

PLASTIC ASIA

Materialities,
Mobilities &
Mutabilities

5-6 AUGUST 2024

<https://ari.nus.edu.sg/events/plastic-asia/>

Plastic is a versatile material that is ubiquitous in our everyday lives—its material responsibilities perform important work in containing and preserving things. Plastic objects are also highly mobile entities that are entrained in material circularity loops. They usually defy spatial containment, even in their afterlives (e.g. off-gassing, leaching). Notably, their prevalent use and unique material qualities (i.e. being non-biodegradable) have led to a global plastic crisis. Consequently, there has been a proliferation of social-scientific studies on how changes to (gendered) household practices and consumption habits can contribute to plastic resource/waste management. These strands of research build on diverse conceptual-theoretical underpinnings such as practice theories, (eco-)feminisms, new materialism and assemblage/actor-network theory, among others. This workshop seeks to draw on such emerging social-scientific strands of work in the Asia-Pacific region.

This workshop is organised around three main themes. The first attends to plastic **materialities** and material relations that are implicated in subject formation within and beyond the household. The second pertains to plastic’s **mobilities**, especially its movement through material circularity loops. The third examines the extent to which material and circular practices related to plastic are **mutable** and whether a socio-political transformation may be possible.

In conceptual terms, key questions that this Asia-centric workshop seeks to raise include:

- How are plastic material circularity loops operationalised in the household and beyond? What kinds of circular R-behaviours (e.g. reuse, recycle) are prioritised over others and to what effects?
- How are plastic materials implicated in mobility regimes? (e.g. single-use disposable take-away containers/bottles enabling a fast-paced lifestyle)
- To what extent is plasticity (i.e. its mutability) associated with plastic materials, given their eventual fate as waste?
- What roles and/or responsibilities can households or communities play in initiating ways of ‘living differently’ with(out) plastics (e.g. circular activism from below, alternative systems of provisioning)?
- In light of the substantial flows of plastic materials in and out of the Asia-Pacific region, what are the strengths and pitfalls of a circular economic approach to a plastic crisis?

WORKSHOP CONVENORS

Dr Qian Hui Tan | Asia Research Institute, National University of Singapore

Prof Brenda S.A. Yeoh | Asia Research Institute & Department of Geography, National University of Singapore

PROGRAM AT A GLANCE

DATE	TIME (SGT)	PANEL SESSION
5 Aug 2024 (Mon)	10:30 – 10:50	WELCOME & INTRODUCTORY REMARKS
	10:50 – 12:30	PANEL 1 – PLASTIC CIRCULARITIES AND MOBILITIES
	14:00 – 16:00	PANEL 2 – PLASTICS AND GENDERED SUBJECTIVITIES
	16:30 – 17:30	PANEL 3 – THE POLITICS OF PLASTIC RECYCLING
	18:00 – 19:30	<i>WORKSHOP DINNER (For speakers and chairpersons only)</i>
6 Aug 2024 (Tue)	10:00 – 11:00	PANEL 4 – POLICIES ON PLASTIC WASTE MANAGEMENT
	11:30 – 12:30	PANEL 5 – PLASTICS IN EVERYDAY LIFE
	14:00 – 15:00	PANEL 6 – PLASTIC WASTE AS OBJECT/ABJECT
	15:30 – 16:30	SPECIAL PRESENTATION – LIVING WITH PLASTICS: AN ARTISTIC IMAGINATION
	16:30 – 17:00	SUMMARY & CLOSING REMARKS

5 AUGUST 2024 • MONDAY

10:30 – 10:50	WELCOME AND INTRODUCTORY REMARKS
	BRENDA S.A. YEOH <i>National University of Singapore</i> QIAN HUI TAN <i>National University of Singapore</i>
10:50 – 12:30	PANEL 1 – PLASTIC CIRCULARITIES AND MOBILITIES
<i>Chairperson</i>	QIAN HUI TAN <i>National University of Singapore</i>
10:50	Circular Logic: Weaving Dreams of Sustainability into Corporate History - The Case of Formosa Plastics YING JIA TAN <i>Wesleyan University</i>
11:10	Unveiling Plastics in a Watershed through Participatory Research in Rural Cambodia and Laos YINGSHAN LAU <i>National University of Singapore</i> CARL GRUNDY-WARR <i>National University of Singapore</i> PHONEVILAY SOUKHY <i>China Exploration and Research Society</i> KHEANG RATANA <i>Groupe de Recherches et d'Echanges Technologiques</i>
11:30	Plastic Paths: Global Interdependence and Local Transitions in Imported Plastic Garbage PRATAMA YUDHA PRADHEKSA <i>Rensselaer Polytechnic Institute</i>
12:00	QUESTIONS & ANSWERS
12:30 – 14:00	LUNCH BREAK
14:00 – 15:00	PANEL 2 – PLASTICS AND GENDERED SUBJECTIVITIES I
<i>Chairperson</i>	THEODORA LAM <i>National University of Singapore</i>
14:00 <i>(online)</i>	Infrastructures of Care: Petrochemical Elements and Companion Technologies in Japan SHIORI SHAKUTO <i>The University of Sydney</i>
14:20	The Green Helper: Migrant Domestic Workers, Plastic Waste Recycling and Ecological Identities in Asia KA-MING WU <i>Chinese University of Hong Kong</i> KE ZHU <i>University of Amsterdam</i> YU TING HO <i>Chinese University of Hong Kong</i>
14:40	QUESTIONS & ANSWERS
15:00 – 15:15	TEA BREAK

15:15 – 16:15	PANEL 3 – PLASTICS AND GENDERED SUBJECTIVITIES II
<i>Chairperson</i>	THEODORA LAM <i>National University of Singapore</i>
15:15	Maternities and Materialities: Mothering with Plastic Baby/Child Care Products QIAN HUI TAN <i>National University of Singapore</i>
15:55	Warriors for a Green Society: Women in the Circularity Loops of Plastic ‘Waste’ Management of Kerala RAJITHA VENUGOPAL <i>Flame University</i> JAWHAR CHOLAKATHODI <i>University of Calicut</i>
15:55	QUESTIONS & ANSWERS
16:15 – 16:30	TEA BREAK
16:30 – 17:30	PANEL 4 –THE POLITICS OF PLASTIC RECYCLING
<i>Chairperson</i>	IMMANUELA ASA RAHADINI <i>National University of Singapore</i>
16:30 <i>(online)</i>	Acrylic Fiber and the Making of Yishan Miracle, 1976-1989 YAXI LIU <i>University of Oxford</i>
16:50	Plasticity of the Blue Bin: The Politics of Segregation and Recycling in Postcolonial Singapore KAMALIKA BANERJEE <i>Centre National de la Recherche Scientifique @ CREATE Singapore</i>
17:10	QUESTIONS & ANSWERS
17:30	END OF DAY 1
18:00 – 19:30	WORKSHOP DINNER <i>(For speakers and chairpersons only)</i>

6 AUGUST 2024 • TUESDAY

10:00 – 11:00	PANEL 5 – POLICIES ON PLASTIC WASTE MANAGEMENT
<i>Chairperson</i>	QIAN HUI TAN <i>National University of Singapore</i>
10:00 <i>(online)</i>	Thinking through Volumetric Plastics in Asia OLIVIA MEYER <i>University of Hawai'i at Mānoa</i>
10:20	Policy Approaches to Single-Use Plastics: Comparing Reduction and Incentive Strategies in South Korea and Hong Kong STEVE KWOK-LEUNG CHAN <i>Keimyung University</i>
10:40	QUESTIONS & ANSWERS
11:00 – 11:30	TEA BREAK
11:30 – 12:30	PANEL 6 – PLASTICS IN EVERYDAY LIFE
<i>Chairperson</i>	IMMANUELA ASA RAHADINI <i>National University of Singapore</i>
11:30 <i>(online)</i>	Everyday Expertise: Plastics, Practices and Material Responsibilities DAVID O. REYNOLDS <i>Commonwealth Scientific and Industrial Research Organisation</i>
11:50	Plastics and Labour: The Case of Disposable Medical Plastics GAURI PATHAK <i>Aarhus University</i>
12:10	QUESTIONS & ANSWERS
12:30 – 14:00	LUNCH BREAK
14:00 – 15:00	PANEL 7 – PLASTIC WASTE AS OBJECT/OBJECT
<i>Chairperson</i>	KAMALIKA BANERJEE <i>Centre National de la Recherche Scientifique @ CREATE Singapore</i>
14:00 <i>(online)</i>	Transfigurations of Plastic Waste: Resisting the Disappearing Act RACHEL TEO <i>University of Amsterdam</i>
14:20	Plastic Waste as Hyperobject: Transnational Legal Geographies and Ecological Affects of Plastic Mobilities in Thai Visual Culture PAWEENWAT THONGPRASOP <i>BioThai Foundation</i>
14:40	QUESTIONS & ANSWERS
15:00 – 15:30	TEA BREAK
15:30 – 16:30	SPECIAL PRESENTATION
<i>Chairperson</i>	QIAN HUI TAN <i>National University of Singapore</i>
15:30	Living with Plastics: An Artistic Imagination RUO BING WANG <i>LASALLE University of the Arts Singapore</i>
16:00	QUESTIONS & ANSWERS
16:30 – 17:00	SUMMARY & CLOSING REMARKS
	QIAN HUI TAN <i>National University of Singapore</i> BRENDA S.A. YEOH <i>National University of Singapore</i>
17:00	END OF WORKSHOP

**Circular Logic:
Weaving Dreams of Sustainability into Corporate History
The Case of Formosa Plastics**

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The centerpiece of Formosa Plastic Group’s Museum at Taoyuan City is a massive piece of kauri wood from New Zealand covered in resin, which symbolizes “Formosa Plastics’ ability to pursue infinite possibilities and move ahead with the times with the spirit of sustainability.” Before introducing its visitors to the success story of the world’s largest manufacturer of polyvinyl chloride (PVC), the curators highlight the “biological normativity” of Formosa Plastics’ business operations by drawing parallels between natural resins created by the “magical wood” to protect itself from wood-boring organisms and the synthetic PVC resin that emerged in the ruins of the Taiwanese economy ravaged by Japanese colonialism and war. To drive home the point that economic growth and sustainability are not mutually exclusive, the company adopted as its mascot “the Mikado Pheasant”—a rare bird found in the mountains of Taiwan and pictured on the NT1,000 bill. This paper explores how Formosa Plastic rewrote its corporate history by centering environmental, social, and governance (ESG) into its narrative. In this retelling, Formosa Plastic claims that circular economy has always been around since the company’s founding in 1954. The ecologically minded narrative depicts the co-founders Wang Yung-ching and Wang Yung-tsai as sons of the Taiwanese soil, who have never deviated far from their agrarian roots, thereby deflecting criticism from environmentalist groups about the pollutive effects of its crowning achievement—the Sixth Naphtha Cracking Unit. The greenwashing of Formosa Plastic’s corporate history demonstrates how “the circular economy” paradigm fails to address the root cause of the plastic waste problem and simply allows petrochemical companies to redefine ESG metrics and shift the environmental burden of their production onto taxpayers and consumers.

Ying Jia Tan is Associate Professor of history, East Asian Studies, and science and technology studies at Wesleyan University in Middletown, Connecticut, where he teaches Chinese history, as well as the history of cartography and environmental history. He left *Lianhe Zaobao* in 2009 to attend graduate school at the Program in the History of Science and Medicine at Yale University. His first academic monograph, *Recharging China in War and Revolution, 1882-1955*, is based on his PhD dissertation. His interest in energy history led him to research the history of Taiwan's petrochemical industries. In the 2023/2024 academic year, he was a faculty fellow with the Bailey College of the Environment Think Tank and recipient of Center for Chinese Studies grant. The paper he is presenting is part of a chapter from his book manuscript *Catalogue of Dreams: Plastics and the Transformation of Industrial Ecology in Chinese East Asia*.

Unveiling Plastics in a Watershed through Participatory Research in Rural Cambodia and Laos

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The Mekong River runs through the Southeast Asian countries of the Lao PDR, Thailand, Cambodia and Vietnam. Its watershed is home to a population of 65 million in these countries. Using the social-ecological systems perspective, this paper considers the generation and fate of plastic from its source to its sink in the Mekong watershed. Our case studies are a village in a mountainous area in northern Laos and a village in the Tonle Sap Lake in Cambodia. In these two villages, we used participatory research approaches, which have emancipatory potential, to (1) raise awareness about the permanence and hazards of plastic as a material and (2) unveil environmentally friendly local and traditional practices of plastic reuse and alternatives of using plastic – in the household and the wider village economies. We also discuss the limitations of plastic recycling and a plastic-free economy in these two villages. Both have limited waste management infrastructure; one needs to cater to the convenience mentality of tourists, and the other is a sink for micro-plastics generated from the watershed. While local environmental-friendly practices slightly ameliorate the situation of plastic pollution, we argue that rural waste management in the Mekong region needs to be improved significantly lest the pervasiveness of plastic in its developing economies further pervades environmental injustices.

Yingshan Lau is an environmental geographer and socio-hydrologist who is curious about human-nature relations and passionate about environmental and climate justice. She has a PhD in geography from the National University of Singapore, where she received the university's Lee Kong Chian Graduate Fellowship. Before that, she worked in PUB, Singapore's national water agency. She holds an M.Sc. in nature, society, and environmental policy from the University of Oxford and a Bachelor of Interdisciplinary Studies in sustainability from the Australian National University. She is currently a research fellow in the Climate Governance of Nature-based Carbon Sinks in Southeast Asia project at the Asia Research Institute, National University of Singapore. Her intellectual interests revolve around traditional ecological knowledge, water, forests and agriculture, and sustainable rural development in Southeast Asia.

Carl Grundy-Warr is a Senior Lecturer in the Department of Geography at the National University of Singapore. He was on the International Editorial Board of *Geopolitics* from 1996–2008; the Editorial Board of the *Singapore Journal of Tropical Geography* from 1995–present, where he is now reviews editor. He is the author of numerous international journal articles on transboundary resources, geopolitics, and border studies and co-author (with Mak Sithirith) of *Floating Lives of the Tonle Sap* (Chiang Mai University Press, 2013). He teaches courses on geography field studies, natural resources' politics, and geopolitics. His current interests are resource politics and environmental security in Southeast Asia.

Phonevilay Soukhy has worked on a variety of projects related to environmental conservation, biodiversity conservation, climate mitigation and sustainable development. Currently, she is a Lao Program Manager at the China Exploration and Research Society (CERS LAOS), where she has been able to strengthen her project management skills and conduct research on development projects. Her passion for environmental impact extends beyond research. She actively participated as a project coordinator with JHA and YMCA, leading an awareness campaign across 10 schools in Luang Prabang Province. This experience honed her communication and collaboration skills, allowing her to effectively engage stakeholders on critical environmental issues.

Khaeng Ratana is a Sanitation Institutional Development Specialist at Groupe de Recherches et d'Echanges Technologiques (GRET). Prior to this role, she was a Sanitation Engineer in the International Development Enterprise (IDE). She was also formerly a researcher at Pannasastra University of Cambodia (PUC). During her time there, she was an assistant to the Dean of Engineering and was an assistant researcher for the Cambodia component of the fieldwork for this paper.

Plastic Paths: Global Interdependence and Local Transitions in Imported Plastic Garbage

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Like other countries in the Global South, Indonesia is grappling with a growing problem of accumulating imported plastic garbage in its remote regions. A total of 320,000 tons of plastic waste were imported into Indonesia in 2018. Indonesia has emerged as the world's second-largest importer of plastic, following China, mostly due to its substantial volume. As a result of insufficient efforts by the Indonesian government to address the problem, along with particular limitations in the recycling process, imported plastic garbage is being dumped on local land. The paper examines the transnational disposal of plastic garbage that still accumulates in Indonesia, as well as the local community's strategies for handling imported plastic garbage in Pagak, Malang. The paper utilised a multisite qualitative research approach in both the United States and Indonesia. It demonstrates that the transnational disposal of plastic garbage is deeply connected to neoliberal economic policies. The local community takes care of a significant quantity of imported plastic garbage, which is used in the production of limestone and palm sugar, as a substitute for conventional resources such as wood and fossil fuels. However, it is important to note that this practice has potential environmental and health risks. The transition is mostly driven by economic considerations. Moreover, this paper highlights the need to understand imported plastic waste not only in terms of its material conditions but also as a symbol of the global interconnections in waste management, recycling, and energy production.

Pratama Yudha Pradheksa is a PhD Candidate in the Department of Science and Technology Studies at Rensselaer Polytechnic Institute. With a keen interest in cultural politics, energy technologies, and environmental STS, his dissertation examines the sociotechnical governance of waste-to-energy (WTE) incinerators. His recent articles have appeared in journals such as *South East Asia Research*, *East Asian Science, Technology and Society: An International Journal*, and *Renewable and Sustainable Energy Transition*. Pradheksa's dedication to addressing environmental injustice is further demonstrated by his film, "Recycling is Colonialism: Unpacking Imported Plastic Waste in Pagak-Malang, Indonesia."

Infrastructures of Care: Petrochemical Elements and Companion Technologies in Japan

Shiori Shakuto

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Emerging bodies of scholarship have shown how petrochemical elements enable social and affective relations. In the case of Japan, petrochemical elements have become “relational elements” through their transformation into household plastic products. Household plastic products are most prominently seen in kitchens, handled mostly by women. Using multiple methodologies, including in-depth photovoice interviews, life history interviews, and the analysis of newspaper articles and cooking magazines from the 1970s, I found that the use of plastics in the household has expanded the variety of care that women can provide to their family members. However, petrochemical elements alone do not act as elemental infrastructures of care. They are mediated by technological infrastructures that freeze and heat food and thereby shift the temporalities of household labour. Together with companion technologies such as fridges, freezers, and microwaves, petrochemical elements became infrastructures of care, not only for women to care for others but also to care for themselves. Drawing on feminist approaches, this paper shows how the dominant narratives to eliminate plastics from everyday lives need to be situated within the wider debate over gender equality.

Shiori Shakuto joined the Discipline of Anthropology as a Lecturer in 2022. Taking inspiration from feminist anthropology, her research approaches the space of the household as a generative site to counter taken-for-granted norms and practices. Her first book (forthcoming from the University of Pennsylvania Press in 2025) encourages us to think beyond the norm of work-life balance through the ethnography of the Japanese retirement community in Malaysia. Her second project re-thinks the idea of circularity by studying the consumption and recycling of household plastic waste in Japan. She also analyses the transnational mobility of plastic waste that ends up on the shores of Malaysia and Australia.

The Green Helper: Migrant Domestic Workers, Plastic Waste Recycling and Ecological Identities in Asia

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The paper investigates plastic and mobilities among Southeast Asian migrant workers in Hong Kong – an underexplored question in the context of Asian plastic waste and climate change. Situating our conceptual framing in “decolonial ecology”, we show how Southeast Asian domestic helpers build ecological awareness through their everyday encounters with plastic products and related practices. Drawing on semi-structured interviews with 195 domestic helpers during their holiday gatherings in Hong Kong in February 2024, we ask the following questions. 1) How do migrant domestic workers from the Philippines and Indonesia understand plastic pollution in their own countries and in their working cities? 2) how do they build plastic-related knowledge and sorting practices with employers, friends, and plastic-reduction policies in their mobility routes of working in the inter-Asia region? Our preliminary finding is that migrant domestic workers in Hong Kong are genuinely concerned about the environment. Their knowledge about climate change and their daily practice of plastic recycling cannot be underestimated. Using the concept of boundary work, we analyse how domestic helpers assume the role of green helpers at three levels: 1) blurring the employer-labor hierarchy through plastic sorting conversation; 2) performing plastic recycling as personal and advocacy work; 3) the materiality of plastic in their daily life setting (food, space, and privacy). Last, we will also share observations about helpers’ plastic awareness as major Asian cities step up on recycling policies

Ka-ming Wu is an Associate Professor in the Department of Cultural and Religious Studies at the Chinese University of Hong Kong. She has undertaken extensive ethnographic research on the cultural politics of state and society, waste, and, most recently, gender and nationalism in contemporary China. Her research has been published in *Journal of Asian Studies*, *Modern China*, *Cities*, *Urban Geography*, *Ethnology*, and *China Perspectives*.

Ke Zhu is a PhD student at the Department of Media Studies at the University of Amsterdam. His research interests include Chinese film studies and environmental media.

Yu Ting Ho is a Research Assistant at the Centre for Social Innovation Studies, Hong Kong Institute of Asia-Pacific Studies. His research interests include precarious labor and community building through social innovation.

Maternities and Materialities: Mothering with Plastic Baby/Child Care Products

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From diapers and milk bags for freezing breast milk to milk bottles, plastic is an indispensable material in many baby/child care products. In employing a materialist ecofeminist frame for unpacking the predominance of plastic materials in maternal care work, this presentation explores how negotiations in the use of baby products made from/of plastic constitute multiple maternal subjectivities. Materialist ecofeminist perspectives typically seek to investigate how caring relations among humans, as well as between humans and nonhumans, are materialised in everyday life. Drawing on qualitative empirical data from in-depth interviews with 15 mothers in Singapore, especially young mothers with newborns and toddlers, I illustrate how mothering responsibilities are played out vis-a-vis consumption decisions/practices on two caring fronts. First, most of our respondents, who are young mothers, appreciate how single-use products with plastics in them, such as diapers, have lightened their childcaring load substantially. Concomitantly, as vigilant protectors of their family's health, these mothers exercise precautionary consumption habits by opting for food-safe plastic products or material alternatives to plastic (e.g. silicone). Second, mothers who care about ecological/planetary health employ strategies to reduce their consumption of plastic products (e.g. toilet training their toddlers). Nevertheless, their subject positions as carers of their children and the environment are sometimes conflicting due to time and labour constraints, such that their mothering responsibilities are often privileged over environmental ones. Taken together, this presentation advances the scholarship on green motherhood by foregrounding plastic material(ities) which has hitherto been overlooked. It also appraises the practical applicability of green motherhood among time-strapped (career) women in the city-state.

Qian Hui Tan is Postdoctoral Fellow in the Asian Migration Cluster at the Asia Research Institute (ARI), National University of Singapore (NUS). She obtained her PhD in Geography from NUS, and her dissertation investigated how single individuals in Singapore queer or problematise intimate relationalities and temporal scripts. Her research interests in sexualities, embodiment and, more recently, sustainability politics are often informed by critical feminist as well as queer theoretical perspectives. As a sociocultural geographer by training, her work has been published in *Gender, Place and Culture*, and *Social and Cultural Geography*. She is currently part of an interdisciplinary team that examines household plastic waste management across Singapore, Japan and Australia at ARI.

Warriors for a Green Society: Women in the Circularity Loops of Plastic ‘Waste’ Management of Kerala

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The household is arguably the most widely dispersed unit of consumption and plastic-waste generation. *Harithakarmasena*, (HKS, roughly translated as the Army for Green Action) is a grassroots, eco-friendly, and decentralized waste management process in Kerala that involves women's participation in collecting and segregating plastic and biodegradable waste from every household in the state. Introduced in 2013, it is part of another larger government initiative called *Kudumbashree* (roughly meaning ‘prosperity of the family’) program that has been successfully running for over twenty-five years at the local civic body levels. The Kudumbashree Mission was initiated by the State Poverty Eradication Mission of the Government of Kerala in 1997 to “empower women” by offering funds to start small self-help initiatives. Both initiatives are highly celebrated as measures for generating employment for women. By ensuring that wastes are segregated and collected from every household early in the morning, the women in the *Harithakarmasena* are the most important starting points in a huge mission to ensure the systematic workflow of solid waste management in the state.

The paper will examine the role of HSK women in the decentralized plastic waste management and recycling process using the framework of Bina Agarwal’s feminist environmentalism. As opposed to ecofeminist perspectives, Agarwal highlights the intersectionality in women’s experiences and rejects the homogenised idea of “woman” in conventional ecofeminism. The paper aims to reinterrogate the notion of women’s empowerment that this initiative projects, because, understanding the plastic waste industry would mean asking ‘Where does plastic waste go, and what is the waste recycling and management process, and in this process, how do the HSK women perceive their role and empowerment? It also aims to understand how it creates safe, dignified, and fair-income jobs for women and builds micro-entrepreneurship opportunities (Waste Collectors into Wastepreneurs) through developing a circular economy for eradicating waste and poverty simultaneously. This paper uses multi-sited ethnography to understand the intersectional and circular nature of this grassroots initiative to the plastic crisis in South Asia.

Rajitha Venugopal teaches in the Department of Humanities and Languages at FLAME University, Pune. She holds a doctoral degree in English Literature from Jamia Millia Islamia, New Delhi. Her research interests include environmental humanities, post-colonial studies, Indian writing in English and translation.

Jawhar Cholakathodi completed his doctoral research at the University of Hyderabad, India, and is working as an Assistant Professor of Sociology at the School of Distance Education at the University of Calicut. In his PhD research, he tries to understand civic engagement with the governance of Agro-biotechnology in the context of India. In his pre-Ph. D. work, he wrote a dissertation on the People’s Science Movement and its engagement with the public. He presented research papers in different international and national conferences and seminars.

Acrylic Fiber and the Making of Yishan Miracle, 1976-1989

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Between 1976 and 1989, enormous unspinnable acrylic staples and filaments were dumped in Yishan town, Zhejiang province. Rural peasants incorporated acrylic wastes into their homespun practices, activating the versatility of acrylic fibers; as agential beings, acrylic fibers vitalized the transformation and diversification of Yishan industries, generating China's largest recycled textile market. My research question is: how did the mutual-shaping interaction between labor-intensive industrialization and the plasticity of acrylic fibers develop in Yishan town? The question is critical for understanding the inextricable relationship between plastics, synthetics, and the so-called "low-cost" processing in the late twentieth century when the resource-intensive plastic manufacturing industries began to migrate from the global north to the south; when they were integrated into labor-intensive manufacturing in the south, the presumption of plastics shifted from modern material to "low-cost" material, fostering a throwaway culture in the north and a poisonous environment in the south. In response to a strand of scholars such as Heather Davis and Jennifer Wagner-Lawlor, this research is significant in challenging the "synthetic universality" of plastics, which perceives plastics as an inertial factor of globalization, standardization, and alienation from specific localities. Demonstrating the situated interplay of social-material transformation in Yishan town, this article argues the vital force of plastics; particularly if the European miracle of production naturalized the rhetorical and social singularity of plastics, Yishan recycled textile market, a miracle of distribution activated the vitality and versatility of plastics and synthetics. Methodologically, this historic inquiry is based on data acquired during my fieldwork in Yishan town, oral history research on two former market managers and a former homespun practitioner, as well as archival and artifact investigations on the equipment and tools used.

As a DPhil student in History, **Yaxi Liu's** research looks at plasticized everyday life in the People's Republic of China (PRC) between the 1960s and the early 1990s. Her thesis, *Polyacrylonitrile and Making Global China*, will engage in the discussion of the twentieth century's "synthetic fibers revolution" as well as the "age of plastic" in the PRC. By exploring the biographies of acrylic fibers, Yaxi's work will contribute to material history studies with expanded assumptions of plastics and synthetics. For audiences and organizations outside academia, her research will contribute to understanding the promises and problems of plastics over the course of its history and address the areas of primary concern today, including legislation and recycling. Prior to Oxford, Yaxi worked as a curatorial coordinator at the National Museum of China and Tsinghua University Art Museum from 2015 until 2022.

Plasticity of the Blue Bin: The Politics of Segregation and Recycling in Postcolonial Singapore

Kamalika Banerjee

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In this paper, I deploy the blue recycling bin as an analytical lens to reflect on the culture of segregation and the moral economy of circularity in Singapore. Drawing on new materialism and postcolonial theory, I argue that the blue bin is a 'performative' matter that is both active and passive in mediating the complex sentiments of residents, their everyday practices, aspirations of the state, and the future of waste management. I focus on two themes- (i) where colonial relationality is produced in the narratives of Western European expatriates who think that the segregation culture in the West is better than Singapore; (ii) the aspirational environmental politics of postcolonial state elites to gain global legitimacy without the attendant social, cultural and economic investment in developing a moral economy to boost household recycling. The blue bin was introduced in 2001 as part of the National Recycling Program and serves as a receptacle for commingled wood, glass, plastic and metal recyclables. However, the blue bin has become an emblem of failure because of the dismal household recycling rates and high contamination rates. The failure of the blue bin is illuminative of a ferality in hypervigilant Singapore, where the bin generates its own spectrum of waste through the polyvalent ways in which it is imagined and used. The position of plastic is particularly queer, where some variants are recyclable while others are contaminants, highlighting the paradox of plastic recycling. The blue bin disturbs the network of the circular economy and acts as what Gabrys calls a 'sink', indeterminate and emergent; its plasticity spills beyond the networked infrastructure as well as transcend normative conceptualisations of the circular economy. I draw from my ethnographic fieldwork in Singapore to reflect on the hybridity of the blue bin to think beyond top-down ideas of circular economy, restricted within the national border of Singapore, and instead focus on the everyday agency of the members of the public and issues of ecological citizenship.

Kamalika Banerjee is a research fellow in the SPACE Project at CNRS@CREATE. Her work focuses on postcolonial urbanism, multispecies intimacies, human-nonhuman interactions, and discard studies. She did her PhD in Sociology at the National University of Singapore.

Thinking through Volumetric Plastics in Asia

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This article draws on volumetric theory to examine the proliferation and impacts of plastic waste in Asia. Volumetric theory challenges the disproportionate focus on surfaces and planes and draws attention to under-examined volumes of materiality. My research asks: How can volumetric thinking improve our understanding of plastic waste and waste solutions? To answer this question, I first consider the need for plastics research to move beyond territorially bounded framings (e.g., countries/states) and territorial flows (e.g., waste imports). I examine other dimensions to conceptualise volumetric plastics that evade popular waste framings in Asia. Prominent studies that rank countries, particularly Southeast Asian nations, for their contributions to marine plastic waste and material flow analyses often fail to account for hidden sources of plastics and toxicants, such as microplastics in clothing, sea breeze, and bodies. Next, I consider volumetric plastics in the context of waste solutions such as improved waste management. As a case in point, I examine Thailand's circular economy. While mainstream circular economy efforts focus on downstream solutions and post-consumer plastics, these circular economies cannot procure vast volumes of waste and associated capital through commodification. This research is based on six months of ethnographic research in Bangkok, Thailand, including interviews and participant observations between 2019 and 2024 and content analysis of local and international articles and reports from 2019-2024. As microplastics and associated toxicants spread through land, water, air, and blood, a volumetric approach to waste reveals why circular economies often fail to secure significant volumes of waste. This research highlights the limits of waste solutions that rely on plastic production and waste management and demonstrates how these solutions threaten continued health and environmental risks posed by plastics.

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Policy Approaches to Single-Use Plastics: Comparing Reduction and Incentive Strategies in South Korea and Hong Kong

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Plastic pollution harms the environment, and its rise is linked to metropolitan lifestyles and consumerism. Disposable plastic shopping bags and single-use bottled drinks exemplify the externalities arising from such behaviours. This study examines environmental policies in South Korea and Hong Kong, two well-developed economies with fast-paced lives. Their high-income and educated populations are presumed to be environmentally conscious. South Korea prioritises waste reduction, enforcing waste segregation and plastic bag bans. This represents a top-down, command-and-control regulatory model, often relying on legislation with coercive measures to ensure compliance. In contrast, Hong Kong uses economic incentives to levy charges on waste. Market-based instruments offer an alternative to the command-and-control approach. This bottom-up strategy employs incentives (positive or negative) when self-regulation falls short of desired outcomes. Pigouvian taxes (eco-taxes), emissions trading schemes, and other economic instruments aim to internalise external costs into production processes, adhering to the polluter-pays principle. In 2024, the city plans to introduce a new levy on solid waste following successful implementations of the sewage charge and plastic bag charging schemes. By reviewing government reports and interviewing key informants, this study compares these reduction and incentive approaches through the lens of the social construction of policy design. This framework acknowledges that policy impacts on different interest groups are not uniform. Policy design involves identifying target groups and their interests, and the "social construction tactic" refers to how policies are presented, using positive and negative labels to strengthen support and minimise opposition. Political uncertainty and imperfect information received by individuals facilitate the construction of public knowledge. The findings contribute to a better understanding of environmental politics and policy choices, particularly in response to and in the social construction of different target groups.

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Everyday Expertise: Plastics, Practices and Material Responsibilities

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The pervasive presence of plastic materials in everyday life shapes and enables ways of living. In the context of a need to reduce domestic plastic waste this paper examines accounts of plastic in people's lives, shared in interviews in Melbourne, Australia. Participants were generally eco-minded and understood plastics as problematic. We make two arguments focused on change in household plastic use. The first is built on an examination of the usefulness of plastic material in the lives of participants, through the lens of elements of practices (materials, meanings and competences) and material responsibilities. We argue that practices with (single use) plastic elements tend to require fewer resources from practitioners (*e.g.* time, effort, money), and to involve less resource-intensive competences. Consequently, reducing these (disposable) material elements involves the adoption of more resource-intensive practices. The second argument is built on participants describing what further reduction in their household's plastic waste would involve. We argue that achieving substantial reductions in household plastic waste currently represent a commitment to a 'dominant project', rather than specific behaviour change or practice reconfiguration. This is not a plausible commitment for many households in Australia and elsewhere, marking a substantial barrier to a step-change reduction in household plastic waste. We conclude by discussing the value of a practice lens for efforts to reduce household plastic waste. Such efforts can beneficially focus on providing pathways to reduction in which reconfigured practices are not unfeasibly resource-intensive for practitioners (in terms of *e.g.* time, mental effort, money, traveling distance).

David O. Reynolds is a Postdoctoral Fellow at the Commonwealth Scientific and Industrial Research Organisation (CSIRO) in Brisbane, Australia. He is fascinated by the human side of sustainability and social justice issues, examining how food and waste connect system-level change and everyday life. He has studied people who avoid plastic, plastic waste, women's household practices, and food insecurity and is currently researching the role of consumers in food systems sustainability transitions.

Plastics and Labour: The Case of Disposable Medical Plastics

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Plastics are ubiquitous in the contemporary practice of medicine, where they are tied to notions of hygiene, sterility, and quality of care. However, when plastics first infiltrated medical practice, they did so because of considerations related to patient comfort, reliability, and durability. It was only after developments in the sterilization of plastics, combined with the marketing of single-use plastics as disposable, that medical plastics came to be emblematic of hygiene as they are today. In this article, drawing from ethnographic fieldwork in India and Singapore, I argue that dependence upon disposable medical plastics is not just about infection control but is also crucial in enabling reductions in labor at the site of use. Medical plastics thus function as a materiality of displaced labor in clinical settings.

Gauri Pathak is a sociocultural and medical anthropologist and an Associate Professor at the Department of Global Studies, Aarhus University, Denmark. Her work centres on interactions between the body and its environment, consumption practices, and toxic landscapes. Since 2016, she has studied how the environmental and health costs of rampant plastic use and disposal are experienced and comprehended differently in different local contexts. Her current project revolves around ethnographic investigations of human–plastic interactions in South and South East Asia and East Africa. The research has been supported by a Homi Bhabha Fellowship and a Carlsberg Foundation Semper Ardens: Accelerate. Other research interests include the effect of consumption practices on understanding the body, antimicrobial resistance, and metabolic syndrome disorders in South Asia.

Transfigurations of Plastic Waste: Resisting the Disappearing Act

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At the heart of the global waste crisis, plastic waste is a curious object of study: it flows across large distances, and between different states or forms. As it flows, it exhibits different material qualities, evoking different reactions from humans. Indonesia is very much embroiled in this plastic waste crisis, struggling to deal with its domestic waste while simultaneously being a key destination for plastic waste exports. In response, a lively landscape of actors working with/against waste has emerged, working in diverse and creative ways that highlight the vibrant potentialities of plastic waste as a material. Situating my research within the field of discard studies and drawing from object-oriented ontology, I investigate the ontological status of plastic waste, its relationship with value, and the consequent powers it holds over humans. Drawing from ethnographic fieldwork in Bandung and Bali, I trace the material flows of waste and the transfigurations it undertakes, to explore the effects and lines of flight that plastic waste affords humans.

Rachel Teo is a graduate student of anthropology at the University of Amsterdam. Having worked in the arts and in user experience design, she is interested in the intersection of aesthetics, design, and ecology; in the affordances that aesthetics and design offer in imagining different worlds and futures.

Plastic Waste as Hyperobject: Transnational Legal Geographies and Ecological Affects of Plastic Mobilities in Thai Visual Culture

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This paper investigates the legal and ecological dimensions of plastic pollution in Thai popular culture since 2004, focusing on the ineffectiveness of current laws and policies. It explores how Thai visual culture portrays plastic waste and how integrating biodiversity concerns, such as the impact on marine mammals, can create a hyperobject that disrupts public ignorance and mobilises sentiment to influence policy. The study argues that international and domestic plastic laws are anthropocentric and often neglect biodiversity conservation, distancing us from the slow violence of plastic pollution. Conceptually, the study draws on ecological affect to highlight the impacts of environmental degradation on both humans and non-humans. Analysed through affective ecocriticism and hyperobject theory combined with Ngai's concept of "ugly feelings", this framework shows how visceral, ambivalent feelings toward plastics can mobilise public sentiment. The case of Marium, a young dugong whose death from plastic ingestion sparked national concern and led to conservation laws, exemplifies how popular culture can elevate environmental awareness. Methodologically, the study employs a legal geography framework to analyse the spatial politics of plastics, including the import of plastic waste and its misalignment with Thailand's waste management roadmap. It includes a visual culture analysis of films like "Citizen Dog" (2004) and "Cool Gel" (2010), as well as recent documentaries and news on marine plastic pollution and the baby dugong's death. Key findings suggest that Thai visual culture illustrates the transnational mobilities of plastics and their impacts on ecosystems. The study advocates for rethinking legal frameworks to include biocentric perspectives and highlights the universality of ecological feelings to mobilise public awareness, paralleling the transboundary nature of plastic waste.

Paweenwat Thongprasop is a law graduate from Thammasat University and an independent queer legal scholar based in Thailand. He specialises in international economic law, climate change, and environmental humanities from queer, posthumanist, and postcolonial perspectives. Currently, he works as a researcher at BioThai Foundation, focusing on the socioeconomic impacts of free trade agreements on food sovereignty. Paweenwat is a member of the Association for the Study of Literature and the Environment of Southeast Asian Nations (ASLE-ASEAN) and has published extensively on environmental justice and related topics. His publications include *Buddhist Ecologies in the Thai Paññāsa Jātaka: Emotion, Environment, and IHL - International Law Blog*, June 2023 and *When Queer Emotions Meet the Constitutional Promise: Dystopian Constitutionalism in Thai Popular Culture - Thai Legal Studies Journal*, February 2023.

SPECIAL PRESENTATION**Living with Plastics:
An Artistic Imagination****Ruo Bing Wang**

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Artists play a distinctive role in intervening across a spectrum of sustainability discussions and expanding the comprehension of environmental issues. While their artistic practices may not strictly adhere to scientific data and laboratory experiments, artists frequently develop their art based on real-world issues faced by communities. Their practices are geared towards engaging the public directly and intimately, aiming to envision and shape sustainable futures through aspiration and creative re-imagination. This presentation will focus on several artworks by the artist Wang Ruobing. Wang has emerged as a prominent local practitioner committed to addressing plastic waste issues by fostering communities and raising public awareness through her art. By predominantly using salvaged plastic waste, Wang integrates real-world insights into her artistic approach, transforming overwhelming crises such as marine pollution into visually compelling and accessible narratives.

Ruobing Wang (Singapore) is a versatile professional in the arts, education, research and independent curation. Previously a curator at the National Gallery Singapore, she currently holds the position of Lecturer at LASALLE University of the Arts Singapore. Her artistic pursuits explore the interplay between humanity and the environment, focusing on ecology and knowledge creation. Wang has exhibited her work extensively at prestigious venues, including the Groninger Museum (Netherlands), National Gallery Singapore, Singapore Botanic Gardens, Yuan Contemporary Art Museum (China), and EVA International, Ireland's Biennial of Contemporary Art (Ireland). Her academic research centres on themes of environment, identity, hybridity, and transcultural dialogues, particularly within the contemporary art scenes of China and Southeast Asia. She has curated numerous exhibitions, notable among them being "Alternative Ecology: The Community," "Artist as Collector," and "12 Solo." Wang earned her Doctor of Philosophy from the University of Oxford, United Kingdom, and co-founded Comma Space, an independent art space based in Singapore. <https://ruobingwang.com>

ABOUT THE ORGANISERS & CHAIRPERSONS

Brenda S.A. Yeoh, FBA is Raffles Professor of Social Sciences, Department of Geography, National University of Singapore. She is also the Research Leader of the Asian Migration Cluster at the Asia Research Institute. She was recently awarded the prestigious Vautrin Lud Prize (2021) for her outstanding achievements in the field of Geography. She was also elected to the Fellowship of the British Academy as a Corresponding Fellow. Her research interests include the politics of space in colonial and postcolonial cities, and she also has considerable experience working on a wide range of migration research in Asia, including key themes such as cosmopolitanism and highly skilled talent migration; gender, social reproduction and care migration; migration, national identity and citizenship issues; globalising universities and international student mobilities; and cultural politics, family dynamics and international marriage migrants.

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Kamalika Banerjee is a research fellow in the SPACE Project at CNRS@CREATE. Her work focuses on postcolonial urbanism, multispecies intimacies, human-nonhuman interactions, and discard studies. She did her PhD in Sociology at the National University of Singapore.

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Qian Hui Tan is Postdoctoral Fellow in the Asian Migration Cluster at the Asia Research Institute (ARI), National University of Singapore (NUS). She obtained her PhD in Geography from NUS, and her dissertation investigated how single individuals in Singapore queer or problematise intimate relationalities and temporal scripts. Her research interests in sexualities, embodiment and, more recently, sustainability politics are often informed by critical feminist as well as queer theoretical perspectives. As a sociocultural geographer by training, her work has been published in *Gender, Place and Culture*, and *Social and Cultural Geography*. She is currently part of an interdisciplinary team that examines household plastic waste management across Singapore, Japan and Australia at ARI.

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Theodora Lam is Senior Research Fellow at the Asia Research Institute, National University of Singapore. Her research interests cover transnational migration and families, the web of care within transnational households, geographies of children and young people, and gender studies. She has researched on both skilled and low-waged labour migrants as well as their families in Singapore and other Asian countries. Theodora has published on various themes relating to migration, citizenship and education, and co-edited several special journal issues and books.

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