

Open Access  CC BY 4.0**WASTE ETHNOGRAPHIES COLLECTION****Waste Ethnographies: An Introduction****TRINE BROX** **ABSTRACT**

Any attempt to address the global waste crisis requires an understanding of waste as both a material reality and a social construct embedded in power relations, social hierarchies, infrastructures and beliefs. As the waste ethnographies in this issue illustrate, ethnography can add important perspectives on waste by exploring how waste is experienced, imagined and materially enacted in particular times and places, rather than treating it as a fixed and self-evident category. This introduction reflects on the affordances and limitations of waste ethnographies. It discusses the ambiguities of waste, how waste ethnographies can enrich our understanding of the material and imaginary entanglements that give rise to specific waste practices, and what it means to be an ethnographer of waste who witnesses and problematises what they see. It also highlights the portability and broader significance of waste and discard studies concepts and frameworks, which can open new perspectives on religious, cultural and social phenomena that might otherwise be overlooked.

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INTRODUCTION

What happens to waste – the things we are done with or never wanted in the first place? Whether we discard, reuse or treat these items in other ways depends on their material properties (e.g., hardness, porosity, elasticity) and material processes such as decay, wear and fatigue. But what we define as waste and what we do with it is also shaped by our understandings, emotions and beliefs about objects and about ourselves: who we are, what we desire and need, how we and things are connected, and where we and they belong. This means that any attempt to address the escalating and alarming global waste crisis must begin with an understanding of how people define, experience and imagine waste; the social, cultural and political forces that influence how and why things are designated as waste; and the trajectories these things subsequently follow. We need to develop materially grounded understandings of how waste is actively generated and subsequently treated *and* to unearth what I call ‘waste imaginaries’ (Brox 2023) – that is, the ideas, understandings and feelings that render things disposable (or not) and as belonging to certain places.

Inspirational, rich ethnographies of waste (e.g., Doherty 2022, Gill 2009, Reno 2016, Stamatopoulou-Robbins 2020) and waste’s near-synonyms such as rubble (Gordillo 2014) and decay (Hage 2021) have shown that ethnography can add important perspectives on waste as both a material reality and a social construct, shaped by emotions, beliefs, norms and subjectivities, as well as power relations, institutions, practices, discourses and technologies. This special issue foregrounds the importance of such ethnographic engagement by exploring the different ways waste is experienced, imagined and materially enacted across diverse Buddhist settings in Asia. It brings together four waste ethnographies from Bhutan (Chophel), China (Wodzer), India (Brox and Tenzin Passang) and Japan (Borup) that address a variety of waste forms and associated imaginaries, from municipal garbage, to religious waste, to the symbolic devaluation of human lives, while focusing specifically on post-consumer solid waste rather than on other waste streams.¹ The

studies reveal how different types of waste demand different modes of treatment and disposal – not only due to their material composition but also because of the specific social, religious, moral, aesthetic and affective dimensions that influence what is considered waste, when and why. Across these ethnographies, we see how waste is always more than what is thrown away or unwanted: it is a site of tension between matter and meaning, temporality and space, belief and practice. In other words, what counts as waste is shaped by social relations and moral valuations, and by when and where things are discarded, retained, or left behind, making waste not only an object category but an ethnographic problem.

This special issue follows in the slipstream of a growing body of ethnographically informed scholarship that attends to waste in Asian contexts.² The insights it offers resonate across worldwide waste landscapes. That said, its regional specificity is not without significance. As a site of rapid urbanisation, massive socioeconomic inequalities, a growing middle class and mass consumption, Asia is an important site for waste ethnographies. It generates a major proportion of the world’s waste and is also the recipient of waste through global flows. While attention to global flows can help us to understand how waste circulates and where it accumulates (Gregson and Crang 2015), it cannot tell us how waste is actually experienced, perceived, treated and also resisted. Answering the call to broaden the study of waste beyond Euro-American frameworks and insights (e.g. Bell 2019, Millington and Lawhon 2019), the waste ethnographies in this issue orient our attention to the perspectives of those who live and deal with waste as situated in specific times and places across Asia.

Taken together, the articles demonstrate how ethnographic attention to language, belief, material practices and lived experience can illuminate the complexity of waste regimes and practices emerging in different parts of the world. They also exemplify how waste and discard studies can be brought into productive interdisciplinary interaction with other fields – in this case, Asia studies and contemporary Buddhist studies – due to its rich conceptual potential.³ By engaging with perspectives and key concepts from waste and discard studies such as dirt (Wodzer),

¹ This special collection grew out of the collaborative research project *WASTE: Consumption and Buddhism in the Age of Garbage (2021–2026)*, hosted by the Centre for Contemporary Buddhist Studies (CCBS), University of Copenhagen, Denmark. The project’s aim was to draw attention to the global waste crisis by investigating consumption practices, waste imaginaries and waste trajectories in Buddhist settings via five micro studies: postdoc Saskia Abrahms-Kavunenko worked in Christmas Island, doctoral candidate Sierra Humbert in Nepal, postdoc Dendup Chophel in Bhutan, Associate Professor Jørn Borup in Japan and myself in India. We also collaborated with MSCA Fellow Paulina Kolata, who joined CCBS with her project *REFUSE: Disrupting Buddhist Circular Economies – Excess and Abandonment in Contemporary Japan (2023–2025)*. Three of the WASTE project’s studies are

represented in this issue, which additionally includes a study by Thupten Wodzer, who presented a paper at our WASTE & VALUE conference in April 2024.

- ² These contexts include Bangladesh (Lepawsky and Billah 2011), Bhutan (Allison 2014, 2019), Cambodia (Eitel 2022), China (Goldstein 2021, Wu and Zhang 2019, Zhang 2024), Japan (Siniawer 2018), India (Demaria 2023, Doron and Jeffrey 2018, Gidwani 2015, Gidwani and Reddy 2011, Gill 2009, Sen 2018), Indonesia (Putri and Colombijn 2025), Mongolia (Abrahms-Kavunenko 2022), Pakistan (Butt 2023), Philippines (Schober 2019) and Vietnam (Nguyen 2018).
- ³ For a recent discussion on the productive potential of cross-fertilisation between anthropology and waste and discard studies, see Little 2025.

disposability (Borup), management (Brox and Tenzin Passang) and value (Chophel), the authors home in on particular kinds of data and ask specific questions about facets of everyday life, religious practice and societal change in Buddhist settings that might otherwise go unnoticed (Brox 2022a).⁴ The use of 'waste as a lens' to explore broader socioeconomic and political processes (Millington and Lawhon 2019: 1045) can be discerned across the articles in this issue, even if they were not originally written with this methodological framing in mind. It is used by Chophel to reflect upon societal changes and their impacts on a village in Bhutan; by Wodzer to show how globally circulating normative concepts such as 'Zero Waste' are culturally translated as they enter specific times and places – in this case a Tibetan pastoralist community; by Borup in his efforts to understand the nature and value of things deemed worthy of special ritual care in Japan; and by Brox and Tenzin Passang as a way into understanding how inhabitants of a Himalayan town experience bureaucratic time.

In short, the articles in this special issue reinforce the argument that to really understand waste and the broader social and political processes in which it is embedded, one must engage deeply with the everyday, the intimate and the ethnographic. They also show that we cannot take the concept of waste or its supporting key terms for granted as they are experienced and imagined differently at various times and places. The remainder of this introduction therefore takes a step back to offer some reflections on waste and waste ethnography. In addition to the articles in this issue, it draws on the burgeoning field of waste and discard studies alongside personal fieldwork experiences and childhood memories. I start by thinking about how definitions of waste are complicated by the ambiguities of waste in practice. I then go on to discuss how waste ethnographies can enrich our understanding of the material and imaginary entanglements that give rise to specific waste practices, illuminating the various ways in which waste is produced, managed and experienced in everyday life. Finally I offer some reflections on what it means as an ethnographer to not only follow but

also bear witness to waste and its effects and why this is important.

WASTE MATERIALITIES, IMAGINARIES AND TRAJECTORIES

India, late 2010s. Volunteers wanted to clean up and prevent littering on the circumambulation path encircling the temple and residence of the Fourteenth Dalai Lama in Dharamshala, a town in the forested foothills of the Himalayas in the Indian state of Himachal Pradesh. Every few metres a garbage bag was strapped onto a tree with a sign encouraging people not to litter. I walked the path every day for several weeks in 2018 and 2019 as part of my ethnographic documentation of local waste imaginaries and waste trajectories. It seemed that the clean-up campaign was working – the path was no longer littered with scattered food packing or other rubbish. What did remain visible, however, was a plethora of repositied Buddhist items such as prayer beads and Buddha statues, some worn out or broken, others still fully functional but unwanted. Since the Indian government had admonished residents to protect the environment of the Himalayas and prohibited the dumping of religious items in the mountains, unwanted Buddhist things – which local norms and beliefs did not allow to be thrown in the trash – were now piling up on the circumambulation path. Meanwhile, the waste collected in the garbage bags would end up being driven down the valley to be tipped over a mountain slope, spawning a colossal dump near a village whose marginalised inhabitants were unable to stop the stream of waste generated by increased tourism and consumption.⁵

The term 'waste' has a plethora of meanings. Waste is 'something fundamentally undesirable, bad by definition' (Lynch 1990: 147). It is the loss of fertility, functionality and value because of decay and breakdown. It is the unfulfilled potential of unused or misused resources, energy, time and space. As the unwanted byproduct of bodily and industrial processes, waste is the dirt, toxins and excrement that offend our senses and contaminate our air and water. In its adjectival form it is also a descriptor for the unrestrained spending and unsustainable consumption that leads to environmental degradation, deepening social inequalities and the generation of mountains of material waste. Mainstream definitions of waste cover these negative and worthless endpoints of consumption – that which we do not want, avoid, hide or try to eliminate. Although definitions of waste vary and change over time and space, what they often have in common is an

4 This is also reflected in the frameworks and language used in other publications by WASTE project team members and associates, which analyse various facets of contemporary Buddhism through the perspective of waste. As scholars from area studies, religious studies and anthropology, new to waste and discard studies, but wanting to make an impact in that field, we looked for flow, leakage and pollution (Humbert 2025), accumulation and excess (Kolata 2022), management, sorting and disposal (Brox 2023), care, recycling and reuse (Borup 2025, Brox 2025) and persistence and obsolescence (Abrahms-Kavunenko 2022, 2025; Brox 2022b; Reichhardt and Abrahms-Kavunenko 2022). For Sierra Humbert in particular, waste became more than an object of ethnographic inquiry; it also became a mode of inquiry. She adopts the language, perspectives and methodological sensibilities of waste and discard studies to reflect on challenges and obstacles in fieldwork and writing on menstruation (Humbert 2025).

5 Elsewhere, I have written about the waste seen along this forest path, with a focus on plastics (Brox 2022b) and sorting practices (Brox 2023).

ascription of negative or zero worth.⁶ Yet, in practice, waste is often more ambiguous than these definitions would suggest ([Hawkins and Muecke 2002](#)).

When it comes to physical items, the characteristics and behaviours of materials such as hardness, plasticity, density, fragility and porosity certainly contribute to determining their value and status. These material properties are not fixed; they undergo change through specific processes under particular conditions. Materials corrode, break, decompose, creep, rot and melt. Such processes of material transformation driven by time, consumption and environmental conditions become perceptible through the senses: visual cues can suggest decline, smell may signal putrefaction and touch can reveal fragility. As we witness materials transform in these ways, items often lose their perceived value, prompting reclassification as waste. But waste only becomes waste when we classify it as such; it gains this status because of our valuation, not simply because of a material fact. This is captured in the proverb 'someone's trash is another person's treasure' (see also [Reno 2018](#), [Strasser 2000](#), [Thompson \(2017 \[1979\]\)](#)). People's ideas and practices around waste are shaped by what they believe is right, wrong, valuable or worthless. Collective ideas, understandings and feelings about waste and its place in the world shape how waste is defined, sorted and managed.

Far from being seen as worthless, some kinds of waste can be attributed value as something to be respected and treated with care rather than avoided. Religious beliefs, moral norms and affective responses can all be factors in our ascription of enduring value to items, making them problematic to discard like trash even though their material status may have rendered them exhausted. Societal norms, beliefs and feelings guide us to treat some things – such as sacred objects ([Brox 2025](#), [Gould 2019](#), [Holmes-Tagchungdarpa 2022](#), [Stengs 2014](#), [Wilson 2022](#)) – with care and attention to ensure their longevity or give them a good 'death'. Irene Stengs (2014) calls such items 'sacred waste', an encompassing category of materials that can include (but is not limited to) the excess produced in religious practices, decaying sacred objects, inactive animated objects and sanctified leftovers, all of which can be found deposited in the sacred landscape of the circumambulation path encircling the Dalai Lama's residence. These materials have a sacrosanct value, but this very charge also renders them ambiguous, enabling a 'substance to enforce its ceremonial treatment' ([Stengs 2014](#): 235). The objects laid to rest along the circumambulation path can be read alongside the 'used up' ritual items in Borup's study: in both cases, objects that are no longer needed or usable do not thereby

become mere waste, but remain religiously potent enough to require careful handling, ritual attention or spatially marked forms of disposal. We see this in Borup's (this issue) analysis of the cultural and ritual frameworks governing contemporary Buddhist practices that acknowledge, transform or honour things that are emotionally charged but have been 'used up'. The procedures for such ambiguous items include memorial services for companion dolls and the ritual processing of items in home altars. The wide range of cases that Borup presents show that it is not a natural given that something is waste simply because material properties and processes have caused its exhaustion; imaginaries are also at play.

Other kinds of physical waste might be rendered ambiguous because of their material durability. For example, some things are valuable because their wastefulness is already perceived and built into them. Single-use cups, sanitary pads and plastic bottles are just some of the products that are 'made to be wasted' ([Hawkins 2013](#)). Yet, plastic is a material that is both valued and devalued because it resists the decay and breakdown that renders other materials useless. Once plastic is rendered as waste – as something that can or should no longer be used – it 'lingers problematically' ([Abrahms-Kavunenko 2022](#): 145). Wodzer (this issue) provides a fascinating example of this in his discussion of Zero Waste initiatives among Tibetan pastoralists. These reveal an ambiguity caused by a tension between the durability and usefulness of plastics on the one hand, and the moral politics of waste on the other. Use of plastics was forbidden under the moral framework of Zero Waste, a regime that the pastoralists had committed and aspired to. This meant that plastic items in their possession could neither be disposed of nor reused; one interlocutor had sixty empty containers stacked against a wall in the yard.⁷

These examples show how, together, waste materialities and imaginaries send items on different paths or 'waste trajectories' ([Brox 2023](#)). This framework helps to explain why certain items are easily discarded while others are not, based on their materialities and perceived value, as well as the moral and social meanings attached to them in situated contexts. Why, in a Himalayan hill town in India, people will drop food wrappings in a garbage bag but carefully deposit a broken Buddha statue in a place considered sacred. Why, in Japan, an unwanted doll might be given a memorial service, rather than simply being thrown in the trash. Or why, in a Tibetan pastoralist community in the People's Republic of China, people will neither discard nor reuse plastic containers, but simply allow them to pile up.

The questions of what waste is and where it should be placed are therefore negotiated through

6 For discussions on the concept of waste and different ways of studying waste and discard, see, e.g., [Alexander and O'Hare 2023](#), [Liboiron and Lepawsky 2022](#), [Moore 2012](#), [Reno 2018](#).

7 Compare with the discussions by Amy Holmes-Tagchungdarpa (2023) and Tridibesh Dey and Mike Michael (2021) of how interlocutors at two different locations in India deal with, adapt to and make sense of the presence and impacts of plastics in everyday life.

changing and sometimes conflicting waste imaginaries relating to the moralisation of consumption, ideas about spatial belonging and pollution, as well as the ascription or loss of value (see e.g. [Gille 2007](#), [Strasser 2000](#)). But waste also has an important temporal dimension ([Allon, Barcan and Eddison-Cogan 2021](#)). From the short lifespans of perishing food to the persistent timeframes of plastic waste, different types of waste operate on different time scales that impel us to act in certain ways. We want to get rid of organic waste before it starts to decompose, but we might store our outdated electronics. Still, it is more often studied as a spatial category – as something that belongs to peripheral places: outside the home, beyond the city or perhaps some other country. Waste infrastructures – systems for waste collection, recycling and disposal – support and reward certain actions. This influences what we identify as waste and what to do with it, but also how we engage with it emotionally and practically. Economic systems and waste infrastructures in many parts of the world make it so easy to throw such items out. When we can simply sort, bag and bin our household refuse for others to collect and move, it is easy to fall under the comforting illusion that our moral responsibility for waste has been relatively effortlessly discharged.

As argued by Kevin Hetherington ([2004](#): 157), the term ‘waste’ is suggestive of ‘too final a singular act of closure, one that does not actually occur in practice’. I have experienced this in my research in Dharamshala, where I have documented local waste imaginaries and waste trajectories together with Tenzin Passang, the head of a local waste initiative. We have witnessed the consequences of economic growth and infrastructure improvements, including intensified tourism and traffic, increased pollution and a surge in consumption, leading to heightened waste generation that exceeds the capacity of local waste infrastructures ([Brox and Tenzin Passang 2026](#)). Here too people distance themselves psychologically and spatially from waste, not always thinking about what happens after they bag it and bin it because it is taken away by someone else or washed down the river to disappear or dissolve. Tenzin Passang and local volunteers have tried to combat the waste problem by organising regular clean-ups to supplement the collection services provided by local authorities. However, there is a ‘scalar mismatch’ ([Liboiron and Lepawsky 2022](#): 39ff) between the idea of ‘clean up’ and the magnitude of the town’s waste problem. Cleaning up, no matter how often it is organised, does not stop rubbish piling up in public places, scarring the hillsides and collecting in open drains and riverbeds. Moreover, when waste is collected, the problem is just relocated. It is driven further down the valley.

We can therefore say that waste is not merely a negative category confined to a particular place and time, but something that is moved through various

conduits that allow some to forget ([Alexander and O'Hare 2023](#), [Hird 2013](#), [Reno 2016](#)), while others are left ‘living with waste’ ([Wu and Zhang 2019](#)). To put it differently, whereas waste is undeniably an accelerating and urgent global problem ([Kaza et al. 2018](#)), its visibility and effects are uneven. Its impacts fall disproportionately on marginalised groups, and its global circulation reflects and reinforces existing power inequalities ([Alexander and Reno 2012](#), [Bell 2019](#)). In wealthy societies, waste technologies render waste invisible through mechanisms such as incineration, dumping and redefinition, the latter including repackaging waste as a resource, for example as WtE (Waste-to-energy) and RDF (refuse derived fuel), and thus disappearing it through ‘green energy’ schemes ([Alexander 2016](#), [Alexander and O'Hare 2023](#), [Corvellec 2013](#)). The idea of the ‘hidden mountain’ of waste ([de Coverly et al. 2008](#)) captures this contradiction of waste as materially overflowing in some places and out of sight in others.

WASTE ETHNOGRAPHY

Norway, 1980s. As a teenager, I grew up near a dump where waste made itself present through the distinct rotten, metallic, musty and sweet odour of amassed cast-offs and time: decomposing organic materials mixed with more stubborn materials such as plastics and metals. Although oozing from material things, this waste odour hung in the air and even spread to our clothes and stuck to our skin. Intrusive and persistent, it filled our lungs, got trapped in our noses and embraced our tongues. I was living in a newly built suburb in northern Norway that sprawled like Lego bricks up a hill and encroached on a birch forest some six kilometres from town, at the very northernmost end of the island. This was also where the island’s dump was situated – an old stone quarry being filled with mixed waste, enclosed by a chain-link fence. Paper and plastics stuck to the fence, but the stench travelled further. Depending on the wind, it could enswathe the entire suburb.

When roaming the woods as kids, we found stuff that had been carried from the dump by the wind, as well as illegal or embarrassing belongings that people had dumped in its vicinity under the cover of night. Slaughterhouse offal, broken toys, disowned pornography, used diapers and uneaten sandwiches – all of the town’s waste ended up at the dump if it had not already been dumped at sea, tipped over a cliff or burned in the backyard. By the early 1990s, the dump was overflowing and infested with rats and a large population of seagulls. One of my friends, who did not want to go to school and could not hold down a job, was placed there as part of a work placement programme for people receiving benefits. His task, he told me, was to pick dead seagulls from the net that had been suspended

over the dump to prevent them from scavenging and scattering waste. It took a toll on his mental health, and he experienced firsthand how he, too, was regarded as waste.

Because waste is both a material reality and a social construct, a spatial as well as a temporal category, waste studies necessitate perspectives generated through ethnographic methods to complement the 'harder' sciences that provide scientific insights into the nature of waste or design new economic models or technical solutions for waste management. Waste ethnographies can provide important insights into how people around the world make decisions about what – and who – is waste; how these decisions are shaped by waste infrastructures, power relations and social hierarchies; and what communities value, believe in and prioritise.

A waste ethnography acknowledges that waste is not only a threat to the environment that must be governed but also a mobile category with a social and political history – one whose study demands attention to questions of scale, ethical considerations and reflexivity. Despite the negative status of waste, it can be something that people actively engage with due to its material composition, local cultural imaginaries and political and economic realities (Doherty 2022, Gill 2009, Gordillo 2014, Hage 2021, Reno 2016, Stamatopoulou-Robbins 2020). Ethnographies give invaluable insights by tracking flows and failures through space and over time. They reveal waste in lived and situated realities like the place I grew up in, in uneven ways (Gill 2009), across scales (Lepawsky 2018) and in shifting and (sometimes) contradicting waste regimes (Brox 2023, Gille 2007). This helps us understand how waste is experienced, imagined and handled differently across cultures, societies and communities. Such understanding is crucial for developing solutions without losing sight of the ethical dimensions – the injustices, inequalities and politics of waste. Studying the marginalised or the unwanted can show how societies define themselves by what they reject, shedding light on how notions of normalcy, purity and value are socially constructed (Douglas 2002 [1966]) and on how power relations are constituted and maintained through waste infrastructures, imaginaries and practices.

Much of the ethnographically informed research on waste in Asia approaches waste from the vantage point of people unable to live up to the ideals valorised in affluent societies or in the theories developed in the Global North, which have an underlying 'rich-nation perspective' (Bell 2019). Such a reorientation draws attention to those who cannot marginalise their waste because they themselves are 'living waste' (Bell 2019: 117), or live 'wasted lives' having been rendered superfluous to 'progress' (Bauman 2014; see also Chopel, this issue). In such studies, ethnography becomes an epistemological

position, a way of knowing the world at the margins, thereby challenging assumptions made in studies situated in societies that are able 'to disappear' waste. As Zsuzsa Gille (2007: 36) puts it in her work on waste in post-socialist Hungary: 'Doing ethnography is a commitment to study an issue at hand by understanding it from the perspective(s) of people whose lives are tied up with the issue or affected by it.'

The focus has primarily been on people whose livelihoods are dependent on waste in various ways, from junk traders in Delhi, Beijing and Hanoi (Gill 2009, Goldstein 2021, Nguyen 2018), street sweepers in Bangalore (Gidwani and Reddy 2011) and sanitation workers in Guangzhou (Zhang 2024), to waste pickers in Surabaya and Kolkata (Putri and Colombijn 2025, Sen 2018), scavengers in Subic Bay (Schober 2019) and waste and recycling workers in Lahore, Gujarat, Phnom Penh and Dhaka (Butt 2023, Demaria 2023, Eitel 2022, Lepawsky and Billah 2011). But the people whose lives are tied up with waste also include those who generate, deal with, avoid and live with it in daily life, such as the pastoralists, householders, farmers and priests who we meet in this special issue.

The articles in this issue are grounded in ethnographic research that involved immersion and bodily engagements in waste that we shared with our interlocutors. Our methods included participant observation – such as when Wodzer, clad in an orange uniform, took part in everyday tasks of waste management – but also photography, analytical walking tours, workshops, funeral attendance, waste picking and following local waste management procedures. We also used informal conversations and formal interviews to capture how waste is experienced and imagined in the languages spoken to communicate about waste. These ethnographic methods offer insights that cannot be accessed through technical data or policy analysis alone.

By engaging with how people talk about and experience waste, we gain insights into how societies have conceptualised and dealt with waste, the values and beliefs underpinning those practices, and how they form part of broader development discourses. This is illustrated by Chopel's contribution to this issue, which examines how villagers in Bhutan are grappling with new understandings of value and waste in the midst of societal changes driven by both religious and economic imperatives. For villagers marginalised in the process, waste is not only a material problem; it is also a way they talk about the transformations that are simultaneously devaluing their lives and livelihoods as redundant. Likewise, Borup's discussion of the disposal of religious waste in a contemporary Japanese Buddhist context reveals how waste is not only material excess but also a moral and ontological question deeply embedded in belief, ritual and hierarchies of value.

Ethnographic research also enables us to explore how waste policies and imaginaries collide with lived material needs, illustrating the dissonance between global environmental aspirations and local realities. This is demonstrated by Wodzer's article on the practical and moral challenges of waste reduction in a Tibetan pastoralist community where Zero Waste principles sit alongside emic notions of waste, exemplified by yak dung and plastics. Tenzin Passang and I unravel how the *when* of waste – its rate of accumulation, seasonality, decomposition timeline and the rhythms of human and infrastructural response – shapes its management and meaning. Waste challenges relate not only to the spatial logics of waste but also to issues of timing – to the coordination and synchronicity of waste producers, collectors and the temporality of the waste itself.

As exemplified by the articles in this issue, waste ethnographies allow us to observe how people imagine, live with, talk about, behave around and handle waste in their everyday lives. We can follow waste, seeing how it shifts hands and where it ends up. But we can also remain in place to bear witness to and understand the effects of waste upon people, places, systems and other-than-human entities – both when waste is there and when it is apparently gone.

BEARING WITNESS

Dharamshala, mid-2020s. Driving to view the dump from the other side of the valley, it was terrifying to witness the sheer scale of waste cascading down the hillside. A private company had been assigned the task of taking care of the old 'mixed waste' that had been lying exposed to the weather for decades.⁸ Since this old waste had mixed with dirt over time, they used a machine to first separate the soil and then shred the waste. The shredded waste was waiting to be transported to cement factories where it would be used as a combustible material to fire the kilns. It had now become RDF. There was no storage capacity in this Himalayan town, so the weather was crucial. When the sun was shining, the waste kept dry, which was good for processing. But it was difficult during the monsoon. Last summer the heavy rainfalls made the mountain of waste burst. A grey mass of waste flowed further down the valley, threatening to push into the village below.

Walking the site with the contractor, I saw how vehicles rolled downhill to the dump with fresh loads of mixed waste to be kept in a separate pile for sorting. Men loaded the waste onto the conveyor belt using shovels, their backs bending and

stretching under the scorching sun. The waste was carried along the conveyor belt, where male and female workers were manually sorting it. The women wore saris, their naked feet in rubber slippers. They had no gloves, no helmets, no protective equipment of any kind. Their toddlers played and roamed the dumpsite. Surrounded by the tangible evidence of consumption and neglect, I felt overwhelmed and very discouraged. It had to do with the scale of the problem versus the scale of my research. After the visit, I wrote in my fieldnotes: 'This is such a massive problem and I have such a small, stupid research project.'

Over time, new ideals change how waste is treated. In Norway, landfills replaced dumps like the one I lived near as child. Landfills were supposed to be a more 'sanitised' and 'scientific' way of hiding waste from sight and smell without any leakage or contamination of the surrounding environment. In many places, landfilling has since been replaced with new waste regimes promoting segregation and alternative methods for waste disposal that disappear waste through other channels, such as recycling and incineration. Despite such changes, the 'disappearing waste' rationale has remained the guiding principle of waste management around the globe ([Alexander and O'Hare 2023](#)). Waste is even exported to place it out of sight and out of mind. Directed along the easiest routes around powerful authorities, regulations and institutions, it ends up in the Global South to be hidden, dismantled or illegally dumped.⁹

From the dumps and landfills located at the edges of the world's cities, to the beaches of West Java, the Ganges River in India and the Atacama Desert in Chile, unwanted waste often ends up in places where it disproportionately affects the already destitute, powerless and marginalised. Meanwhile, many landfills in Europe and North America have been capped or removed, and the land has been developed into forests, recreational grounds and housing estates ([Melosi 2020](#)). My childhood wasteland of rotting debris, dead seagulls and cast-offs has since been made into a wilderness disc-golf park. Still, waste haunts such places, remaining present in fears of the ground sinking, buildings collapsing, landfill gas exploding and leachates seeping into the surrounding soil and waters. Waste does not simply vanish with its hiding or removal but continues to linger ([Hetherington 2004](#), [Reno 2019](#), [Stamatopoulou-Robbins 2020](#)). The failure to effectively manage waste serves as a poignant reminder that it is impossible to entirely eliminate the waste generated by our overconsumption. Waste will persist – whether in the highly developed landscape of Norway or the remote Himalayas.

8 When recyclable plastics, metals, paper and organic waste have been taken away (usually to be sold), one is left with so-called mixed waste, that is, 'the broad collection of stuff (napkins, plastic bags, diapers, etc.) left over in the waste stream, which is difficult both to separate and to treat' ([Zhang 2025](#): 178).

9 On intraregional trade in Asia and shifting global flows, see [Lepawsky and Billah 2011](#), [Rathore 2020](#).

As I noted in my field diary, when faced with the relentless, material reality of waste, ethnographic research can feel small and useless in comparison. As scholars, we might experience such moments of doubt when confronting the enormity of the waste problem. Do waste ethnographies have any value and impact? Surrounded by mountains of indistinguishable grey waste, with layers upon layers beneath my feet and trucks constantly arriving with fresh loads, I was pierced by uncertainty about whether my interventions contributed anything. My research was not directly moving mountains of waste. Still, this kind of reflection signals the ethical and existential awareness that waste ethnographies can bring to the study of waste, environment and sustainability. As ethnographers, our task is not only to follow waste, but also to bear witness.

When I highlight the ethnographer of waste as a present, affected and responsive witness, I want to contrast it to the kind of public and controlled witnessing that is orchestrated in organised visitor tours of waste treatment facilities ([Reno 2011](#), [Zhang 2025](#)). Such waste tours create a framework for what is seen and how it is seen, scaffolding a narrative of control and containment, perhaps also sustainability. The witnessing I am calling for is one that attends instead to the cracks, spills and disruptions. Reno (2011) argues that the moments when waste escapes and becomes visible give opportunities of 'counter-witnessing', but this is not exactly what I am appealing to here. We can also expose what is outside the orchestrated frames of public display by documenting how waste is experienced ([Hawkins 2006](#)), tracing the waste materialities and waste imaginaries that make waste, and contributing our own experiences.

The feeling of hopelessness when confronted by mass waste at a Himalayan dump or the unjust marginalisation of an elderly farmer in Bhutan, whose livelihood and personhood has been devalued (Chophel, this issue), urge us to reflect on the ethical weight of our presence as waste ethnographers, even when we cannot resolve what we encounter. Chophel narrates injustices in his homeland, contrasting them with memories from his childhood, and reflects on what he sees today: a society where societal changes render certain things, practices and even people as waste. By drawing attention to the ethics of waste, his study exemplifies the need to track waste across time and place to expose waste as the mobile category it is. His act of bearing witness raises questions about what the next steps might be and how the knowledge generated through such witnessing can be put to use.¹⁰

Bearing witness is not only about being physically present at the site of waste; but also about being moved by what we encounter and attuned to

feelings of hopelessness and injustice at what we experience. Reflecting on our own lives and practices is one way of making witnessing concrete by taking our own personal experiences of waste – whether everyday childhood memories or observations in the field – and situating those within broader dynamics. How do our encounters with waste connect to systemic processes, technologies and policies?

What it means to witness waste differs among the contributors to this special issue, and has different consequences. Borup attended memorial rites yet remained a detached observer, a witness who documented what he saw and related this to the rich scholarship on memorial practices in Buddhist studies. Wodzer tried to make sense through practice, participating by following waste protocols and experiencing with his own body what and how some things are considered waste and how they are subsequently dealt with. For Tenzin Passang and me, bearing witness to waste problems – including the challenges we examine in our contribution to this issue – served as the foundation for waste interventions that we organised through collaborative and practice-oriented research. Tenzin Passang organised a collaborative-analytics workshop, a Tibetan-language waste documentary, an awareness-video campaign, many waste collections and flash mobs. We reacted and adjusted to what we experienced through these waste interventions, which were designed as methods to both generate data and make an impact in the local community by generating discussion, raising awareness and helping to change local practices. For Chophel, bearing witness to waste issues as an ethnographer is an important step in pursuing his personal aims as a scholar to promote societal change.

These different scales of involvement extend ethnographic engagement from documentation and analysis to participation and intervention. We may still be left with the sense that there is a mountain of waste that our research cannot move. But we firmly hold the conviction that we must engage seriously with changing perceptions and practices around waste – including what makes us generate so much of it in the first place – if any discussion about climate change and the need for a global 'green transition' is to be meaningful. Such an engagement demands ethnographic research into consumption habits, waste categorisation, waste generation and practices, feelings, beliefs and affects that propel the generation of waste and its impacts on both local communities and the global environment. This special issue contributes to this much larger project by bearing witness to how waste is experienced, imagined and materially enacted across different Buddhist settings in Asia, and how it becomes meaningful in situated ways.

¹⁰ This sort of engaged research invokes, perhaps, the tactics of environmental movements ([Davies 2022: 419](#)).

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DECLARATION OF INTEREST

The author reports there are no competing interests to declare.

REFERENCES

- Abrahms-Kavunenko, S. 2022. 'Zombie rubbish and mummy materiality: The undead and the fate of Mongolian waste'. In T. Brox and E. Williams-Oerberg (eds), *Buddhism and Waste: The Excess, Discard, and Afterlife of Buddhist Consumption*, pp. 145–16. New York: Bloomsbury Academic. [Crossref](#)
- Abrahms-Kavunenko, S. 2025. 'Anthropocene ouroboros: Shimming plastics and the contamination of time'. *Worldwide Waste* 8 (1): 1–10. [Crossref](#)
- Alexander, C. 2016. 'When waste disappears, or more waste please'. *RCC Perspectives* 1 (3): 1–40. [Crossref](#)
- Alexander, C. and P. O'Hare. 2023. 'Waste and its disguises: Technologies of (un)knowing'. *Ethnos* 88 (3): 419–443. [Crossref](#)
- Alexander, C. and J. Reno. 2012. *Economies of Recycling: The Global Transformations of Materials, Values and Social Relations*. New York: Zed Books. [Crossref](#)
- Allison, E. 2014. 'Waste and worldviews: Garbage and pollution challenges in Bhutan'. *Journal for the Study of Religion, Nature and Culture* 8 (4): 405–28.
- Allison, E. 2019. 'The reincarnation of waste: A case study of spiritual ecology activism for household solid waste management: The Samdrup Jongkhar initiative of rural Bhutan'. *Religions* 10 (514): 1–19.
- Allon, F.R., R. Barcan and K. Eddison-Cogan (eds). 2021. *The Temporalities of Waste: Out of Sight, Out of Time*. Abingdon: Routledge. [Crossref](#)
- Bauman, Z. 2014. *Wasted Lives: Modernity and its Outcasts*. Cambridge: Wiley.
- Bell, L. 2019. 'Place, people and processes in waste theory: a Global South critique'. *Cultural Studies* 33 (1): 98–121. [Crossref](#)
- Borup, J. 2025. 'Temple death and revitalization: Managing religious waste and excess'. *Journal of Religion in Japan* 14 (1): 1–32. [Crossref](#)
- Borup, J. 2026. 'Ritualising waste, disposal and afterlife in Japanese Buddhism'. *Worldwide Waste: Journal of Interdisciplinary Studies* 9: 67–80. [Crossref](#)
- Brox, T. 2022a. 'A framework for studying Buddhism and waste'. In T. Brox and E. Williams-Oerberg (eds), *Buddhism and Waste: The Excess, Discard, and Afterlife of Buddhist Consumption*, pp. 1–30. New York: Bloomsbury Academic. [Crossref](#)
- Brox, T. 2022b. 'Plastic skinscapes in Tibetan Buddhism'. *The Copenhagen Journal of Asian Studies* 40 (1): 91–114. [Crossref](#)
- Brox, T. 2023. 'Tibetan Buddhism in the age of waste'. *Journal of the American Academy of Religion* 91 (4): 820–35. [Crossref](#)
- Brox, T. 2025. 'The afterlives of Tibetan Buddhist material objects'. In E. Martin, T. Brox and D. Lange (eds), *Among Tibetan Materialities: Materials and Material cultures of Tibet and the Himalayas*, pp. 93–112. Heidelberg: Universität Heidelberg Asian Studies Publishing. [Crossref](#)
- Brox, T. and Tenzin Passang. 2026. 'When to waste: Timing and discarding in the Indian Himalayas'. *Worldwide Waste: Journal of Interdisciplinary Studies* 9: 53–66. [Crossref](#)
- Butt, W. 2023. *Life Beyond Waste: Work and Infrastructure in Urban Pakistan*. Stanford: Stanford University Press. [Crossref](#)
- Chophel, D. 2026. 'Between value and waste: An ethnography of language, classification and Buddhist modernity in a Bhutanese village'. *Worldwide Waste: Journal of Interdisciplinary Studies* 9: 26–39. [Crossref](#)
- Corvellec, H. 2013. 'Recycling food waste into biogas, or how management transforms overflows into flows'. In B. Czarniawska and O. Löfgren (eds), *Coping with Excess: How Organizations, Communities and Individuals Manage Overflows*, pp. 154–72. Cheltenham: Edward Elgar Publishing. [Crossref](#)

- de Coverly, E., P. McDonagh, L. O'Malley and M. Patterson. 2008. 'Hidden mountain: The social avoidance of waste.' *Journal of Macromarketing* 28 (3): 289–303. [Crossref](#)
- Davies, T. 2022. 'Slow violence and toxic geographies: "Out of sight" to whom?' *Environment and Planning. C, Politics and Space* 40 (2): 409–27. [Crossref](#)
- Demaria, F. 2023. *The Political Ecology of Informal Waste Recyclers in India: Circular Economy, Green Jobs, and Poverty*. Oxford: Oxford University Press. [Crossref](#)
- Dey, T. and M. Michael. 2021. 'Plastic possibilities: Contrasting the uses of plastic "waste" in India'. *Anthropology Today* 37 (3): 11–15. <http://doi.org/10.1111/1467-8322.12652>.
- Doherty, J. 2022. *Waste Worlds: Inhabiting Kampala's Infrastructures of Disposability*. Oakland, CA: University of California Press. [Crossref](#)
- Doron, A. and R. Jeffrey. 2018. *Waste of a Nation: Garbage and Growth in India*. Cambridge, MA: Harvard University Press. [Crossref](#)
- Douglas, M. 2002 [1966]. *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo*. London: Routledge.
- Eitel, K. 2022. 'Reshuffling responsibility: Waste, environmental justice and urban citizenship in Cambodia'. *Worldwide Waste: Journal of Interdisciplinary Studies* 5 (1): 1–13. [Crossref](#)
- Gidwani, V. 2015. 'The work of waste: Inside India's infra-economy'. *Transactions* 40 (4): 575–95. [Crossref](#)
- Gidwani, V. and R.N. Reddy. 2011. 'The afterlives of "waste": Notes from India for a minor history of capitalist surplus'. *Antipode* 43 (5): 1625–58. [Crossref](#)
- Gill, K. 2009. *Of Poverty and Plastic: Scavenging and Scrap Trading Entrepreneurs in India's Urban Informal Economy*. Delhi: Oxford University Press. [Crossref](#)
- Gille, Z. 2007. *From the Cult of Waste to the Trash Heap of History: The Politics of Waste in Socialist and Post-Socialist Hungary*. Bloomington: Indiana University Press. [Crossref](#)
- Goldstein, J. 2021. *Remains of the Everyday: A Century of Recycling in Beijing*. Oakland, CA: University of California Press.
- Gordillo, G.R. 2014. *Rubble: The Afterlife of Destruction*. Durham, NC: Duke University Press. [Crossref](#)
- Gould, H. 2019. 'Caring for sacred waste: Caring for Butsudan (Buddhist altars) in contemporary Japan'. *Japanese Religions* 43 (1–2): 197–220.
- Gregson, N. and M. Crang. 2015. 'From waste to resource: The trade in wastes and global recycling economies'. *Annual Review of Environment and Resources* 40 (1): 151–76. [Crossref](#)
- Hage, G. (ed.). 2021. *Decay*. Durham: Duke University Press. [Crossref](#)
- Hawkins, G. 2006. *The Ethics of Waste: How We Relate to Rubbish*. Lanham, MD: Rowman & Littlefield.
- Hawkins, G. 2013. 'Made to be wasted: PET and topologies of disposability'. In J. Gabrys, G. Hawkins and M. Michael (eds), *Accumulation: The Material Politics of Plastic*, pp. 49–67. New York: Routledge.
- Hawkins, G. and S. Muecke. 2002. 'Introduction: Cultural economies of waste'. In G. Hawkins and S. Muecke (eds), *Culture and Waste: The Creation and Destruction of Value*, pp. 9–17. Lanham, MD: Rowman & Littlefield Publishers.
- Hetherington, K. 2004. 'Secondhandedness, consumption, disposal, and absent-presence'. *Environment and Planning D: Society and Space* 22 (1): 157–73. [Crossref](#)
- Hird, M.J. 2013. 'Waste, landfills, and an environmental ethic of vulnerability'. *Ethics and the Environment* 18 (1): 105–24. [Crossref](#)
- Holmes-Tagchungdarpa, A. 2022. 'Reincarnating sacred objects: The recycling of generative efficacy and question of waste in Tibetan and Himalayan Buddhist material cultures'. In T. Brox and E. Williams-Oerberg (eds), *Buddhism and Waste: The Excess, Discard, and Afterlife of Buddhist Consumption*, pp. 125–44. New York: Bloomsbury Academic. [Crossref](#)
- Holmes-Tagchungdarpa, A. 2023. 'Preserving offerings, prolonging merit: Efficacy, skillful means, and re-purposing in plastic Buddhist material culture in contemporary Sikkim'. *Worldwide Waste: Journal of Interdisciplinary Studies* 6 (1): 1–11. [Crossref](#)
- Humbert, S. 2025. *Body Dust: Menstrual Waste Among the Newar in Sankhu, Nepal*. Ph.D. Thesis, University of Copenhagen.
- Kaza, S., L.C. Yao, P. Bhada-Tata and F. Van Woerden. 2018. *What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050*. Washington DC: World Bank. [Crossref](#)
- Kolata, P. 2022. 'Heritage out of control: Buddhist material excess in depopulating Japan'. Allegra Lab, January. <https://allegralaboratory.net/heritage-out-of-control-buddhist-material-excess-in-depopulating-japan/> (accessed 27 August 2025).
- Lepawsky, J. 2018. *Reassembling Rubbish: Worlding Electronic Waste*. Cambridge, MA: The MIT Press. [Crossref](#)
- Lepawsky, J. and M. Billah. 2011. 'Making chains that (un)make things: Waste-value relations and the Bangladeshi rubbish electronics industry'. *Geografiska Annaler: Series B, Human Geography* 93 (2): 121–39. [Crossref](#)
- Liboiron, M. and J. Lepawsky. 2022. *Discard Studies: Wasting, Systems, and Power*. Cambridge: The MIT Press. [Crossref](#)
- Little, P.C. 2025. 'Engaging anthropology at the global waste-discard-toxicity nexus'. *Human Organization* 84 (2): 125–30.
- Lynch, K. 1990. *Wasting Away*. San Francisco: Sierra Club Books.
- Melosi, M.V. 2020. *Fresh Kills: A History of Consuming and Discarding in New York City*. New York: Columbia University Press. [Crossref](#)
- Millington, N. and M. Lawhon. 2019. 'Geographies of waste: Conceptual vectors from the Global South'. *Progress in Human Geography* 43 (6): 1044–63. [Crossref](#)
- Moore, S.A. 2012. 'Garbage matters: Concepts in new geographies of waste'. *Progress in Human Geography* 36 (6): 780–99. [Crossref](#)
- Nguyen, M.T.N. 2018. *Waste and Wealth: An Ethnography of Labor, Value, and Morality in a Vietnamese Recycling Economy*. New York: Oxford University Press.
- Putri, R.L. and F. Colombijn. 2025. 'Debilitating domestic duties: Precariousness of female waste pickers in Indonesia'. *Worldwide Waste: Journal of Interdisciplinary Studies* 8 (1): 1–14. [Crossref](#)
- Rathore, G.J.S. 2020. 'Circulating waste, circulating bodies? A critical review of E-waste trade'. *Geoforum* 110: 180–82. [Crossref](#)
- Reichhardt, B. and S. Abrahms-Kavunen. 2022. 'Plastic purity and sacred dairy: Microbes, vitality, and standardization in Mongolian dairying'. *The Copenhagen Journal of Asian Studies* 40 (1): 66–90. [Crossref](#)

- Reno, J. 2011.** 'Managing the experience of evidence: England's experimental waste technologies and their immodest witnesses'. *Science, Technology, & Human Values* **36** (6): 842–63. [Crossref](#)
- Reno, J. 2016.** *Waste Away: Working and Living with a North American Landfill*. Oakland: University of California Press. [Crossref](#)
- Reno, J. 2018.** 'What is waste?' *Worldwide Waste: Journal of Interdisciplinary Studies* **1** (1): 1–10. [Crossref](#)
- Reno, J. O. 2019.** 'Kept in suspense: The unsettling indeterminacy of US landfills'. In C. Alexander and A. Sanchez (eds), *Indeterminacy: Waste, Value, and the Imagination*, pp. 31–49. New York, Oxford: Berghahn Books. [Crossref](#)
- Sen, N. 2018.** *Urban Marginalisation in South Asia: Waste Pickers in Calcutta*. Boca Raton, FL: Routledge.
- Schober, E. 2019.** 'The politics of indeterminacy: Boundary dislocations around waste, value, and work in Subic Bay (Philippines)'. In C. Alexander and A. Sanchez (eds), *Indeterminacy: Waste, Value, and the Imagination*, pp. 161–80. New York, Oxford: Berghahn Books. [Crossref](#)
- Siniawer, E.M. 2018. *Waste: Consuming Postwar Japan*. Ithaca: Cornell University Press. [Crossref](#)
- Stamatopoulou-Robbins, S. 2020.** *Waste Siege: The Life of Infrastructure in Palestine*. Stanford: Stanford University Press. [Crossref](#)
- Stengs, I. 2014.** 'Sacred waste'. *Material Religion* **10** (2): 235–38. [Crossref](#)
- Strasser, S. 2000.** *Waste and Want: A Social History of Trash*. New York: Holt: Metropolitan.
- Thompson, M. 2017** [1979]. *Rubbish Theory: The Creation and Destruction of Value*. London: Pluto Press. [Crossref](#)
- Wilson, J. 2022.** 'The afterlives of butsudān: Ambivalence and the disposal of home altars in the United States and Canada'. In T. Brox and E. Williams-Oerberg (eds), *Buddhism and Waste: The Excess, Discard, and Afterlife of Buddhist Consumption*, pp. 75–102. New York: Bloomsbury Academic. [Crossref](#)
- Wodzer, T. 2026.** 'From yak dung to plastics: Rethinking Zero Waste in a Tibetan pastoral community'. *Worldwide Waste: Journal of Interdisciplinary Studies* **9**: 40–52. [Crossref](#)
- Wu, K.M. and J. Zhang. 2019.** 'Living with waste'. *China Perspectives* **2**: 67–74. [Crossref](#)
- Zhang, A. 2024.** *Circular Ecologies: Environmentalism and Waste Politics in Urban China*. Stanford: Stanford University Press. [Crossref](#)
- Zhang, A. 2025.** 'Spectacular technology, invisible harms: Witnessing techno-science on waste tours in China'. *Science, Technology, & Human Values* **50** (1): 169–96. [Crossref](#)