agroecology. Succeeding Duterte's six-year regime was the return to power of the deposed Marcos Sr. family with the landslide election of Ferdinand Marcos Jr. to the presidency in May 2022. It is within this political context at the peak of the COVID-19 pandemic that the implementers of the dam project gradually and restlessly labored to deliver compliance in the years spanning more than half a decade. Given these circumstances, the resurgence of military influence operating through big water infrastructure projects intensified the suppression of dissent, civil disobedience, and insurgency and expanded its territorial scope. I was prompted to turn to the military exploits in and around water infrastructures in colonial Manila after I found resonances in the implementation of the dam project. Remarkable among these resonances are the elements of counterinsurgency through the waterworks—namely, water bureaucrats turning fiction into reality and policing water extraction. These military tactics allude to the various impacts of violence upon water users and riverine communities. Before this discussion it is relevant to lay the foundation of the disorderly and immaterial beginnings of waterworks in colonial Manila.

## The Beginning of Waterworks

In 1743 Francisco Carriedo, a Spanish municipal board member, left a substantial amount for the construction of the Manila water system. The money, however, was not used until 140 years later (Doeppers 2016).

Upon operation, the Carriedo Waterworks pumped water from the Marikina River in Santolan, then conveyed it through cast-iron pipes laid out on the surface to El Depósito, an underground reservoir in the hills of San Juan. When the water reached the Carriedo fountain in Manila, it was distributed through pipes to fire hydrants and public fountains across the city and its suburbs.

Before bureaucrats attempted to extract water from nature using waterworks, potable water from springs, shallow wells, and the upper Pasig River was transported in *tinajas* (earthenware jars) in canoes or by carts pulled by carabaos and sold along rivers (MWSS 2018). Deep wells, as sources of drinking water, also served to convey other meanings. In the 1899 photo in which women and children carry earthen vessels on their heads containing water from a deep well (figure 11.1), the caption states narratives of Christianity and the distinction between the civilized and the uncivilized savage: "In the Philippine Islands as in all other countries of the Orient, it is customary to carry their drinking water from the public wells. More than three thousand years ago Moses met his future wife at the well. The servants of Abraham made the bargain with Rebecca to marry Isaac at the well. Christ met the woman of Samaria at Jacob's well. The women and children of the East still keep up the ancient custom in semi-savage as well as civilized lands."



FIGURE 11.1. Native water carriers in Iloilo, 1899. *Source:* Lopez Museum and Library, 2023.

The boulder up on the hill of San Juan that was destroyed for the construction of El Depósito was also a monument referencing Christianity. A surviving laborer of the reservoir narrated for the 1929 issue of the *American Chamber of Commerce Journal* how a *tigbalang* and the *matanda sa punso* fought the waterworks (Minton 1929).[1] The recounter of this story, Juan Javalan, worked for the Spanish engineer Don Sebastian Jube in 1877.[2] At first Jube was able to gather a great number of native laborers for the excavation but was later abandoned by his workers, who grew fearful of the avenging *tigbalang* and *matanda sa punso.* The *matanda sa punso* would hurl missiles of stone and earth but, peculiarly, would not touch those they were thrown at. Their whistling on the trail was heard instead. Stories about dead bodies in the river supposedly the doing of the *tigbalang* also reached anyone who knew of the place. Upon learning this, the Spanish engineer summoned Juan Javalan to tell his fellow laborers that he did not fear the "evil spirits." He said: "Say to them that the evil spirits are jealous, but that they cannot harm us, because this project is pleasing in the sight of God. And tell them that the destruction of the *sampalok* [tamarind, *Tamarindus indica*] tree is the sign by which they may know that good spirits, more powerful than those of the *bondok* [mountain], are helping us in our work" (Minton 1929, 14). The laborers were suspicious of Jube, who must be a sorcerer or a witch to foretell the time and place of a lightning bolt strike. Still, they watched from a distance and found Jube at sunset "carrying strange looking bags, and candles . . . and knelt praying beneath the tree" (Minton 1929, 14). In the following afternoon, suddenly "a great sheet of flame shot up from the *sampalok* tree, and there was a deafening explosion" (Minton 1929, 14). Jube used divine oratory and force—what appeared to be firepower—to exploit the ambivalent beliefs about *bondok* spirits, muting the qualms of the perturbed laborers.

The Spaniard was able to persuade the natives to go back to work. Jube listened first to the stories about the *tigbalang* and the *matanda sa punso,* beliefs foreign to him, to seemingly plan a convincing performance with the use of explosives. He proceeded with confidence in defending the construction of the reservoir as favored by God, an argument appealing to the laborers. It can be said that this attempt to use information from listening to the natives was a nineteenth-century precursor to the modern developmentalist approach in stakeholder consultations and negotiations that I found in my ethnography.

## Performing Truth

Perhaps the first fundamental step in large infrastructure projects is for the implementer to have the conviction that the project will get done. Even a "dead project" is not dead but "deferred and still on the shelf," said one of the employees of MWSS. Such characteristics of infrastructures can be understood as gestural when they "contribute to the postponement of failure" (Weszkalnys 2016, 285). To exemplify this, a system of dams and settlement basins on the upper tributaries of the Marikina River and the Angat River were studied by the Metropolitan Water District in the 1930s. Angat Dam would not be constructed until the 1960s, while the construction of facilities such as those in Boso-Boso in Rizal would begin decades later. The technology of the large dams, designed to harness hydropower for large-scale industrial growth, was due to an American military intervention during the Occupation. Top water managers in the nineteenth and twentieth centuries were either reformist engineers from Spain, US-trained sanitary or civil engineers, and/or retired military officials. One of the many tasks of both the colonial reformer and the contemporary bureaucrat carrying out infrastructure building is persuading and pacifying the apprehensive *kalooban* (inner self) of the people affected by the construction work, such as the laborers of El Depósito.

The dedication to performing fiction into reality is what makes a "fictional truth" that inspires the water bureaucrats to work. An integral part of fictional truth relies on rhetorical strategy, a skill successfully effected by the Spaniard Jube as a reformer in the colony. Similarly, water bureaucrats aimed to present the dam project as a model of good governance today. In interagency deliberations and in the everyday workings of MWSS administration, they sought to make this a reality (*gustong patunayan,* from *tunay,* meaning "real"). In one notable instance when I was seated among the MWSS employees as an observer, a commissioner of the National Commission on Indigenous Peoples (NCIP) who was markedly unreceptive to the dam asked the MWSS administrator, "What if the permit would not be granted, what would happen to the project?" The administrator replied with unyielding conviction, "We always say one thing, Commissioner and to the Commission. *We will not get tired of explaining* to our stakeholders the benefits of the project. Our Commission, it is not just for Metro Manila, Rizal, Cavite, and Bulacan. It will benefit our

*Indigenous peoples* and our local residents in the watershed or project area" (emphasis in original).

What exactly is the fiction that technobureaucrats convince themselves must be reality? Simply put, it is that a redundancy of water infrastructures that extract from water-rich peripheries and convey to water-poor cities will solve the water crisis. It is important to note that today, the MWSS has several installation projects for new tunnels and aqueducts for irrigation and domestic water in the nearby Bulacan Province. These projects are to increase the capacity to draw more water from Angat dam, the main reservoir supplying the service areas of the MWSS. On the other hand, the problem of water supply is commonly fabricated as a matter of increasing demand and insufficient supply, rather than rectifying water distribution. This has been the case as early as nineteenth-century Manila, where only 50 percent of the public fountains and fire hydrants in the design were set up. Maps illustrated that the ratio of hydrants and fountains to population were more considerable in size in the central business district as well as in the walled city of Intramuros than in the rest of Manila and its suburbs (Costelo 2020). Manila's water infrastructure was built to connect areas of the colonial and industrial elite (see also Kooy and Bakker 2008). I learned from conversing with an MWSS engineer that today the demand for water is declining despite an increasing population in cities when leakages are reduced. This has already been pointed out repeatedly by many groups, including members of the Senate and the Congress.

## Enmity and Policing Water Extraction

There is another palpable fictional truth salient here: public service against a *kalaban* (enemy, adversary). I often hear my interlocutors distinguish people as *kalaban* with far more certainty than when considering someone to be *kasama* (a patriotic comrade supporting the government). I attended a meeting called by the mayor of a municipality that had been affected by the Kaliwa Dam project. Residents in the municipality had already been displaced from their homes with no clarity on the resettlement plan. A senior engineer of the Kaliwa Dam project was assuring coworkers that the protesting locals were already "organized." This meant that particular

ideological organizations had already given them "a script to follow" and a "leftist" point of view (a *kalaban*) to uphold in public consultations.

The practice of identifying the *kalaban* has become almost customary in the consent-seeking process among the Dumagat-Remontado, the Indigenous Peoples in the Sierra Madre where the dam is to be built. The project team has a record of photographs of conspicuous personalities among the Dumagat-Remontado, including those instrumental to (*kasama*) and against the project (*kalaban*). The Indigenous Peoples opposing the dam had withdrawn their participation in the consent-seeking workshops as a form of protest. However, in the seventh year and final stages of the process in 2022, those who were staunch believers of the virtue of the governmental procedure eventually joined the formalities. Aware of the presence of the *kalaban* in the heavily guarded, authorized-only venue and expecting dubious behavior from them, the staff of MWSS who were joining as observers of the workshop immediately checked their identities. In one instance during the workshop when they could not identify someone verbalizing dissent, one of them exclaimed as they looked at the photos, "NPA ata yun ah! Di nagpapakita ng mukha" (They must be an NPA! They don't show their face). "NPA" here refers to a member of the New People's Army, the armed group of the Communist Party of the Philippines. This practice of red-tagging is a dangerous pronouncement with a real threat of arbitrary arrest or detainment and the accusation of rebellion, human trafficking, or illegal carrying of firearms. Red-tagging has become widespread, indeed commonplace, in the Philippines since the legislation of the Anti-Terrorism Act, which has been used to legitimize the arrest and murder of citizens and activists (Dressler and Smith 2022). There were also murmurs among the project team composed of the MWSS, its consultants, and the facilitators from the NCIP about how other unknown participants in the workshop were *atin yan* (ours), meaning a *kasama* and not a member of the NPA.

Those challenging the optimistic view of the consent process through hostility, which is now seen as archaic, are automatically perceived as enemies of democracy (Mouffe 2005; Rancière 2009) and, particularly in this case, threats to national security and enemies of the state. The rest of the discussion below illustrates the enmity that has characterized water provision since colonial times and is found throughout today's institutionalized counterinsurgency program.

## The Pathomilitary Control of Water in the Colony

The threat of cholera was real in the Spanish era and afflicted Manila several times (Lemps 2001). However, the waterworks proved to be insufficient during epidemics, when only half of the planned public fountains for potable water and fire hydrants were in place in the city (Costelo 2020). Adding the number of public water fountains and fire hydrants for drinking water and sanitation that were needed to support the population appeared to be a goal out of reach. Instead, a rigorous surveillance system was employed.

The patrolling of water sources was assigned to the Guardia Civil Veterana, while the Guardia Civil performed household inspections to report water habits and cases of illness (Costelo 2020). These patrols monitored and restricted the movement of natives who relied on public fountains. Activities such as washing the clothes of sick people and bathing near the water source were criminalized and penalized. Vigilance and surveillance intensified when the Inspección General de Obras Públicas contrived reports on the illegal extraction of water, most especially in public fountains, consequently asking the Ayuntamiento de Manila to station plumbers and overseers in the fountains for monitoring and control of water (Costelo 2020). Mechanical water meters to measure dues were urgently installed in the public fountains as a means to forcibly avoid unauthorized extraction, as authorities believed this was the main cause of Manila's insufficient water supply (Costelo 2020).

By the end of the nineteenth century, the public water supply became a primary concern for military health officers. During the Philippine-American War (1899–1902), Americans occupying the Philippines considered water to be constitutive of the disease-ridden tropical environment (W. Anderson 2006; Doeppers 2016; Ileto 2017; see also Ludovice 2021b). In Guthrie's *Observations on the Philippines* (1903), the author states, "The air, water, soil, the whole earth and its sundry encumbrances (living and dead) [were] reeking in germs" (quoted in W. Anderson 2006, 60). Filipino bodies were also construed as "not microscopically clean" and thus carriers of *Philipinitis* and *germania* (W. Anderson 2006, 58–59). Water provisioning became an apparatus for colonial warfare wherein waterworks turned into disciplinary and surveillance institutions. Both germs

and *insurrecto* (insurrection) were contained and disciplined in the reinforcement of medical and military strategies (W. Anderson 2006).

During the cholera outbreak from 1902 until 1904, the Marikina River, the main source of water in Manila, was patrolled by sanitary inspectors and cavalry. Ironically, the constabulary dispatched to guard the riverbanks from infection introduced and spread the disease to the Marikina Valley (Ileto 2017). When Wawa Dam was constructed in 1909 to provide an additional supply during the dry season, former soldiers patrolled the watershed of El Depósito (Doeppers 2016). The soldiers were to police the area to keep pollution and contamination, such as animal carcasses upstream of the Marikina River, from entering the water system. The system of dams and filtration built in the 1930s that resulted from public outrage in the extreme drought of 1926—namely, the earthen dam in Novaliches and the Balara filters—was robust enough to handle damage from attack with explosives (Doeppers 2016).

A 1908 study that tested Manila water for bacteria, protozoa, amoebas, and cholera showed that filtered tap water was not safe for drinking, not because of contamination in the pipes but rather during the transfer from one receptacle to another (Edwards 1908). Although this study attributed the contaminated water to the washing of receptacles in untreated waterways, access to treated piped water was also inadequate. Water sources were interpreted instead as pathological, a site of suspicion for the spread of disease, and were thus weaponized as a military tactic to control colonial subjects through patrols, water overseers, and inspections.

## The American Imperialist Invasion through Waterworks

Immediately after the Americans occupied Manila Bay in 1898, Filipino revolutionaries held El Depósito as a stronghold. It was the primary site of defense in Manila and, consequently, of conquest by the imperialist invaders who viewed the defending Filipinos as insurgents. General Emilio Aguinaldo used the waterworks occupation to establish authority and oppose the self-perceived entitlement of the Americans over the country post revolution. Aguinaldo wrote to the Americans that he had "permitted the use of water" from the city supply from the mountains instead of compelling them to drink from the contaminated water of the old cistern

(Halstead 1899, 317). Aguinaldo's letter demanded equal rights as General Merritt, the American commander in chief, but Halstead (1899) and Millet (1899) both documented Meritt's refusal of Aguinaldo's request. Halstead (1899) reacted as an imperialist who was agitated and disrespected by Aguinaldo's letter, while Millet portrayed Merritt as a temporizing liberator following the orders of Washington "to avoid rupture with the insurgents at almost any cost" (Millet 1899, 185).

The nonengagement in battle with the revolutionaries was a temporary state of affairs. On March 5, 1899, the Nebraska Volunteers received information to "sweep the country from the vicinity of the waterworks, from the Santolan River near Mariquina, southwest to the north side of the Pasig River" (Eager 1900, 23). In this early American invasion, American troops wreaked havoc upon cities surrounding the waterworks system, including the burning of the city of Mariquina (now Marikina). On their way to continue their skirmishes toward the Pasig River, they took prisoners to work as servants in camps. The Americans justified the necessary and prompt capture of the waterworks with the threat of a water famine and the reoccurrence of cholera and typhoid fever. The American volunteer troops continued to march toward El Depósito but were met with volleys from the Filipinos. The Americans were pushed back to their camp with many casualties.

## An Institutionalized Antiterrorism Campaign: Contemporary Waterworks

The presence of the military was conventional under Duterte's regime. The sight of uniformed men alongside him in public appearances and in his cabinet was the image the administration consciously projected to the nation during the COVID-19 pandemic lockdowns from 2020 to 2021. A high-level conference that I attended in December 2019 organized by the Commission on Human Rights reported that Indigenous communities in the Kaliwa Dam area face heightened militarization following the creation of the NTF-ELCAC. During the conference, Dumagat youth in the dam-affected area professed that the impacts of this policy have been hostile to the community. They claimed that they were being recruited by the military to join a special Dumagat unit. If they were identified as opposing the dam or did not want to join the military training, they would be

treated as suspected Communist rebels. In another instance, a Dumagat was jailed after he hit a soldier with a shovel when the latter importunately and wrongly identified him as NPA.

There had been a marked change in the composition of Duterte's Cabinet since its first year. The number of retired military and police officials nearly tripled from four in 2016 to eleven in 2019, including those involved in Kaliwa Dam—namely, top officials of the Department of Environment and Natural Resources, the MWSS, and the NCIP. In a 2019 statement, Duterte said he valued the "discipline, obedience, and efficiency" of the military and the police (Ranada 2019). What Duterte meant by "efficiency" with regard to his military officials in the executive branch of the government was revealed in the Kaliwa Dam project. The Department of Public Works and Highways (DPWH) permitted the construction of an access road traversing the Sierra Madre and the ancestral land of the Dumagat-Remontado without securing a permit or the consent of the Indigenous communities. A trip to this area was the first time I accompanied my interlocutors in October 2021. I was standing on the edge of the access road, a four-lane dirt road. We were overlooking a creek and a coconut plantation when my new acquaintance told me, "This road is actually illegal. They were saying it was DPWH but really this was MWSS. The chairman said to go ahead and penetrate the mountains. And then when road construction began, we immediately applied for a permit so no one would protest."[3] The chairman to whom my colleague referred was the appointed MWSS administrator during the time of Duterte, a retired police general.

There was a military checkpoint before entering this access road from the national highway. Every authorized person needed to log in by signing his or her name, time of entry, and signature, or in the case of residents in the area, showing their ID proving their residence inside the now restricted boundary. Aside from this, the heavily armed military stationed by the entrance took a close-up portrait shot of us for their profiling. This was the first time for everyone to be profiled, and one of my interlocutors mentioned in an aside that he did not like having his photo taken and questioned whether it was necessary.

Military visibility became tangible in the existing water facilities in the Sierra Madre during the time of Duterte, including the installation of military barracks. At the Umiray water source for Angat Dam, barracks were installed in 2021 because of a 2018 raid by the NPA, the engineers told me.

This incident was also the first that came into the mind of a senior engineer when he was asked in an online radio interview why the project was put on hold. While the engineer could have cited several other cease-and-desist orders from Congress, or the bidding irregularities flagged by the commission on audit, he responded by solely citing the "terrorist attack" by the NPA. Despite the 2022 court ruling that dismissed the motion to declare the Communist Party of the Philippines and the NPA as terrorist organizations (Parrocha 2022; Strangio 2022), armed bureaucrats of the state have always considered the group to be terrorists. This demonstrates how different governmental agencies share a counterinsurgent orientation to dissenting groups and how police powers through the NTF-ELCAC use bureaucratic procedures for their counterinsurgency program.

I began the chapter with a personal vignette about the lack of trust in the safety of tap water even by the people mandated to provide it. Amid this perennial inadequacy to convince the public that tap water is safe, the state continues to fixate its water security efforts in investments in new water sources such as building large dams that encroach on protected areas and ancestral lands. I argue that the state builds military power through its counterinsurgency program under the premise of water infrastructures. This is evident as early as the colonial conquest and has recently intensified in the period of Duterte's military authoritarianism.

I described the workings of counterinsurgency through waterworks in two ways. First, the water bureaucrats are guided by a tunnel vision that legacy infrastructures would be built under any circumstances. Second, bureaucratic procedures were repurposed for policing both the movement of water and the deemed enemies of the state. Such dedication to fictional truth and the use of military power renders the democratic processes of consent seeking, in particular, as tolerance of dissent and of co-optation. The militarization of water sources affects communities through surveillance, containment of mobility and access, red-tagging, and arrest.

During my fieldwork when I was looking up and facing the monumental progress in the dam tunnel outlet, its massive concrete body that bored through the earth gave me an impression of authority. To alter landscapes and to divert water from its natural form require authoritative conviction. While fictional truth is a matter of simultaneously speculating about realities, the legitimacy of government work is still produced by the consuming public. This is evident in the lack of trust in potable tap water.

Counterinsurgency is beyond the popular imagination of ensuring the security of the sovereign domain from an external threat. Rather, it is integrated in state bureaucracy and the infrastructures that shape our urban-rural landscapes. Access to safe tap water in Metro Manila is an embodiment of the long history of authoritarian suppression of dissent in the Philippines.

## Notes

1. Since both *tigbalang* and *matanda sa punso* are colloquially still used today, the author emphasizes the difference in translation between the present and the colonial Philippines. In contemporary description, the *tigbalang* is portrayed as a tall creature with long limbs and the head and hooves of a horse who inhabits the forest and particularly resides in a balete (fig) tree. In the 2021 English translation of Ferdinand Blumentritt's (1853–1913) *Diccionario Mitológico de Filipinas,* from the same period as the construction of El Deposito, the *tigbalang* took "various forms, most of the time gigantic. If he appears in his favorite form (tall man with disproportionate limbs), he has head spikes; between these, three are distinguished, the thickest, that serve as amulets" (245). In another description cited from the same translation but originally sourced from *Relacion de las Yslas Filipinas* (1582), the *tigbalang* has "a face like a cat's, with a head that is flattened above, not round with thick beard, and covered with long hair" (Blumentritt 2021, 255). *Matanda sa punso* literally means "old man in the *punso,*" the pile of dirt that formed termite mounds. The *matanda* lived in the mound and is often illustrated as an old man squatting on the *punso.* In the English translation of Blumentritt's (2021) dictionary, they were described as ancestor spirits, or *nuno,* which is still believed today.

2. In Paz et al. (2016), Jube was Sebastian Jose, one of the two engineers who assisted Genaro Palacios, who headed the Carriedo waterworks project that was completed in 1882. The author follows the source material of the anecdote and uses Sebastian Jube instead.

3. "We" is the translation of the pronoun *tayo* used in the original quotation, indicating that I was included in what had already happened, as opposed to just "them."

# 12 | Planting the Seeds of Liberation

## *Agroecology in Lumad Schools*

Thea Kersti C. Tandog,
Mary Jill Ira A. Banta,
and Tami Alvarez

Ismael's day begins at 4:00 a.m. As soon as his alarm rings, he gets up and stirs awake Ronnie and their fellow Lumad students in their dormitory beds.[1] It is time to cook, clean, and tend to the school farm. Breakfast is often corn grits with *kamote* (sweet potato, *Ipomoea batatas*) tops or some vegetables from the half-hectare school farm. The land on which the farm stands, donated by one of the community members, is planted with various crops and vegetables such as *balanghoy* (cassava, *Manihot esculenta*), *kamote, karlang* (yautia, *Xanthosoma sagittifolium*), eggplant (*Solanum melongena*), *ampalaya* (bitter melon, *Momordica charantia*), and okra (ladies' fingers, *Abelmoschus esculentus*). Ismael, twenty-three, and Ronnie, twenty-one, both Pantaron Manobo, a Lumad group from Southern Mindanao, have tended the small farm since the start of the school year. The farm is part of the practical lessons they learn in their agriculture class at Salugpongan Ta 'Tanu Igkanogon (Unity in Defense of Ancestral Domain) Community Learning Center, a Lumad school in Talaingod, Davao del Norte.

Lumad, a Visayan word meaning "native" or "Indigenous," is a collective term that refers to the non-Moro Indigenous Peoples in Mindanao (O. Paredes 2018, 344). Much of the Lumad people's way of life is tied to their relationship with their land. For Jom, twenty-four, who serves as a volunteer teacher at the Center for Lumad Advocacy Networking and Services

(CLANS) in Sultan Kudarat, land is life. "Ang yutang kabilin ay ang kinaiyahan. Tubig, pagkaon, medicine nakaugat sa yutang kabilin. Diha ang among ospital, palengke, ug diha mi nagpuyo" (The ancestral land is our environment. It is where we source our food, water, and medicine. It is our hospital, marketplace, and home), he said. This shared perception of their environment has developed not only because of their recognition of the richness of natural resources in their lands but also because of decades of state failure to provide adequate basic services to their communities, which has left them with no choice but to rely on resources from their immediate environment.

Through the years, many Lumad groups have been forcibly removed from their land to create space for industrial development. One of the common reasons for land dispossession is the entry of foreign monocrop plantations wherein the Lumad end up as hired laborers on their own land, as is the case of Del Monte's occupation of Lumad land in Bukidnon (see chapter 5 in this volume). Lumad groups have become actively involved in defending their ancestral lands. Among them are the Manobo Pulangihon of Quezon, Bukidnon, who are standing up against corporate land-grabbing by means of land occupation and *bungkalan* (collective land cultivation) (Imbong 2021; see also chapter 10 in this volume); the Pantaron Manobo, who have waged *pangayaw* (warfare) against logging operations (Dulce 2016); and the Blaan of Tampakan, who, for three decades now have resisted the operations of the biggest open-pit mine in Southeast Asia (Sarmiento 2020). The term "Lumad" reflects this history of resistance, with its current use emerging only in the 1970s to refer to the Indigenous Peoples of Mindanao who were on the forefront of the struggle against logging and plantation companies encroaching on their lands (Alamon 2017).

The constant need to defend their land and life, in what Alamon (2017) calls a "war of extinction" deliberately waged by the state, has pushed Lumad groups to employ different avenues to empower their people in asserting their rights. One of these initiatives was the establishment of literacy and numeracy programs in their own communities, with the help of allied nongovernmental organizations (NGOs) and advocacy groups. Before these programs existed, the nearest public schools were often hours away by foot for many Lumad students. These public schools, despite being state subsidized, still collect fees and expect their students to wear uniforms. Lumad students also experience discrimination and

alienation. For these reasons, the Lumad have found it difficult to continue their studies in the public school system. This has had cascading implications. For example, it is common to hear about a Lumad who is unable to read or write being conned into signing documents relinquishing their lands to corporations and landlords.

Lumad schools fill this need by providing free education and accommodations to interested students, regardless of age. But beyond providing accessible education, they also offer culturally relevant pedagogy that reflects their context, history, language, practices, and their communities' collective desire to defend their ancestral lands and sustain their way of life. Unlike mainstream public and private schools that structurally mold students to aspire to individualistic growth characterized by high-paying jobs, upward social mobility, and overseas employment, Lumad schools envision students returning to their communities and continuing the collective work of sustaining their ancestral lands and asserting their right to self-determination.

Lumad schools supported by the Save Our Schools Network apply a unique curriculum that advances a nationalist, mass-oriented, and scientific (*makamasa, makabayan, at siyentipikong edukasyon*) stance that runs counter to the neocolonial and neoliberal educational system advocated by the state (Lanuza and San Juan 2023; San Juan 2016).[2] It is "nationalist" because it is oriented toward addressing local needs over foreign demands, understanding the history of the struggles of Indigenous Peoples, peasant farmers, workers, and the urban poor, and standing in solidarity with them. The curriculum is "mass oriented" because it is accessible to and serves the needs of oppressed peoples such as the Lumad. It is "scientific" because it encourages critical thinking and promotes learning that is rooted in the concrete conditions of the community. At the heart of the Lumad school curriculum is agriculture because it is the primary economic activity of the Lumad and because for centuries the Lumad people have sustained their communities through self-reliant farming before the entry of agribusiness plantations. In their classes, Lumad students learn about agroecology not only as a science but also as a social movement.

In this chapter, we discuss how agroecology emerged at the heart of Lumad schools in light of the Lumad's concrete experiences of marginalization, exploitation, and dispossession. We argue that despite current challenges, agroecology has the potential to plant the seeds of liberation for the Lumad, if practiced within the framework of a contextualized,

critical, and transformative pedagogy. This framework has been integral to the food systems and environmental practices in Lumad schools in sustaining and asserting their land and life.

Our discussion is informed by our interviews with several teachers and students from Lumad schools across Mindanao, as well as representatives from Lumad school support groups, MASIPAG Mindanao (a grassroots network for farmers), and Save Our Schools Network.[3] This chapter is also largely informed by our personal experiences of working with the Lumad, writing about their stories, and supporting their calls. Tami Alvarez is a Lumad from the Manobo and Dibabawon who has volunteered at a Lumad school and whose current work in the Sabokahan Unity of Lumad Women, an intergenerational organization composed of Lumad women and Lumad LGBTQ+, supports the Lumad students. Meanwhile, Mary Jill Ira A. Banta and Thea Kersti C. Tandog were volunteers in Liyang Network, a grassroots organization that supports and amplifies Lumad groups' calls to action.

## Agroecology—Definitions, Processes, and Critiques

Agroecology was first used as a concept in the 1920s (see Bensin 1928, cited in Wezel et al. 2009) to refer to the use of ecology and its application to agriculture. Over time its meaning evolved to refer to the relationship of agroecosystem components, agricultural management, the physiological context of crops, and ecological factors affecting the development of crops. Thus, the term's inception was closely associated with zoology, agronomy, and crop physiology. Today the meaning of agroecology transcends science, as it is now also understood as a movement and practice (Wezel et al. 2009). As a movement, agroecology is intertwined with environmentalism and environmental justice, such as scrutinizing the use of toxic substances in agriculture and their social impacts. As practice, agroecology refers to sustainable agricultural methods or simply a form of agriculture "that is not ecologically harmful" (Wezel et al. 2009, 511). Agroecology has also become synonymous with organic agriculture because of the nature-based solutions that organic farming applies. Rosset and Altieri (1997) warn that organic agriculture based on mere input substitution greatly diminishes its potential to be sustainable if it does not

challenge the monopoly of agribusiness and if it does not support self-reliant farming. Thus, food sovereignty as well as resistance to the agro-industrial complex are key elements of agroecology.

Agroecology is perceived not just as an ecological sustainability strategy but also as a solution to poverty and hunger (Holt-Gimenez and Altieri 2016). It is seen as a self-sufficiency model to feed societies while taking into consideration future generations and environmental protection (Sy 2021, 61). Agroecology is also a form of resistance because it challenges the unsustainability of the agro-industrial complex, which focuses mainly on capital accumulation, market expansion and competition, and export (Gliessman 2016). Its scholars and practitioners also advocate it for its capacity to preserve cultural practices, such as traditional cultivation and the passing down of crop varieties from generation to generation, which are often sacrificed to give way to new varieties of crops and the modern agricultural methods of the agro-industrial complex (Gliessman 2016).

In the Philippines, agroecology is a thriving movement and practice. *Bungkalan* (collective land cultivation) is a prime example in which farming cooperatives reclaim the land they till, but do not own it, through collective organic farming (see chapter 10 in this volume). This specific practice is the core of "farmworkers' struggle against both class and environmental exploitation" and an assertion of the farmers' right to own and till their land (Sy 2021, 72). Because *bungkalan* is the occupation of land for just causes, its radical character cannot be understated. The movement has faced state violence, with advocates and practitioners being detained and murdered. In 2018, nine farmers in Sagay, Negros, were killed (Macasero 2018), while in 2022, ninety-two land reform advocates and farmers were arrested in Tinang, Tarlac, all of whom were practicing *bungkalan*. Furthermore, Wright (2014) and Heckelman, Chapell, and Wittman (2022) demonstrate how agroecology has been used by MASIPAG to bolster farmer resilience and establish food sovereignty in various agricultural communities in the Philippines. MASIPAG espouses people-centeredness in which communities' food security comes first. We echo Sy's (2021, 81) assertion that agroecology has a role in the "struggle for liberation." Thus, the practice of agroecology in Lumad schools has become a form of resistance, a strategy for food security, and a deepening of social ties—all of which hinge upon activism to assert land and human rights.

Several scholars, however, have criticized the idea and praxis of agroecology (see, for example, Soper 2020; Jansen 2014). They view the move toward agroecology, its perceived benefits, and its associated movements as rooted in the utopian ideologies of advocates rather than a straightforward solution to the problems of agrarian life. For example, Soper (2020) has challenged the emancipatory value of agroecology because of issues of representation in movements, incongruity with farmers' desires and actual practice, and the continuing popularity and ubiquity of the use of synthetic fertilizers and chemicals within the framework of commercial agriculture in many rural areas. Jansen (2014) further criticizes the traditionalist outlook within agroecology movements and questions the viability of agroecology as an alternative to commercial agriculture.

While these critiques are valid, especially the continuing popularity of agro-industrial practices among farmers (including Indigenous ones), we underscore the need to contextualize the situation. We ask, "Why do farmers choose this path? What are the circumstances and the reasons behind their decision? What is the political economic situation of the farmers that influences such desire?" We endeavor to answer these questions in the next section by providing a brief historical account of agrarian transformation in Lumad communities.

## Transitions in Lumad Farming

"Mag-uuma gyud. Mao ra gyud ang among panginabuhian" (We are farmers. That is our only livelihood), says Ronnie. Both he and Ismael are children of Pantaron Manobo farmers in Talaingod whose main livelihood is planting abaca (*Musa textilis*), banana, and corn. Agriculture is part and parcel of the life and history of the Lumad. Parents teach their children how to farm and children learn by shadowing their parents. At a young age, their parents give them *lagaraw* (machetes) or *guna* (short weeding bolo), crucial tools in the rural Philippines where much of farming is still heavily manual and labor-intensive.

In the past, the Lumad practiced swidden farming. This was performed by burning a small portion of forest land, allowing the biomass from the burnt vegetation to enrich the soil and promote the growth of upland rice, tubers, corn, and many other edible plants. After harvest, the cultivated land was left fallow for many years to allow the forest to recover

in time for the next cycle of clearing, burning, and planting of crops (see Schlegel [1979] for swidden farming among the Teduray of Mindanao). The Lumad emphasized that traditionally they avoided farm inputs. Recently, however, Lumad farmers have shifted from swidden farming to intensive agriculture, producing high yields of crops through monocropping and using synthetic chemicals from agro-industrial corporations. The choice of crops has been highly dependent on the demands of the market. Thus, many Lumad people have abandoned traditional varieties of crops for high-yielding varieties of, for example, rice and corn.

There have been multiple reasons for this transition. For one, Lumad people's increased interaction with lowlanders has introduced them to commercial agriculture. Ronnie described this as a common situation in their community, saying the following:

> Syempre pag mulugsong sila, naa man na'y sharing-sharing sa mga ginatawag nila nga Kristyano o Bisaya sa ubos. Mao to, naa na sila'y mga ideya kay syempre muingon man sila na dali ra kayo mapatay ang mga sagbot o dali na kaayo mamunga kung gamiton ni . . . So kato ilang gigamit. (Of course, when they descend from the mountains, there is sharing of knowledge with what they call Christians or Bisaya in the lowlands. That's how they started to have an idea because they noticed that it's much easier to kill weeds or it's much easier for crops to bear fruit if they use [synthetic inputs]).[4]

The reasons for the transition to commercial agriculture have also been largely structural. The large demand for aggressive productivity has pushed the Lumad to engage in the use of synthetic fertilizers and pesticides peddled by agribusinesses. Ronnie and Ismael admit that even their parents have adopted the use of Roundup Ready corn, a genetically modified corn that is resistant to glyphosate-based herbicide.[5] Many Lumad have been enticed by the possibilities of higher yield and lower labor inputs so they can have a chance to participate in commercial agriculture. These commercial crops are currently sold in markets far from the Lumad communities or as livestock feed instead of being consumed by the Lumad themselves.

Lumad people have also found it increasingly difficult to acquire their basic needs from their environment and from the practice of swidden agriculture. For the longest time, the forest had provided Lumad people with their basic needs such as food, shelter, and medicine, among

others. However, in recent years the density of forests has receded from 90 percent during the Spanish colonization to a mere 21.7 percent in 2001 (Bankoff 2007; ESSC 2002). The destruction of forests has been facilitated by large corporations that aim to profit out of it through mining, logging, and plantations. Furthermore, swidden cultivation has been banned by the government under the Forestry Reform Code of the Philippines of 1975 (Presidential Decree 705). Thus, its practice has been massively curbed, although, according to some informants, it is still practiced where state agents are not present. The enactment of this law has further pushed Indigenous Peoples all over the country to practice intensive agriculture geared toward commercial production.

The transition to commercial agriculture has had its toll on the Lumad people's livelihoods and culture. Commercial agriculture requires capital for farm inputs and chemicals (see chapter 6 in this volume); as a result, Lumad people have accumulated debt as they acquire farm inputs from traders acting as liaisons for agribusiness corporations. They have become beholden to these traders who initially market their synthetic inputs and genetically modified seeds by sharing success stories of other farmers who supposedly rake high yields and huge profits from the use of said inputs. What they fail to mention is that while gross profits may be high, these are offset by the high cost of inputs. In reality, farmers earn far less income than expected. As Ismael explained:

> Naay panahon nga mag-harvest, wala na ma-income tungod sa kadako sa utang. Usahay tama ra gyud sa utang. Ang pamilya kay mag-utang, magbaligya na og mais unya ag makakwarta ibayad sa utang. Unya mag-utang na sad. Mao ang stratehiya. (There are times during harvest season when we don't get enough income because of our huge debt. Sometimes, our income would be just enough to pay our debt. Our family would borrow money, sell the corn, and use the money to pay our debt. Then we would borrow money again. That is our strategy).

In addition, traders have maintained the power to control the prices of the crops, set exorbitant interest rates, and reduce the price value of the crops if they deem these of low quality. And because synthetic inputs not only control pests but also have an impact on the microorganisms that enrich the soil (Tripathi et al. 2020), the only way to "nourish" the soil again has been to apply another round of synthetic inputs and planting genetically

modified seeds. "Manganad ang yuta kung butangan og kemikal" (The land will get used to the chemicals), lamented Ismael. He added that in the next planting cycles, the produce has tended to be smaller and the yields lower. Farmers have found it difficult to return to traditional farming or attempt organic agriculture because the soil has no longer been as productive as it used to be. Thus, farmers have found themselves caught in a cycle of indebtedness and low yields, until their own lands become so degraded that they need to be sold off, forcing Lumad people to take on jobs as laborers on plantations (Imbong 2021).

## Lumad Schools, Agroecology, and the Role of Support Groups

The agrarian transitions discussed above serve as a backdrop to the emergence of Lumad schools and their agroecology-based curriculum. The first accredited Lumad school was established in Talaingod, the province of Davao del Norte, in 2007 through a collaboration between the Rural Missionaries of the Philippines and Salugpongan Ta 'Tanu Igkanogon. At one point as many as 216 Lumad schools were operating in Mindanao (Diño 2020), but by 2021 most had closed down (Nolasco and La Viña 2021).

Agroecology figures strongly in the curriculum of the Lumad schools that remain. For many Lumad students, agroecology is a foreign term introduced by MASIPAG in 2016. Agroecological practices, however, are not removed from many traditional Lumad farming practices—they remain aligned with the Lumad's collective assertion of their right to self-determination and a sustainable way of life in their ancestral land. For example, part of the agroecology lessons in Salugpongan is tracing the changes in the agricultural practices of the Pantaron Manobo and integrating the Lumad practices of *lalapung* (seed and grain preservation) while exploring new sustainable farming practices.

Despite the critique that Indigenous People's participation in agroecological movements is limited (Soper 2020), Lumad schools are prime examples of how the application of agroecology can be dialectical. Agroecology builds on the wisdom of the Lumad ancestors while situating the Lumad in the larger context of global food insecurity. Those in the community work with MASIPAG and other peasant farmer advocates in developing a curriculum that honors traditional farming while exploring

other sustainable methods that fit their given context and fulfill their collective aspirations.

As described by Lumad student Ronnie, the school's subjects are taught beyond the four corners of the classroom, and agriculture is integrated into all of them. For example, children who are just starting to learn math are taught to count using grains. Meanwhile, teachers and students in all grade levels engage in everyday farming, working collectively to produce crops. The students "sell" the crops to the schools in exchange for "credit," which students can use to purchase goods such as soap and food items sold in the school-managed store. In this way, students are encouraged to participate in farming activities while simultaneously acquiring their needs other than food. The crops they "sell" are used for their own consumption and the excess production is given to the communities where each school is located.

Support groups like MASIPAG and other NGOs play an important role in strengthening the curriculum of Lumad schools. The role of support groups such as the Rural Missionaries of the Philippines and the Save Our Schools Network is to mobilize people who can serve as volunteer teachers in Lumad schools. Other support groups help gather material and financial support and amplify the work done in Lumad schools to the public. For example, Liyang Network, an international advocacy network that supports human rights and environmental defenders, was formed at the request of Sabokahan, an organization of Lumad women from Southern Mindanao. As a support group, Liyang Network launches campaigns and fundraising events to provide for the needs of various Lumad schools. Some of its members also volunteer as teachers in various Lumad schools across the Southern Mindanao Region. Scientists, academics, and university students support the Lumad schools by aiding in curriculum development, part-time teaching, research, and giving the Lumad a space to engage with larger networks.

## Agroecology as a Tool for Liberation in Lumad Schools

"Pagtudlo sa panguma nga wala'y gitamakan" (Teaching a form of agriculture that doesn't oppress anyone)—this is how Teacher Jom describes their

subject on agriculture, which places an emphasis on agroecology. He adds that their curriculum follows a *makamasa, makabayan, at siyentipikong edukasyon* (mass-oriented, nationalist, and scientific education), highlighting that education is also a social movement to resist oppression.

Like other cases of agroecology in the Philippines (Heckelman et al. 2022; Wright 2014), agroecology in the context of Lumad schools is intertwined with food sovereignty. Here it is not only an intellectual association but also a practical and strategic decision. Most Lumad schools are located in far-flung areas—some in forests—that have no access to markets and grocery stores. Thus, they establish gardens and farms to feed teachers, students, staff, and the school's immediate communities.

The emphasis on food sovereignty points to the emancipatory value of agroecology in the lives of Lumad students. The practice of agroecology has the potential to liberate their families from reliance on the interest of traders and cuts the cycle of indebtedness. It prevents the loss of ancestral lands to traders who acquire the lands when the Lumad can no longer pay off their debts. It also deters the Lumad from selling their land to mining and real estate interests when the soil is already too degraded for planting. As such, agroecology is connected to the Lumad's commitment to defend their *yutang kabilin* (ancestral lands) from land-grabbing and development aggression.

Furthermore, Lumad schools advocate agroecology in the context of environmental protection. The use and encroachment of hazardous agrochemicals destroy the integrity and health of the soil and contaminate water systems through runoff. Water contamination is particularly alarming in the context of Pantaron Range, which supplies water to eighty-two river systems in the Mindanao region, including the Pulangi River that stretches from Bukidnon to Cotabato Province. Moreover, unlike the monocropping system encouraged by agribusinesses, the diversified farming promoted in agroecology allows the Lumad to survive calamities or pest infestation, especially amid the threat of climate change. For the Lumad students, their education in and practice of agroecology is necessary for their safety and that of the generations to come.

The sentiments above are echoed by students in Lumad *bakwit* (evacuee) makeshift schools established in metropolitan Davao, Cebu, and Manila for Lumad students displaced by conflicts. Despite being in urban sanctuaries, the Lumad students maintain vegetable gardens that not only



FIGURE 12.1. A Lumad student of a *bakwit* (evacuee) school shows the harvest for the day—a bundle of radishes that were later added to the school's lunch plates. This photo was taken in 2020, at the height of the COVID-19 lockdowns, which made mobility and access to food difficult for the Lumad *bakwit. Source:* Sabokahan.

serve as a setting for them to continue learning about agroecology (Yambao et al. 2022) but also contribute to their food needs as Lumad evacuees (figure 12.1).

## Agroecology and Relationality in Lumad Schools

Heckelman et al. (2022) state that agroecology invokes the system of *bayanihan* (collective work) and rebuilds relationships in Negros Occidental, Philippines. Similarly, agroecology serves a role in weaving relationships within Lumad schools. First, we observe that it facilitates mutual learning between students and teachers. Students learn techniques in sustainable agriculture through the curriculum while teachers learn hands-on agriculture as well as Lumad traditions, values, and practices. Teacher Jom shares that while he himself is a Lumad and his parents are Lumad farmers, he did not learn farming from his parents because they had planned for him to grow up in the city. "Ang praktika nakat-onan ra nako sa pagserbisyo sa Lumad schools" (I only learned the practical aspects of farming through serving in the Lumad schools), he affirms. The Lumad schools' pedagogical approach resonates with Freire and Ramos's (2005) "pedagogy of the

oppressed," in which both students and teachers see themselves as working together in the task of unveiling reality, knowing it critically, and recreating knowledge.

Second, agroecology promotes and strengthens collective life. Teachers and students are typically divided into groups to perform farming activities together, while other chores such as cooking are also performed collectively in a group. Teacher A, a Filipino American volunteer teacher in a Lumad school, recalls that there were ten to fifteen members at a time (one teacher and fourteen students from various grades) preparing food for the entire school. Someone starts cooking the rice, and the others start chopping the vegetables and other ingredients. The typical food is *kangkong* (water spinach, *Ipomoea aquatica*), *sayote* (mirliton squash, *Sechium edule*), and sardines. Education in Lumad schools instills camaraderie and togetherness. Teachers and students are encouraged to practice *pakikipagkapwa* (a Filipino term that denotes that personhood extends beyond oneself to include others), as is evident in how schools share their resources and crops with community members outside, and vice versa.

Third, agroecology is a way for students and teachers to get to know each other through genuine dialogue. Lumad schools do not only serve students coming from the ethnolinguistic group where the school is located; they also cater to other ethnolinguistic groups, including some Bisaya settler youth from the area who enroll because of the free tuition. Tensions among students from conflicting ethnolinguistic groups occasionally arise. However, collective work in the farm allows space for understanding, familiarity, and even friendship among students. In addition, students and teachers participate in an open forum once a week to collectively resolve personal conflicts between and among students and teachers. These shared encounters break barriers and challenge the usual power dynamics between teachers and students. Students are aware that their teachers also learn from them, thus promoting a less hierarchical and more intimate relationship.

Last, all the relational dynamics stated above result in the tightening of personal connections in Lumad schools. Teachers, students, and staff alike feel a sense of belonging and community within these schools, fostering a bond through shared experiences. Members of the school community are also bound by their common hopes and dreams for a life that sustains the culture and lifeways of the Lumad for generations, protecting the *yutang kabilin* (ancestral land).

The students' participation in agroecological learning and practice demonstrates how Lumad schools cultivate a transformative and liberating education. Lumad students understand that the world is not a "static reality, but as a reality in process, in transformation" (Freire and Ramos 2005, 83). Through collective action applied in agroecology, they become active participants in transforming an oppressive society toward one that is more just and equitable.

## The Challenges of an Agroecological Curriculum

Many challenges arise during the teaching and practicing of agroecology in Lumad schools. On a personal level, teachers, especially those who do not come from Lumad communities, find the labor-intensiveness of farming difficult. On a logistical level, teachers and school administrators find it difficult to sustain teaching agroecology due to the scarcity of farming tools in Lumad schools, a problem that becomes starker in the context of diminishing resources and violence.

State-sponsored violence is perhaps the most difficult challenge. Because of Lumad groups' commitment to defend their ancestral lands, they have become targets of militarization and violence, which according to the Save Our Schools Network (2020) are perpetrated by state agents. Ismael, Ronnie, and Teacher Jom share that armed soldiers continue to control the activities in their communities, including their farm schedule. The military controls and monitors the whereabouts and actions of community members to assert military power, instill fear, and keep the community docile—a rampant phenomenon referred to as psychological warfare or *psy war* (Alave 2021)—with the supposed intent of deterring them from aiding and/or allying with accused insurgents.

Based on the accounts of Ismael, Ronnie, and Teacher Jom, military personnel threaten students and teachers, accuse them of being members of the New People's Army, and confiscate their farming tools. "Kung muadto sa uma, ubanan ka sa military ug limitahan ka. Kung dugay ka makauli, naa nay paghulga nga gikan ka sa pikas kay nganong dugay nakauli sa balay?" (If you go to the farm, the military will accompany you. If you stay long, they will accuse you of being a rebel, because [they will think], "Why would it take long for you to return home?"), laments Ismael.

Violence against Lumad schools reached its most extreme level when Lumad school educators Emerito Samarca, Chad Booc, and Jurain Ngojo were killed between 2015 and 2022 (MindaNews 2015; Noriega 2022). By 2021, more than a hundred Lumad schools, including Salugpongan, the Community Technical College of Southeastern Mindanao, and the Center for Lumad Advocacy Networking and Services, were ordered by the government to close. President Rodrigo Duterte himself was quoted threatening to bomb Lumad schools (Associated Press 2017), saying "Get out of there, I'm telling the Lumads now. I'll have those bombed, including your structures. I will use the armed forces, the Philippine air force. I'll really have those bombed . . . because you are operating illegally and you are teaching the children to rebel against the government." The Save Our Schools Network (2020) addressed this accusation, saying "Indeed, they [Lumad schools] do—that is, if defending their homes, protecting the local ecology, and struggling for the continuity of their tribes' bloodlines be tagged as 'rebellion.'" Part of the accusation is premised on the state narrative that the Lumad are controlled by support groups that the state tags as insurgent Communists.

Such attacks underscore the ways agroecology threatens the state and corporations. Agroecological practice is a pivotal element in Lumad communities' ancestral land defense and environmental protection, which interrupt the interests of extractive industries to the extent that Lumad schools have become a target of military surveillance and intervention. The students, parents, and teachers in Lumad schools actively participate in opposing land-grabbing in their communities. In an interview with Banta, a Lumad school teacher disclosed that a land developer bulldozed her coffee and corn to make way for a corporation's Falcata (*Falcataria falcata*), Gmelina (*Gmelina arborea*), and coffee plantation in 2016. The Lumad community raised this issue to their barangay and municipality officials, but the matter was not addressed. Because of the school teacher's active resistance, she was arrested and was falsely accused of murder and frustrated murder. Out of desperation, the Lumad community participated in the Lakbayan ng Pambansang Minorya (Journey of National Minorities), an annual march and campout of thousands of Indigenous Peoples and other groups who identify as "national minorities." The march included a journey from the Indigenous People's homelands to Metro Manila, where they aired their issues on the streets, at universities, and in front of government agencies. Some of these issues included the presence

of the military in their schools, the destruction of their environment due to land development, and the human rights violations committed against them.

The closure of the schools has had a heavy impact on the Lumad. Lumad students have had to give up their education because mainstream schools continue to be inaccessible and fail to provide the services that Lumad schools offer. Furthermore, the practice of agroecology has not transcended to communities despite the active promotion in Lumad schools. Outside the schools, most Lumad people rarely apply agroecological methods in their farming as they opt to use synthetic fertilizers and pesticides as part of their engagement in commercial agriculture. While this reality must be contextualized in the local agrarian political economies that embroil Lumad communities, as discussed above, it remains a significant hurdle in the journey toward agroecological liberation.

## Planting the Seeds of Liberation

It may be easy to dismiss the efforts of Lumad schools to practice agroecology as futile given that even the families of Lumad students find it difficult to transition toward sustainable agriculture. But like any struggle against the dominant mode of industrial agriculture, agroecology requires years of genuine dialogue, patient community organizing, and earnest experimentation with what works and what does not. Agroecology and related practices like the organic agriculture embraced in Lumad schools are sufficient evidence of the Lumad peoples' interest in learning about alternative methods of farming. In one Lumad school, the school farm was able to supply 30 percent of the school's vegetable consumption five years after its establishment. This is a significant achievement amid challenges to school operations.

Outside Lumad schools, narratives of successful applications of agroecology have begun to emerge. Based on a conversation with a representative of MASIPAG, many of the organization's partner farmers have had positive net incomes from producing organic rice. These farmers have maximized their incomes by creating their own nature-based concoctions, such as organic nutrients. They have also worked together to set up a drying and milling facility for collective use, thus earning more from selling *bigas* (milled rice) instead of *palay* (rice prior to husking).

Common to these successful narratives of agroecology is the regard for collective work among the people practicing it. Thus, agroecology cannot be reduced to a return to labor-intensive farming or an uncritical revival of traditional farming. Rather, it is a practice and a movement of collective learning, decision-making, and action toward mutual development. Equally important, agroecology affirms its potential to be a tool for liberation in Lumad schools if practiced within the framework of a contextualized, critical, and transformative pedagogy.

Save Our Schools–affiliated Lumad schools remain some of the very few educational institutions that cater to the particular culture and condition of the Lumad. Lumad schools are unique because they foster, encourage, and actively engage in collective life, not just within the schools but also in the communities surrounding them. Furthermore, those involved in Lumad schools—students and teachers alike—shape their curriculum to be a tool for resistance against neocolonial, neoliberal, patriarchal, and unjust structures. They are aware of the ubiquity of oppressive systems around them. They not only learn mathematics, literacy, and agroecology; they also learn about their rights vis-á-vis the systems that exploit them, thus helping them gain stronger political power to resist.

Proponents of Lumad schools agree that their curriculum can be implemented in other parts of the country but may not be compatible with the mainstream schools within the network of the Department of Education (DepEd). Lumad schools' ethos revolves around the empowerment and self-determination of Lumad communities, while DepEd's schools have become more neocolonial and neoliberal (Lanuza and San Juan 2023). They also believe that communities elsewhere can adapt the Lumad schools' curriculum, if they are organized. However, with the closure of Lumad schools, the future of emancipatory education in the Philippines remains an open question.

"Padayon gihapon nga nagapaningkamot na mabalik ang eskwelahan" (We continue to struggle for the reopening of our schools), says Ronnie. He and Ismael are now actively involved in national campaigns for recognition of the Lumad right to land, self-determination, and education. Recognizing the value of organizing in cities and connecting with fellow environmental advocates, they, along with fellow Lumad youth, have also become our colleagues in the local environmental struggle. Lessons of agroecology and collective work, then, are not lost among the Lumad students. Their continued participation in the struggle for liberation is

already an application of the social and environmental justice principles they have learned in Lumad schools.

Ismael was arrested for his activism in July 2022. Just a month after our last conversation with him as we were writing this chapter, he and his brother Mawing were unjustly detained during a protest held in Davao City. Fabricated charges of human trafficking were filed against them. "Lisod gyud siya huna-huaon" (If you think about it, it's really difficult), Ismael said in an interview before his arrest, referring to his life as a child of a Lumad farmer. "Pero labanan gyud ang kalisod!" (But we must fight (amid) adversities!). His words are an invitation for us to fight, alongside them, in our common struggle for liberation.

## Notes

1. Pseudonyms are used to protect the identity of our interlocutors.
2. Save Our Schools Network is an advocacy network composed of church-based groups, people's organizations, and NGOs that advocate for the rights of children to education. It was formed in the context of militarization and attacks on schools, which transgress and disrupt the education of children. It has a particular focus on Lumad schools.
3. MASIPAG stands for Magsasaka at Siyentipiko para sa Pag-unlad ng Agrikultura (Farmer-Scientist Partnership for Development) and is a farmer-led network of people's organizations, NGOs, and scientists.
4. Bisaya largely refers to settlers from the Visayas.
5. In 2017 the World Health Organization-International Agency for Research on Cancer (IARC) identified glyphosate as a substance in herbicide that is probably carcinogenic to humans.

# *Panghimagas*

## *What We Crave*

Marvin Joseph F. Montefrio
and Alyssa Paredes

We landed on the term "*halo-halo* ecologies" in a moment of playful banter. We were only looking for an evocative Filipino food icon—ideally both familiar and eccentric—that might capture the spirit of our collaboration. Deciding on the term almost half-jokingly, we had little idea how central an analytic it would become for all the authors featured in this volume, visualizing both the nature of our collective and clarifying what it meant to bring us all together.

When it comes to our beloved summertime dessert, what appeals to the Filipino palate is not only the melding together of the various ingredients but also the contrast of those textures, flavors, and colors. Appropriately, assembling *Halo-Halo Ecologies* became a project of reconciling with, even reveling in, contrasts. The eighteen authors involved in this project began with little more in common than a shared commitment to storytelling through food. Meeting each other at a workshop in June 2022, we were quickly confronted with disagreements over what the work of that storytelling ought to be. Do we recount narratives of environmental violence, struggle, and resistance with the primary aim of documenting social realities as they are? Or do we write in an aspirational, even revolutionary mode, to will into being alternative realities outside the structuring forces of capitalism and colonialism? Should we aim to tell stories that reclaim notions of Indigeneity and Indigenization or highlight the intensifying hybridization of more-than-human worlds? Do we attest to the continued dominance of imperial and capitalist structures on agroecological

systems or emphasize their undoing? Put differently, if our role as social scientists, food writers, and politically engaged citizens is to bear witness, to what ends?

True to the *halo-halo* nature of the project, each author fell on a different point of the spectrum in response to these questions. Emotions rose as we felt the stakes of those divergences, unsettling any facile presumption of a shared vocabulary. We debated on whether we ought to refer to food-growing communities as "marginal" or "marginalized" and whether their actions ought to be recognized as genuine "resistance" or a more passive "response." We deliberated the extent to which we needed to deconstruct the binaries of "native/foreign," "internal/external," and "homeland/diaspora." These dichotomies tend to erase historical and ecological relationality, but they are also terms that communities themselves insist on for political reasons. Coming together to debate each idea's merit, we realized that in fact every term we offered could be imploded. Indeed, at every turn that we used the word "Filipino" or the phrase "Filipino food," we had to swallow how imperfectly they captured the archipelagic nature of the social realities we were writing about. For every moment we tried to underscore local terms and ideas around food, we confronted other instances that left us frustrated at the necessary English- or Tagalog-centrism of writing for the broadest possible audience.

Rather than smoothing out our stories into a singular narrative arc, we have chosen to retain the integrity of each piece and the complexity of the mix. To us, this captures something essential about the nature of *halo-halo* ecologies—it befuddles simple narratives and insists on complexity. In the chapters above, assemblages and entanglements became a central analytic by which authors came to understand the complex web of relations emanating from their central objects of inquiry.[1] The swirl of peoples, plants, animals, microbes, ecosystems, and social institutions become the ingredients necessary for bringing out the fuller flavor of the emergent environmental relations behind Filipino food. Ludovice's (chapter 4) history of evaporated milk is implicated in stories about pasture grasses, coconut plantations, cattle breeds, and the colonial institutions that introduced them. Medrano's analysis of giant gouramis (chapter 1) reveals an assemblage of ecosystems where these fish were introduced, the food that nourished them, and the local scientists who helped them settle in the Philippine environments. Meanwhile, Varquez (chapter 7) illuminates how the fate of seaweeds is entangled not only with the fisherfolk growing

them but also with the nutrient concoctions they are "addicted" to and the diseases that bleach them.

Like a tall glass of our favorite summertime dessert, *Halo-Halo Ecologies* offers analyses in multiple layers—from the historical to the contemporary, from the social-cultural to the political-economic—and at multiple scales—from individuals to households and from local communities to whole regions. The layers may appear legible at the beginning, but once mixed—as one does with a long-handled spoon—the interactions between ingredients and layers become difficult to distinguish. Alejandria (chapter 8) and Abasolo and Montefrio (chapter 9) examine the layers of environmental disasters, livelihood precarity, and food provisioning. The chapters by Sales (chapter 10), Ruzol (chapter 11), and Tandog, Banta, and Alvarez (chapter 12) add the layers of state- and military-sponsored violence. Meanwhile, Medrano (chapter 1), Collins (chapter 2), and De Leon (chapter 3) include the layers of the transnational movement of humans and nonhumans and the knowledge and discourses attached to them.

Yet simply concluding that our stories are complex and plural misses an opportunity to uncover underlying patterns. Coursing through all chapters, albeit unevenly, are the layers of colonialism, technoscience, and neoliberal capitalism. These figure into the precarity of fishers in Capiz and the informal settlers of Manila, the proliferation of commercial agrichemicals even in the farthest regions of the country, the establishment of monocrop plantations on Indigenous lands, and the dominance of introduced food commodities. The stories we tell remind us that multispecies relations are often contingent on larger systemic assemblages (Collier 2006), especially in the context of a nation that has a long colonial history and a still unfolding engagement with neoliberal capitalism.

Against the grain of hegemonic forces, rural and urban precariats navigate environmental change and rising authoritarianism with awareness and strategy. Many vulnerable Filipino communities in our stories are aware of the lack of nutritious food they consume, the toxicity and hazards of the agribusiness practices they adopt, and the dangers of the militant forces they encounter regularly. They find ways to navigate the troubled circumstances they are in, whether by growing organic vegetables in the backyard, setting up community pantries, preparing *pagpag,* stealing pineapples from plantations, or introducing agroecology in Lumad schools. The nonhumans in our stories also intimate such agencies, such as when the giant gouramis open new hybrid foodways or when the *tambalang*

seaweed fulfills the development aspirations of fisherfolk. These serve as cautionary tales against taking colonialism, technoscience, and neoliberal capitalism as overdetermining structures constraining all of social and ecological life.

For that reason, as members of the *Halo-Halo Ecologies* Collective, we took it upon ourselves to uncover the environmental underpinnings of Filipino/Filipinx food without falling into the trap of ecologically deterministic thinking (see Norgaard 1994). We heed the work of thinkers who emphasize that multispecies interactions can result in open-ended, multidirectional, and surprising trajectories (DeLanda 2006; Deleuze and Guattari 1987; Norgaard 1994; Tsing 2015). Sometimes narratives deviate from the path dependence predicted by a political economy analysis, such as when an unlikely bricolage of secular and nonsecular knowledge challenges the entrenched imperial epistemes and practices of a plantation economy or when novel sociomaterial relations allow underprivileged classes to gain access to high-end food commodities (A. Paredes 2021; Montefrio 2020). We anticipate novel *halo-halo* relations to emerge still in the face of the yet unknown impacts of climate change, electoral politics, wars, the swings of the global markets, and the eruptions of resistance and uprising in and beyond the archipelago.

In navigating the relational complexities of food and environment in the Philippines, we were ourselves surprised that what had started out as an intellectual journey quickly became a personal and emotional one. From the beginning, our attention to matters of environmental concern was intended to disturb the romanticizing and nationalistic impulses that can often motivate discourse on food. In writing, many of us came to admit that we are ourselves romantics writing from the places and communities that we care about deeply. Critical as we are of state-sponsored narratives of the nation, we cannot deny the unique joy that has come from the fact that this is, in the end, a book written by individuals deeply connected to the Philippines, regardless of what form that connection takes. Our joys, however, have been sobered by the unspeakable suffering, death, and loss that lies in between this book's lines. Some chapters were written with the painful knowledge that the voices they capture are no longer with us in this world. For others, untimely death in the family was the very reason for writing in the first place. In each case, the loss was never only human.

Recognizing the stakes of this work as both scholarly and personal has clarified that our work comes with a sense of urgency to tell stories about

food and environment that bring to light the unsavory and unpalatable realities that undergird even our most cherished foods and gastronomic institutions. Amid our friendly disagreements over the scholarly lexicon, our conceptual leanings, and our political inclinations, we found solidarity with each other in that shared cause. While deepening our commitment to intellectual nuance, *Halo-Halo Ecologies* has also become our expression of solidarity with Indigenous Peoples, landless peasants, the urban poor, political prisoners, and their allies. Many of these communities are threatened by virtue of their precarious positionality in the global food order or persecuted for their commitments to envisioning that order anew. The ongoing oppressive maneuvers of the state and the institutions of capital cannot be ignored. Recognizing the resourcefulness and persistence of urban and rural precariats to address acute hunger amid crisis must prompt a sense of urgency rather than complacency. Identifying acts of resilience—such as Indigenous farmers' practices of growing organic food in their home gardens—cannot mean that the issue of their exposure to toxicity in industrial agricultural fields has been solved (chapter 6). Novel forms of care work and resistance, like community pantries, community kitchens, and Lumad schools, are awe-inspiring models for alternative futures, but they also face even greater threats amid rising authoritarianism and militarism (chapters 10 and 12). These struggles are not dissociated from those of overseas workers, forced migrants, and striking laborers in the diaspora, many of whom find themselves at the global core of racial capitalist violence (chapters 2 and 3).

The task of telling these stories impels us to ask what we can offer to the political project of actualizing alternative food worlds. We look at the scholarship on social movements and resistance for inspiration. In the Philippines and its diaspora, so much work is already being done by activists and advocates at the intersection of food and environmental issues. To mention only a few, these include the movements against genetic modification and threats to food sovereignty (Kupferschmidt 2013), the Rice Tariffication Law (Bonquin 2019), the Regional Comprehensive Economic Partnership (Strangio 2023), aerial spraying and related forms of toxic harm (Nikol and Jansen 2020; A. Paredes 2022), union busting, and labor violations in the fast-food and food-manufacturing industries (Orleck 2018). A vibrant Filipino/Filipinx civil society has already dedicated itself to agroecology (Imbong 2021; Sy 2021), participatory forms of organic farming (Montefrio and Johnson 2019), watershed guardianship

(Lapniten 2021), volunteer seacoast patrolling (Austin and Eder 2007), urban gardening (Garcia 2021c), Lumad education (chapter 12), the collective rematriation of ancestral domains (Fabro 2023), and genuine land redistribution (Borras and Franco 2010). Their actions demonstrate that revolutions are not merely singular, spectacular events to depose tyrants and kleptocrats but rather constitute the bread and butter—or better yet, the rice and *ulam* (main dish)—of Philippine and Filipino/Filipinx life.

Our solidarity with these movements is heightened by the threats that loom over engaged citizens and academics in today's political climate. Behind our resolve to offer an authoritative account that sets the agenda for future scholarship lies a certain apprehension that our words may endanger us—or worse, that they will endanger some of us more than others. The stakes have been made clear to the *Halo-Halo Ecologies* Collective. The specter of incarceration already hovers overhead. In the Philippines, concerned citizens and scholars have been detained for the innocent act of planting seeds (CNN Philippines 2022). While trauma experienced by some at the hands of the police is unimaginable to many, the revelation to all of us is clear: food grown in a people-led food system is threatening to the elite-controlled institutions so determined to undermine it.

We see such moments as political openings. They remind us that acts of violence and disregard, as well as outsized attempts at intimidation—whether by the colonial or carceral state or the hacienda- and plantation-driven economy—come from a place of weakness rather than strength and vulnerability rather than hegemony. This was made clear to one member of the *Halo-Halo Ecologies* Collective who was recently behind the picket lines, along with many others, protesting historical revisioning by the Ferdinand "Bongbong" Marcos Jr. administration. When faced with busloads of military soldiers and policemen bearing guns, shields, and batons, a member of our collective wrote, "Halatang takot na takot sila sa lumalawak na hanay ng nagagalit at nagugutom na masa na ang bitbit lang naman ay mga panawagang nakasulat sa karton" (It is obvious that they [the riot police] are so afraid of the growing throngs of the angry and hungry masses who, after all, carry with them only their slogans written on cardboard).

Our hope is that *Halo-Halo Ecologies* and the collective emerging from this endeavor mark a new scholarly tradition in Filipino/Filipinx food and environment. Standing on the shoulders of giants, we are enlightened by the already rich scholarship in the cultural studies on food history and in the critical agrarian and environmental studies. We wonder, however,

what might come of efforts to bring into relation, for instance, ideas we glean from the food writer and gourmand Doreen G. Fernandez (1994) and the peasant advocate, food sovereignty activist, and political prisoner Angie Bisuña Ipong (2009). This curiosity has urged us to begin to define a new gastroecological storytelling tradition that frames food as a marker of cultural identity, a reflection of the political-economic realities of agrarian and environmental change, an exploration of the emergent possibilities of multispecies relations, and a platform for engaged scholarship and collective action. In these pages we have brought together the vibrant cultural and historical writings on Filipino/Filipinx foodways and the established traditions of political ecology and agrarian studies, taking cues from scholars committed to striking a balance between political-economic and relational modes of analysis (see, for example, Dressler, Smith, and Montefrio 2018; Montefrio 2020c; A. Paredes 2021; Saguin 2022).

Beyond just an intellectual pursuit, *Halo-Halo Ecologies* has also cultivated a collective of scholars and scholar-activists committed to (re)imagining and enabling alternative futures (Borras and Franco 2023). For this reason, we have called this final chapter *panghimagas* (dessert) because it is an expression of what we continue to crave. We crave food writing that recognizes that food can only come from the land and sea and that if producers are landless and ecosystems are emptied out, then what we consume are products of oppression, persecution, neglect, and human hubris. A neglect of these realities fails to satiate our desire for a sense of urgency and agitation toward collective action and genuine change. Too many stories of food in the Philippines are disrupted by the realities of hunger and are undercut by the question of whether the food available to us is even edible or the water we drink potable. How can we speak about "Filipino food" when so many have none?

Even after the hearty meal that each chapter has served, we hope still for a more vibrant spread. The question is not which other stories we want to hear but which stories demand to be told. Like family members gathering around a table after *hapunan* (dinner), we wonder—*Ano'ng uulamin bukas?* What's going to be on the table tomorrow?

## Notes

1. Assemblages and entanglements are relational views of sociomaterial realities. These concepts draw from dynamical systems theory, a body of scholarship that

explores complex coevolutions and emergence emanating from the multiple associations of humans and nonhumans. A variety of conceptions of assemblages and entanglements in the social sciences and humanities abound (see, for example, Bennett 2010; Latour 2005; DeLanda 2006, 2016; Deleuze and Guattari 1987; Tsing 2015; Whatmore 1999), many of which have been adopted in food, agrarian, and environmental studies (Montefrio 2024). We will not be expounding on the scholarship on assemblages and entanglements in this volume. While the chapters may have resonance to the theoretical and methodological dimensions of assemblages and entanglements, they do not directly engage this body of literature.

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