ARI
ASIA RESEARCH INSTITUTE
National University of Singapore

WORKSHOP

DOING OCEAN GOVERNANCE

Approaches in and from
Singapore and Southeast Asia

26-27 FEBRUARY 2026

HYBRID FORMAT

NUS AS8-04-04 & Online via Zoom

For more information, visit https://ari.nus.edu.sg/events/ocean-governance/

Global oceans are in crisis. Oceanic places and processes are increasingly flashpoints in global political economy where ocean resources including fish, hydrocarbons, and minerals, and ocean infrastructures including ports, ships, cables, and pipelines are figured at the center of narratives around national security, migration, unfree and coerced labor, and conflict. These trends challenge the conception, implementation, and enforceability of ocean governance regimes, underscoring how persistent ambiguities around the ownership of ocean resources and the management of ocean spaces offer opportunities for creative rethinking.

Yet, while some scholars of maritime and ocean governance have increasingly found it useful to historicize, emplace, and otherwise situate law as one technology among many used to apprehend and order ocean space, ecologies, labor, and resources, it remains the case that ocean governance is often treated as a static frame in which science and technology operate, rather than being conceived as historically contingent and mutually interdependent.

Consequently, there remains much work to be done in bringing critical approaches to ocean science and technology into denser dialogue with law and policymaking. In part, this entails the meaningful integration of customary, vernacular, and other locally situated approaches to ocean science and ocean management in wider schemes for ocean management that are rooted in approaches from Western technoscience and lawmaking. It also means attending to diverse cultural imaginaries of the ocean and the tensions between local and global knowledges of the sea, by remaining open to new methods of inquiry including embodied and multispecies approaches.

In the spirit of the *Pacem in Maribus* conferences, which after 1970 were organized by Elisabeth Mann Borgese and colleagues with the International Ocean Institute to address thematic and regional facets of rapidly evolving global ocean policy, this workshop aims to deepen the synthesis of critical accounts of ocean technoscience and ocean governance, broadly construed.

Singapore is an excellent place to undertake this work. The history of global ocean governance is deeply tied to local and regional histories, beginning with the Sultanate of Johor's role in the maritime conflict that eventually shaped the Doctrine of the Freedom of the Seas, to the Singaporean Diplomat Tommy Koh's shepherding of the 1982 UN Convention on the Law of the Seas to its conclusion. The years after UNCLOS have seen Singapore play important roles in maritime arbitration and high seas treaty-making. Singapore is situated amid multiple, overlapping geographies, from the historic Nanyō and Nanyang, to the contemporary Indo-Pacific and South China Sea, which bind together shared histories spanning the Eastern Indian Ocean, archipelagic Southeast Asia, and the Pacific Islands. And furthermore, Singapore's modern history at the ocean-land interface distills anxieties around human mobility, logistics, trade patterns, environmental transformation, ecological degradation, and resource extraction, that together ramify outward with planetary effects.

We need new methods and metrics for being with the ocean. This workshop stages a provocation to think how to recontour wider ways of understanding, managing, sharing, and relating to oceans across scales, by beginning from the situated specifics of place.

WORKSHOP CONVENORS

Dr Jonathan GALKA
Asia Research Institute, National University of Singapore

Dr Canay ÖZDEN-SCHILLING
Department of Sociology and Anthropology, National University of Singapore

Assoc Prof Jiat Hwee CHANG
Asia Research Institute & Department of Architecture, National University of Singapore

26 FEBRUARY 2026 • THURSDAY

09:30 – 09:45	**WELCOME REMARKS**
	JONATHAN GALKA, National University of Singapore **CANAY ÖZDEN-SCHILLING**, National University of Singapore **JIAT HWEE CHANG**, National University of Singapore

09:45 – 11:25	**PANEL 1 • COUNTER-MAPPING OCEAN SCIENCES, LAWS, AND NARRATIVES**
Chairperson	**JONATHAN GALKA**, National University of Singapore
09:45 *Online*	The Coral Triangle as a Laboratory for Cooperative Ocean Law and Policy **ARIE AFRIANSYAH**, University of Indonesia
10:00	Literary Topologies of Indo-Pacific Diving **KILLIAN QUIGLEY**, Australian Catholic University
10:15	The Vernacular Poetics of Maritime Epistemology: Pantun as a Vessel for Reimagined Ocean Governance **AHMAD SYARIFUDDIN**, Nanyang Technological University
10:30	Spectral Sovereignties and the Uneasy Intersection of Memory, Law, and Science in Regional Maritime Disputes **SOUMYA RANJAN GAHIR**, Ravenshaw University
10:45	Questions & Answers

11:25 – 11:55	**MORNING TEA**

11:55 – 13:35	**PANEL 2 • LABOR AND MORE-THAN-HUMAN MOVEMENT AT SEA**
Chairperson	**DHIRAJ NAINANI**, National University of Singapore
11:55	Floating in Fear: Rohingya as Subjects of Haphazard Oceanic Governance in the Andaman Sea **ANTJE MISSBACH**, Bielefeld University
12:10	Doing Ocean Governance from Below: Maritime Mobilities, Vernacular Rule, and the Criminalization of Movement along the Buton-Wakatobi-Singapore Route **FANADA SHOLIHAH**, University of Indonesia
12:25	Between Livelihood and Sustainability: Local Practices, IUU Fishing, and Quest for Sustainable Governance in Coastal Areas of Balochistan (Pakistan) **MALIHA ZEBA KHAN**, National University of Modern Languages
12:40	Reading the Heavens, Understanding the Ocean: Passing Down Maritime Knowledge **N. ASTI LALASATI**, Cultural & Environmental Storyteller
12:55	Questions & Answers

13:35 – 14:45	**LUNCH**

14:45 – 16:00	PANEL 3 • LITTORAL URBANISMS
Chairperson	**JIAT HWEE CHANG**, National University of Singapore
14:45 *Online*	Towards a Substantive Rule of Sea: Rethinking Ocean Governance in Southeast Asia **NATHAN WILLIS**, Bond University
15:00	A Sea of Difference: The Plural Epistemologies and Contested Governance of Penang's Coast **ANGUS TAYLOR**, Architectural Association
15:15	The Viscous Spaces of Federal-State Frictions in Maritime Governance: A Case Study of Kuching **AZMAH ARZMI**, Universiti Malaysia Sarawak
15:30	Questions & Answers
16:00 – 16:30	**AFTERNOON TEA**
16:30 – 17:30	**KEYNOTE ADDRESS**
Chairperson	**JONATHAN GALKA**, National University of Singapore
16:30	Ocean Ontologies: Resisting the Conventional Violence of Ocean Governance **SUSAN REID**, The University of British Columbia
17:10	Questions & Answers
17:30	**END OF DAY 1**

27 FEBRUARY 2025 • FRIDAY

09:30 – 11:10	**PANEL 4 • REGIMES OF MARINE CONVERSATION**
Chairperson	**STEFAN HUEBNER**, National University of Singapore
09:30	Situating Raja Ampat-Singapore Contrast: Pathways toward Inclusive and Grounded Models of Marine Governance in Southeast Asia **MAULIDYA QUTROTHUNNADA**, Indonesian International Islamic University **PRIZA MARENDRAPUTRA**, National University of Singapore
09:45	Participatory Ocean Governance from the Shorelines: Co-creating Online Manuals for Community-Led Mangrove and Coral Stewardship in Bintan, Indonesia **JOSHUA GEBERT**, Nanyang Technological University **UTE META BAUER**, Nanyang Technological University
10:00	Ocean Governance in Derawan: Intersection between Sea People, Conservation, and Technology **DADANG ILHAM KURNIAWAN MUJIONO**, Mulawarman University
10:15	Beyond the Reef: Ethnographic Perspectives on Coral Restoration and Governance in North Sulawesi **ANITA LATEANO**, University of Westminster
10:30	Questions & Answers
11:10 – 11:40	**MORNING TEA**
11:40 – 13:20	**PANEL 5 • FISHERS' KNOWLEDGES AND VERNACULAR GOVERNANCE**
Chairperson	**UTE META BAUER**, Nanyang Technological University
11:40	Vernacular Ocean Governance and the Epistemologies of Crisis: Rethinking Coastal Management in Rembang, Indonesia **YOGA ALDI SAPUTRA**, Diponegoro University
11:55	Ports, Papers, and Power: Aceh and the Riau Archipelago **FAKHRIATI**, National Research and Innovation Agency
12:10	Tapping Fishers' Maritime Expertise for a Marine Community-led Conservation Area: A Case Study from the Western Tebrau Strait, Malaysia **SERINA RAHMAN**, National University of Singapore
12:25	Customary Consensus and Contested Conservation: Plural Imaginaries of the Sea in West Aceh, Indonesia **RIZANNA ROSEMARY**, Syiah Kuala University
12:40	Questions & Answers
13:20 – 14:15	**LUNCH**

14:15 – 15:30	**PANEL 6 • OCEANIC ANSWERS TO TERRESTRIAL QUESTIONS**
Chairperson	**DOROTHY TANG**, National University of Singapore
14:15	Dual Habitats above and below the Sea Surface: Japanese Mariculture Research, Plastics, and Asia's Coastal Concentrations of Marine Biomass and Nutrients **STEFAN HUEBNER**, National University of Singapore
14:30	Too Much and Too Little: Singapore's Contradictory Relationship with (Sea) Water **ALICIA GUTTING**, Nanyang Technological University
14:45	The Sea of Speculations: Governing the Uncertain through Thailand's Landbridge Project **JAKKRIT SANGKHAMANEE**, Chulalongkorn University
15:00	Questions & Answers
15:30 – 16:00	**AFTERNOON TEA**
16:00 – 17:15	**PANEL 7 • LOGISTICS' MARINE MATERIALITIES**
Chairperson	**CANAY ÖZDEN-SCHILLING**, National University of Singapore
16:00 *Online*	Ocean Governance, Green Transitions, and the Making and Unmaking of Port Efficiency in Singapore's Seas **ELIZABETH SIBILIA**, University of California – Berkeley
16:15	The Pacific's Cyber Infrastructures: Detangling Regulatory Tensions amongst Multiple Actors **FRANCINE HUG**, Western Sydney University
16:30	The Industrial Littoral and Compensation Ecologies in Singapore **DOROTHY TANG**, National University of Singapore
16:45	Questions & Answers
17:15 – 17:30	**BREAK**
17:30 – 18:30	**KEYNOTE ADDRESS**
Chairperson	**JONATHAN GALKA**, National University of Singapore
17:30 *Online*	The Global South, International Law, and Worldmaking on the Sea **SURABHI RANGANATHAN**, University of Cambridge
18:10	Questions & Answers
18:30 – 18:45	**CLOSING REMARKS**
	JONATHAN GALKA, National University of Singapore **CANAY ÖZDEN-SCHILLING**, National University of Singapore **JIAT HWEE CHANG**, National University of Singapore
18:45	**END OF WORKSHOP**

The Coral Triangle as a Laboratory for Cooperative Ocean Law and Policy

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This paper analyses cross-border collaboration in the Coral Triangle area, which comprises six Southeast Asian and Pacific nations, as a compelling example for reassessing ocean governance via legal and epistemological diversity. The Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security (CTI-CFF) and other systems focus on bilateral collaboration. However, they also operate within legal frameworks influenced by customary marine tenure, indigenous legal orders, and regional community-based resource management systems. This paper examines legal pluralism and alternative ocean epistemologies through the lens of various governance regimes, as they are mediated across social, political, and policy dimensions. The study examines the function of environmental law as a governance mechanism, utilising case studies from Indonesia, the Philippines, and Papua New Guinea, and its interplay with non-state institutions to create hybrid regulatory frameworks that contest conventional command-and-control marine policies. Such intersections imply an idea of ocean governance where the sea is viewed as both a resource and a territory of rights, yet also a place of relationships, duties, and coexistence. Instead of treating such alternative models as exceptions, the article assumes that they may signal less rigid, fairer and more epistemically accommodating ocean governance legal structures in the Anthropocene. Thus, the Coral Triangle area is becoming not only a centre of biodiversity but also an experimental site for law and policymaking. It is also a place of normative regimes, ecological realities, and various oceanic knowledges. This research contributes to ongoing discussions on decolonial environmental governance, transnational legal pluralism, and the future of ocean law beyond liberal frameworks.

Arie Afriansyah is Professor in the Faculty of Law at the University of Indonesia. Besides teaching duties, he is currently Chairman of the Center for Sustainable Ocean Policy, Faculty of Law, Universitas Indonesia; Editor-in-Chief of the *Indonesian Journal of International Law*; and Editor-in-Chief of *Indonesia Yearbook of International Law*. He is also President of the Indonesian Society of International Law Lecturers (2024-2027) and Executive Council Member of the Asian Society of International Law. His areas of focus are primarily the law of the sea, maritime security, migration, and refugees. Arie obtained his Bachelor's in law (Sarjana Hukum/SH) in August 2003 from the Faculty of Law Universitas Indonesia. In December 2006, he received a Master of International Law degree from the University of Sydney Law School, Australia. Finally, Arie obtained his Doctorate Degree in Law (PhD) at the Faculty of Law,University of Otago, New Zealand, in August 2013.

Literary Topologies of Indo-Pacific Diving

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I have argued recently that settler Australian pearl-films of the mid-twentieth century "tend…both to rely on the lives, labors, and knowledges of Central Indo-Pacific seafarers and to culminate in prospects of their redundance, if not outright disappearance" (Film Quarterly, forthcoming). For Doing Ocean Governance, I aim to ask how representational protocols of this kind interrelate with attempts to transform hemispherically cosmopolitan oceanic place into nationally regulable maritime space. More specifically, I propose to consider the crucial, ambivalent, and shifting role of divers and diving labors within literary depictions of the Indo-Pacific (sub)marine scene. More than a trope, diving after pearls, chank shell, bêche-de-mer, wreckage, and other valuables has long been a powerful vector for the composition and recomposition of literary topologies. This was true of the prolific twentieth-century romanticist Ion Idriess, author of such works as Forty Fathoms Deep: Pearldivers and Searovers in Australian Waters (1937), and it is true of the contemporary poet and artist Omar Musa, whose Killernova (2021) goes underwater to reconfigure Australian waters through, and as, Malaysian seas. Far more than strictly modern or Australian concerns, a literary topology of diving offers to fundamentally revise—and literally deepen—our sense of Indo-Pacific place-making in ways that draw unanticipated connections between (e.g.) seventeenth-century Ceylon and twentieth-century Broome; reckon with the remains of imperial and counter-imperial submergence; and center seabeds, water columns, and human-invertebrate entanglements. If ocean governance needs new methods and metrics, it may also need a new dimension. This paper hopes to help take it there.

Killian Quigley teaches and researches at the Australian Catholic University's Institute for Humanities and Social Sciences. He co-edited *The Aesthetics of the Undersea* (2019) with Margaret Cohen, and he wrote *Reading Underwater Wreckage: An Encrusting Ocean* (2023). In Melbourne, he facilitates a collective called *Situating a Benthic Humanities: Composing Knowledges with Nerm* (Port Phillip). This work relates to his co-leadership, with Charne Lavery and Laurence Publicover, of an international critical seabed studies collaborative. Killian's current projects also include a description, with the archeologist Ruud Stelten, of durations of salvage in the Dutch East Indies; and an account of the sea-surface as image-maker.

The Vernacular Poetics of Maritime Epistemology:
Pantun as a Vessel for Reimagined Ocean Governance

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Recited at weddings, national ceremonies, and cultural events, pantun remains one of Singapore's enduring expressions of maritime heritage. Recognised by UNESCO as Intangible Cultural Heritage, it has long served as a vessel of communication and moral reflection, transmitting ecological, spiritual, and social knowledge across generations in the Malay world. This paper situates pantun within debates in critical ocean governance and the Blue Humanities, interrogating tensions between local animist, ontological, and relational conceptions of the sea and global managerial, securitised, and extractive rationalities. It positions pantun as a locally grounded epistemology and an artistic, embodied, multispecies method for reimagining oceanic imaginaries and governance.

Through close readings of Malay nautical pantun, the study employs formal-structural and lexical-semantic analyses to show how the form encodes vernacular oceanic epistemologies, particularly, spiritual ecology, relational attunement, and multispecies coexistence.

By engaging the intersections of literature, anthropology, and critical ocean governance, the paper proposes pantun as both archive and method, an approach to seeing, sensing, and reasoning with the sea otherwise. Situated in Singapore's maritime modernity, where the ocean is often reduced to resource and means, the analysis shows how vernacular poetics can inform more equitable, situated, and culturally responsive forms of ocean governance. Ultimately, pantun articulates a decolonial framework for imagining maritime futures that advance sustainable ocean governance while remaining anchored in the region's maritime heritage and lived seascapes.

Ahmad Syarifuddin is a final-year undergraduate in Maritime Studies at Nanyang Technological University. His research and creative practice explore Southeast Asia's maritime heritage and the ethnographies of its island and coastal communities. A writer and playwright, he was a recipient of the Golden Point Award for Malay poetry and is an active member of Kelana Pantun Temasek. Syarif attended the Oxford University Creative Writing Summer School, where he developed fiction and nonfiction centred on the displacement of the Orang Laut and island narratives, and later joined the Writing Lab at the National University of Singapore (NUS) Museum, producing a play on Singapore's oceanic amnesia and loss of maritime identity. His work bridges scholarship and art, using poetics to recover the region's maritime histories and reimagine contemporary connections between people, place, and sea.

Spectral Sovereignties and the Uneasy Intersection of Memory, Law, and Science in Regional Maritime Disputes

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Ocean governance debates often emphasise territorial boundaries, resources, and legal regimes, but Southeast Asian seas are also haunted by the afterlives of war. Japanese and Allied wrecks from the Second World War lie across the South China Sea and surrounding waters, many illegally salvaged for scrap or treated as underwater graves by coastal communities. The research problem addressed here is how these wrecks, and the spectral claims they generate, complicate dominant models of sovereignty that assume governance is either territorial or economic. The paper situates Singapore as a regional hinge: historically central to the negotiation of UNCLOS under Tommy Koh, and today an arbitration hub where disputes over wreck salvage, heritage, and liability converge. It also highlights how local communities, including fishers and divers in Borneo and the Philippines, treat these wrecks as sources of livelihood, sites of commemoration, and objects of danger, drawing on customary sea knowledge alongside official law. Methodologically, the study combines archival research, policy documents, and ethnographic accounts with critical memory studies to show how hydrographic surveys and salvage technologies transform spectral presences into governable objects. The central argument is that these ghostly sovereignties reveal sovereignty at sea to be historically layered, locally negotiated, and affectively charged. By bringing law, science, and vernacular knowledge into dialogue, the paper reframes ocean governance as a practice that must reckon with both the material and spectral dimensions of the sea. This offers a novel lens for rethinking governance in Singapore and Southeast Asia.

Soumya Ranjan Gahir is a doctoral research scholar in Political Science at Ravenshaw University, India. His research explores national identity, memory politics, and the geopolitics of the Indo-Pacific, with a particular focus on Japan's post-war legacies and evolving ocean governance. He has presented papers at international conferences across Asia and Europe, including workshops on maritime futures, law, and diplomacy, and his work has appeared in peer-reviewed outlets on Indo-Pacific strategy and memory studies. Soumya also served as Research Associate on an ICSSR-funded major project examining India's historical ties with Southeast Asia, where he studied maritime circuits connecting Odisha, Myanmar, and Indonesia. His current projects interrogate how sovereignty, heritage, and memory intersect in contested seascapes such as the South China Sea, with a view to integrating cultural imaginaries and critical approaches into governance debates.

Floating in Fear:
Rohingya as Subjects of Haphazard Oceanic Governance in the Andaman Sea

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This paper examines how contemporary ocean governance in the Andaman Sea operates as a technology of exclusion that transforms maritime spaces into what we call abject seascapes, where irregularised migrants become trapped subjects of state abandonment and punitive expulsion. We analyse how irregularised migrants initially experience the sea as a hopeful space for a new future but throughout their extended journeys the seas transform in a militarised space of containment engineered by exclusionary governance regimes.

Drawing on ethnographic research with Rohingya survivors and open sources, this study demonstrates how Southeast Asian states exploit the juridical ambiguities of ocean space to avoid protection obligations whilst maintaining plausible deniability. Through systematic push-backs and tow-forwards, deliberate non-assistance to boats in distress and illegal deportation methods, state actors weaponise the ocean to create zones of prolonged strandedness (Hoffstaedter & Missbach 2024) er control and deterrence. The paper demonstrates how maritime irregularised migrants become subject to haphazard ocean governance, where regimes engineer conditions of suffering and death whilst avoiding direct accountability.

This paper contributes to critical ocean governance debates by exposing how seemingly technical and humanitarian maritime policies, such as search and rescue protocols, enforcement of maritime borders, and the absence of effective regional coordination, function as bordering technologies that transform the ocean into a space of exclusion. The paper challenges dominant ocean governance frameworks by revealing how current regimes prioritise state sovereignty over human protection, offering insights for reimagining oceanic governance beyond territorial paradigms of control and abandonment.

Antje Missbach is Professor of Sociology at Bielefeld University, specialising in the study of global migration and mobility. She obtained a PhD from the Australian National University in 2010. Next to teaching at Humboldt University in Berlin, Heidelberg University and Monash University in Melbourne, she was McKenzie Postdoctoral Fellow at the Melbourne Law School. She is the author of *The Criminalisation of People Smuggling in Indonesia and Australia: Asylum Out of Reach* (Routledge, 2022), Troubled Transit: Asylum Seekers Stuck in Indonesia (ISEAS Yusof Publishing, 2015) and co-author with Jemma Purdey and Dave McRae of *Indonesia: State and Society in Transition* (Lynne Rienner Publishers, 2020). Her latest co-edited and open-access works include *Refugee Protection in Southeast Asia: Between Humanitarianism and Sovereignty* (Berghahn, 2024, with Susan Kneebone, Reyvi Mariñas and Max Walden). Together with Gerhard Hoffstaedter, she is currently delving into a new project on "Theorising (im)mobilities at sea: Challenging the terra firma bias in Refugee Studies through human maritime movements", funded by the Volkswagen Foundation. Part of this work includes retracing the maritime journeys of Rohingya and Vietnamese refugees.

Doing Ocean Governance from Below:
Maritime Mobilities, Vernacular Rule, and the Criminalization of
Movement along the Buton-Wakatobi-Singapore Route

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Illegal sea traffic between Buton, Wakatobi, and Singapore has attracted sustained attention since the 1970s. These activities are carried out through a network of local sailors who have traditionally operated this route. This route is not only used to smuggle commodities such as onions, used clothing, and electronic goods, but also protects wildlife from Papua and Maluku, as well as people seeking fortune in Singapore. Generally, residents of Buton and Wakatobi make their living from traditional shipping. Their voyages cover the Southeast Asian region, despite being equipped with Lambo boats with a capacity of 30 to 60 tons. The tendency to engage in illegal smuggling is not only due to a lack of understanding of national border regulations, but also because of the view that the sea is a living space that cannot be restricted, where every cargo is considered legal as long as it generates income. In addition, the increasingly difficult living conditions of traditional sailors, whose sailing businesses rely on wind power, are being increasingly displaced by the role of sailboats. However, when nation-states began ratifying boundary regulations under the 1982 UNCLOS, the movement of animals, goods, and people was deemed illegal and punishable by law. This study will use a marine anthropology (multispecies) approach and legal and mobility analysis to answer two main questions. First, how is maritime mobility on the Buton–Wakatobi–Singapore route carried out and normalised through vernacular governance practices by traditional sailors? How does the post-UNCLOS legal regime classify the maritime mobility practices of Buton and Wakatobi sailors as illegal, and what impact does this have on their lives and traditional sailing strategies? Initial findings show that this multi-commodity network is not considered criminal by sailors, but rather a normal part of a deeply rooted maritime economy. This Research is expected to contribute to new ways of rethinking maritime governance by accounting for the specificity of local maritime epistemologies.

Fanada Sholihah is a founder of a digitalized historical sources platform named Tarugiri (http://tarugiri.org) and a doctoral student in history at the University of Indonesia, supported by LPDP scholarship. Her research primarily focuses on ecological history, migration, slavery, and maritime history during the Dutch colonial era. In 2024, the International Criminal Court in Den Haag, Netherlands, invited her to serve virtually as an expert consultant (Asia-Pacific) on slavery crimes. She also works on an independent project on the migration and repatriation of Koeli Kontrak from New Caledonia to Indonesia, and their relation to capitalism. In addition to working in the academic and research fields, she is an active cultural YouTuber with the channel Fanada Sholihah. Currently, she is undertaking a dissertation project on ecological degradation in nineteenth-century Jepara.

Efel Indhurian is a historian and artist who has written extensively about Javanese culture. He founded Griya Wayang, collecting hundreds of ancient wayang puppets, some of which have a history spanning several centuries. He is pursuing a doctoral program in history at Diponegoro University and focusing on the theme of the Indonesian movement, especially the dynamics of the Volksraad 1918-1942.

Between Livelihood and Sustainability:
Local Practices, IUU Fishing, and Quest for Sustainable Governance in
Coastal Areas of Balochistan (Pakistan)

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For the Blue Economy and sustainable exploitation of marine resources, Ocean Governance has become an unavoidable configuration. The research critically investigates the struggle between global ocean governance standards intended for sustainable development i.e., SDG 14 and indigenous livelihood practices of coastal communities of Pakistan's largest province Balochistan. The international frameworks to counter illegal, unreported, and unregulated fishing (IUUF) consider the ocean important for both fishing and for environmental sustainability; while the indigenous coastal communities perceive oceans as crucial for their livelihood security, survival, and identity. The analysis has highlighted a gap where local fishermen prioritize short-term livelihood needs and find it difficult to follow sustainability norms i.e., fishing gear and species restrictions, preservation of fleet size, and reporting the catch, as these restrictions overlook the socio-economic realities of Balochistan's coastal communities. While ocean governance norms stress the long term sustainable conservation of marine resources. However, these communities also stress the need of protecting marine biodiversity for their livelihood security and for future generations. This research follows mixed methodology, utilizing primary, secondary, and tertiary sources. Building on global governance theory, this research suggests a polyphonic framework that takes into account interests and considerations of every actor by incorporating local concerns into policy making. Thus, the new framework can balance both livelihood activities and sustainability of the oceans.

Maliha Zeba Khan is working as Assistant Professor at the Department of International Relations, National University of Modern Languages, Islamabad, Pakistan. Her area of research includes foreign policy analysis and foreign policy decision making, maritime affairs, maritime security, maritime connectivity, critical maritime infrastructure, ocean governance, Blue Economy, Blue Diplomacy and Blue Regionalism. She is the principal investigator on the HEC-funded research project on CPEC and Blue Economy of Balochistan.

Jaweria Atiq is a student of M.Phill IR at the National University of Modern Languages. She is currently working as a research assistant on a HEC research grant entitled "Socioeconomic Impacts of CPEC on Non-Traditional Maritime Security and Sustainable Development of Baluchistan's Blue Economy: Case-Study of Fisheries and Seafood Industry".

Haseeb Ahmed Khalid is a student BS (Hons) IR at the National University of Modern Languages. He is currently working as a research assistant on a HEC research grant entitled "Socioeconomic Impacts of CPEC on Non-Traditional Maritime Security and Sustainable Development of Baluchistan's Blue Economy: Case-Study of Fisheries and Seafood Industry".

Reading the Heavens, Understanding the Ocean:
Passing Down Maritime Knowledge

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Reading the Heavens, Understanding the Ocean is a short documentary by Indonesian storyteller (Asti), presented alongside a photographic and written zine.

Set in the Riau Archipelago, the work explores maritime knowledge in Bintan Island, where reading the 'sky' and understanding the 'sea' are learned through lived experience rather than formal education. The project follows the lives of coastal natives—from women fishers to *Kelong* workers and members of the Orang Sampan (Sea People of Bintan)—revealing how winds, clouds, and waves are passed down through observation, stories, and songs. This inherited knowledge guides daily life and sustains a close relationship between people and the ocean.

Yet today, the signs are shifting. Winds arrive earlier, tides rise higher, and fish move farther away as monsoon patterns change and industrial development reshapes coastal landscapes. Through quiet imagery and community voices, the film reflects on ecological literacy, resilience, and the fragile continuity of maritime knowledge across generations. This work questions what happens when environmental change moves faster than memory—and what we can still learn from those who have adapted for generations.

N. Asti Lalasati is a lecturer and storyteller from Bintan Island, Indonesia. Her practice spans film, writing, exhibitions, tours, and community-based education, with a focus on maritime culture, women's narratives, and traditional ecological knowledge. She holds a masters in environmental planning and is a recipient of the Australia Awards Scholarship in film scriptwriting and directing, strengthening her interdisciplinary approach to visual storytelling. Her documentary *Reading the Heavens, Understanding the Ocean* (2021 and 2025) and its accompanying zine document traditional maritime knowledge in Bintan. Alongside this work, Asti has directed films foregrounding women's lived experiences and coastal culture, including *Dara Duka* (2020), which won Best Documentary at a national competition and screened internationally; *Women vs. Mining* (2022); *Rumah Lontiok* (2024); and *Mak Normah* (2025). Through her teaching and public programmes, Asti continues to nurture young storytellers and emerging artists, advocating for art as a tool for cultural preservation and ecological understanding. Her broader practice is rooted in reconnecting people with place, memory, and the wisdom carried across generations.

Towards a Substantive Rule of Sea:
Rethinking Ocean Governance in Southeast Asia

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This paper proposes the substantive rule of sea as a new framework for ocean governance in Southeast Asia. Adapting insights from the substantive rule of law, it shifts attention from technocratic regulation and geopolitical strategy to questions of justice, dignity, and ecological sustainability. In doing so, it foregrounds the lived experiences of coastal populations and the entanglement of land and sea in governance practices.

The argument develops through the case of Myanmar's Rakhine State, where the Kyaukphyu deep-sea port and pipeline projects illustrate how maritime trade infrastructures extend inland. These projects reshape rights to land, patterns of displacement, and community survival, showing how ocean governance is inseparable from terrestrial struggles. Comparative reflection on Sri Lanka's Hambantota port underscores how large-scale coastal infrastructure across the region reconfigures relations between states, markets, and coastal societies.

By asking who gains and who loses when seas and coasts are reimagined as corridors of global commerce, the paper situates Southeast Asian ocean governance within histories of dispossession as well as emerging debates over sustainability and equity. The substantive rule of sea offers an innovative vocabulary for plural, locally grounded approaches to governing oceans in and from Southeast Asia.

Nathan Willis is a teaching fellow in the Faculty of Law at Bond University, Australia. His research focuses on constitutional and public law in Australia and Myanmar, with particular attention to the rule of law, federalism, and legal pluralism in contexts of political transition. Nathan completed his PhD at Southern Cross University in 2022 with a dissertation titled "Myanmar (Burma), Ethnic Nationalities and the Rule of Law: A Critical Analysis". His publications include peer-reviewed articles on land disputes, constitutional reform, the substantive rule of law, and racial discrimination law. He has a sustained interest in how legal frameworks intersect with displacement, community rights, and questions of justice. Nathan participated in the Young Scholars Workshop at the Centre for Asian Legal Studies, National University of Singapore, in 2013, and continues to engage with regional debates on law, governance, and reform in Southeast Asia.

A Sea of Difference:
The Plural Epistemologies and Contested Governance of Penang's Coast

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Over the past decade, a series of large-scale infrastructure and coastal development projects have transformed Penang Island, revealing deep tensions over how its coast is governed, valued, and imagined. At the heart of this contest between state-led visions of progress and the moral–ecological worlds of coastal communities is Silicon Island, a 2,300-acre reclamation project currently under construction off Penang's southern shore. Envisioned as a major regional tech hub and Free Industrial Zone, the project promises new employment opportunities and renewed international prominence for Penang, yet simultaneously threatens its fragile coastal ecologies and traditional lifeworlds.

The paper examines how the Silicon Island conflict surfaces divergent epistemologies of the sea and, in turn, competing rationalities of governance. While Penang State and its corporate partners advance a frontier imaginary of the sea as a platform for investment and innovation, fisherfolk invoke Islamic moral principles to conceive it as a living commons sustained through reciprocity and care. Allied with secular environmental NGOs, the fisherfolk oppose Silicon Island by translating these moral and ecological values into legal claims that challenge state authority on the water and open ocean governance to epistemic pluralism.

Situating Silicon Island alongside regional instances of oceanic urbanisation, the paper analyses the governance effects of a shared spatio-legal repertoire—reclamation, island-making, corridorisation and zoning—harnessed by states to engineer jurisdiction at sea. It also shows how friction between state governmentality and customary marine stewardship is generative, with those resisting ecological harm forging potent alliances across spiritual and scientific lines that reframe governance and reimagine coastal futures. Taken together, the findings cast Penang's waters as a continually negotiated field rather than a settled order, where contests over the sea are shaped by how it is known and valued.

Angus Taylor is an architect, writer and researcher based in London. His current research focuses on the politics and territorial dynamics of tech-oriented development in Malaysia and related issues around spatial and environmental justice. He draws on ethnographic research methods and anthropological bodies of knowledge to understand how communities marginalised by urban governance regimes negotiate their right to the city and mobilise generative forms of resistance. In addition to practising architecture, Angus is a writer within the New Architecture Writers collective and works as an archival researcher at the Architectural Association.

The Viscous Spaces of Federal-State Frictions in Maritime Governance: A Case Study of Kuching

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This paper investigates the viscous spaces —the interface between land and sea—where friction between the federal Malaysian and Sarawak state governments over maritime governance is tangibly realized in the city of Kuching. Drawing on the metaphorical idea of "viscous spaces," as coined by Couling & Hein (2020), this study argues that the federal-state relationship is a site of ongoing contestation over policy, resources, and jurisdiction. The federal government manages the sea's maritime traffic, while the state manages the rivers and other waterbodies within its borders. Disputes over oil and gas rights, work permits, rights-of-way for cargo vessels and port operations are politically leveraged to assert state autonomy against federal authority. These frictions represent a deep-seated disagreement over national economic plans, as the state pursues its own development agenda in opposition to centralized federal policies.

This struggle is tangibly manifested in the city's coastal urban development, spawning industrial estates, land reclamation for green energy projects, as well as new port infrastructures. Drawing on extensive ethnographic fieldwork—including in-depth interviews, media analysis, and policy review—the study reveals how these tensions produce patterns of uneven urban development along the coastlines and riverbanks of Kuching that impact marginalized coastal communities. Many of these communities are being displaced and disenfranchised directly and indirectly through the implementation of maritime governance policies. By focusing on inter-governmental friction, this research reveals how these frictions shapes the material landscape of a city and, in turn, the socio-political realities and inequalities experienced by its most vulnerable inhabitants.

Azmah Arzmi teaches architecture at the Universiti Malaysia Sarawak in Malaysia. She holds a Bachelor's and Master's in Architecture from the University of Kent in Canterbury. After completing her architectural studies, she worked for architecture firms in Malaysia and Germany. She earned her double PhD in European Planning History from the Bauhaus-Universität Weimar in Germany and University of Pavol Jozef Šafárik in Slovakia, under the auspices of the Horizon 2020 urban¬HIST European Joint Doctorate program. Her research interests lie at the intersection of planning history and postcolonial urbanism, focusing on the impact of infrastructure development on marginalized communities in East Malaysia. Her current research examines the effects of extended urbanization on indigenous rural communities in Sarawak's hinterlands. Her work has been published in journals such as *Planning Perspectives* and *Singapore Journal of Tropical Geography*, and she has contributed a book chapter to Routledge in the field of planning history.

KEYNOTE ADDRESS

Ocean Ontologies:
Resisting the Conventional Violence of Ocean Governance

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Resource corporations strive to naturalise their predatory presence at every depth and reach of the ocean. Theirs is a conventional violence; humanity's dominating ecological relationship with the ocean. Guided by the extractive imaginaries of capitalist industrialisation, corporate humanity and its legal, political, financial and logistical infrastructures entrench patterns of refusal and not seeing: refusing the legibilities of ocean multibeing, not seeing the catastrophic ocean changes for which they are responsible.

The ocean promoted by commercial corporate predation is a fake. It is an extractable version ridiculously abstracted within governance frameworks and used to legitimate ecological violence. An abundance of genres and conditions of beings must be unseen for this fabrication to manifest. These ontological cuts are defining features of ocean extractivism. As tools for ocean governance, they unwittingly contribute to the declining state of the ocean.

This paper casts an illuminating beam to genres and dimensions of being ontologically cut from corporate representations and ocean governance frameworks. A series of conceptual drifts introduce constituents of the majority ocean, including planktonic genres of being and deep ocean fungi. Responding to these ontological multitudes is critical to reimagining human-ocean relationships. Applying an other-than-human, infrastructural analysis to the seabed and water column reveals the material, spatial and relational conditions through which marine constituents extend into ocean worlds. Responding to these conditions is critical to build non-extractive approaches for more just ocean governance.

Situating Raja Ampat-Singapore Contrast: Pathways toward Inclusive and Grounded Models of Marine Governance in Southeast Asia

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Raja Ampat's Marine Protected Areas (MPAs) are widely recognized across Indonesia and Asia for their exemplary management system, which integrates indigenous ecological knowledge with formal regulatory frameworks. This hybrid approach has fostered an inclusive co-governance model that actively involves diverse stakeholders, particularly indigenous communities, through the traditional practice of *Sasi*. Originating in eastern Indonesia, *Sasi* regulates the timing and methods of resource extraction, such as limiting sea cucumber harvesting seasons and restricting destructive fishing gears, ensuring the long-term protection of marine ecosystems. Beyond conservation, *Sasi* also reinforces a form of circular economy by promoting equitable redistribution of marine resources. This allows indigenous communities to collectively benefit from resource use while resisting external capitalist appropriation of local assets. In contrast, Singapore's ocean governance is characterized by a highly centralized and technocratic model. While this top-down system has proven effective in terms of infrastructure development and legal enforcement, it often overlooks ecological observations and the socio-cultural perspectives of coastal communities. Here, *Sasi* offers a valuable counterpoint: as a bottom-up, culturally rooted governance mechanism, it highlights the potential benefits of integrating local traditions into otherwise rigid policy structures. By contrasting these two cases, this study underscores pathways toward more inclusive, resilient, and contextually grounded models of marine governance in Southeast Asia. Through inter-referencing practices across Indonesia and Singapore, we argue for governance approaches that not only meet global sustainability demands but also remain attentive to local knowledge, cultural values, and community participation. To broaden this discussion, the paper will also review comparative cases from other Southeast Asian countries, situating the Raja Ampat–Singapore contrast within the wider regional context of coastal and marine policy-making.

Maulidya Qutrothunnada earned her Master's degree in Public Policy specializing in Climate Change from the Indonesian International Islamic University in 2025. Her research focuses on remote sensing, bathymetry, and the integration of Indigenous Local Knowledge in climate adaptation. She received the Best Thesis award in the MPP Climate Change program for her work *Navigating Raja Ampat's Customary and Formal Policy Integration of Marine Protected Areas in Building Sequencing Governance*. She has been actively involved in fieldwork with coastal communities, most recently in Raja Ampat in April 2025, where she engaged with Indigenous coastal communities to study traditional practices in marine resource governance. Her research interests center on coastal sustainability management, with a particular focus on the governance and resilience of Marine Protected Areas.

Priza Marendraputra earned his PhD in Environment and Resources from the University of Wisconsin-Madison in 2023. His research focuses on political ecology, examining human-environment interactions to understand the complexities of urban development. He has taught courses on climate policy, green urbanism, planning studios, infrastructure planning, spatial information systems, and statistics at institutions in Wisconsin, Hawaii, and Indonesia. At the Asia Research Institute at the National University of Singapore, he is actively involved in the Capitals of the Future: Place, Power, and Possibility in Southeast Asia project. His recent publications include the chapter "Political Ecology of Land Degradation from Urban Expansion of Jakarta Metropolitan Area in Planning Jakarta in the Post-Suburban Era" (University of Hawai'i Press, 2026). Additionally, he has two forthcoming chapters on urban livelihoods and Indonesia's post-decentralization era, both set for publication in 2026 in Routledge and Edward-Elgar Publishing. His ongoing research explores urban transformations, environmental governance, and socio-political dynamics, with multiple articles under review in high-impact journals.

Participatory Ocean Governance from the Shorelines: Co-creating Online Manuals for Community-Led Mangrove and Coral Stewardship in Bintan, Indonesia

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This presentation explores how digital tools co-developed with communities and local stakeholders can foster more inclusive, community-driven approaches to ocean governance. It presents two emerging projects based in Bintan, Indonesia, where our research team, working with local educators, maritime scientists, and youth, seeks to co-develop bilingual online manuals on mangrove and coral care, restoration and stewardship. The manuals are conceived as living knowledge platforms: mediums through which local actors, scientists, and artists articulate practices of mangrove and reef care that are not only ecological but also social, pedagogical, and political.

Currently in its formative phase, the project gathers input through interviews and discussion with partners including Raja Ali Haji Maritime University, local dive and tourism groups, as well as community-ran NGOs. Preliminary findings suggest that such participatory manuals function as situated governance instruments, mediating between national conservation policy, scientific expertise, and customary coastal practices, while also addressing the need to sustain local livelihoods. They also underscore that addressing climate change effectively requires not only community participation but genuine community ownership of environmental knowledge and stewardship. The paper reflects on how these digital manuals may contribute to what we term embedded ocean governance: forms of stewardship grounded in local epistemologies and sustained through everyday media use, youth engagement, and intergenerational knowledge exchange.

By foregrounding co-creation, co-ownership and accessibility, the project challenges technocratic approaches that separate science from social practice, offering instead an experimental model for integrating ecological restoration driven by community participation and local knowledge. It contributes to broader conversations on how locally situated, multispecies, and place-, practice-, and knowledge-based approaches can inform and encourage alternative imaginaries of governing the ocean in Southeast Asia.

Joshua Gebert is Research Fellow in the Centre for Contemporary Art Singapore at the Nanyang Technological University (NTU CCA), where he works under the Climate Transformation Programme. His current research focuses on participatory and transdisciplinary approaches to environmental stewardship, heritage, and climate adaptation in coastal Southeast Asia. At NTU CCA, he collaborates on projects in Bintan, Indonesia, that bring together artists, scientists, and local communities to co-develop digital manuals on mangrove and coral restoration. Joshua holds a PhD in Southeast Asian Studies from the National University of Singapore, where his doctoral work examined the politics of heritage and decolonization in post-authoritarian Indonesia. His broader research interests include critical heritage studies, decolonial theory, and the intersections between art, ecology, and local knowledge. Beyond academia, he has been involved in community-based heritage initiatives in Singapore, Indonesia, and the Netherlands, with a focus on creating accessible, locally grounded approaches to cultural sustainability. Through his current work, Joshua aims to explore how digital and community-driven platforms can strengthen local agency and contribute to more inclusive forms of environmental governance and climate resilience.

Ute Meta Bauer is Professor at Nanyang Technological University (NTU), where she serves as Chair of the MA in Museum Studies and Curatorial Practices, and as Acting Director and Principal Research Fellow at the NTU Centre for Contemporary Art (CCA) Singapore. Serving as its founding director for over a decade, her work as an educator and curator over the past years is focused on climates, habitats, environments. At the NTU CCA, she curated and co-curated numerous exhibitions, including "The Oceanic" (2017/2018), "Trees of Life: Knowledge in Material" (2018), and "The

Posthuman City" (2020). Working across contemporary art, film, video, and sound, her curatorial projects include Documenta11 (2002)—which formalised one of the first collaborations with Yang Fudong—the 3rd Berlin Biennale for Contemporary Art (2004), the 17th Istanbul Biennial (2022) co-curated with David Teh and Amar Kanwar, and the Diriyah Contemporary Art Biennale 2024. Bauer previously co-curated the US Pavilion, 56th Venice Biennale, featuring artist Joan Jonas; and the Singapore Pavilion, 59th Biennale di Venezia, that presented artist Shubigi Rao.

Ocean Governance in Derawan:
Intersection between Sea People, Conservation, and Technology

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This study explores the intersection between coastal communities, marine conservation, and technology within the context of ocean governance in the Derawan Archipelago, Indonesia. The local community rejects the government's proposed zoning of the Marine Protected Areas (MPAs), arguing that it reduces their income and their fishing flexibility. This highlights tensions between local tradition and global conservation policies. The integration of the Marine Monitor (M2) System by international conservation organizations also raises concerns among local fishers, as it enhances surveillance in some parts of the MPA, thereby increasing monitoring of vessel activities. For the Sea People of Derawan, the sea is their home. Home is both land and sea. This study uses a qualitative approach with in-depth interviews and participatory observation. The results show that global conservation policies often ignore local realities and tend to force their implementation (misdiagnosis problem). Modern technology, such as M2, can either enhance or impede conservation efforts, depending on how well it is integrated with local practices and needs. This study emphasizes the importance of integrating local traditions with global knowledge to achieve sustainable and inclusive ocean governance.

Dadang Ilham Kurniawan Mujiono is a lecturer, researcher, and conservationist at Mulawarman University, Indonesia, with a focus on international relations, maritime ethnography, and environmental governance. In addition to that, he also serves as Indonesia's Director for Global Conservation, where he leads programs in the Derawan Archipelago that connect local knowledge with new technologies to support sustainable marine management and improve surveillance of illegal, unreported, and unregulated fishing. He received his PhD from the National University of Singapore, researching the shifting identities—insider and/or outsider—of the Sea People of the Derawan Archipelago and their roles as the custodians of the local knowledge across the Archipelago. Dr Dadang collaborates with national and international organizations on marine policy and has written various articles and books about marine ecosystems and ecotourism.

Beyond the Reef:
Ethnographic Perspectives on Coral Restoration and Governance in North Sulawesi

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In recent years, coral reef restoration (CRR) has emerged as a key strategy within Indonesia's expanding blue economy agenda, with the government positioning the country as a global leader in reef rehabilitation. However, only a small proportion of CRR projects include evaluation mechanisms (Razak et al. 2022), raising concerns about their ecological efficacy and governance legitimacy. This paper presents preliminary findings from six months of ethnographic fieldwork in North Sulawesi, an area known for its high marine biodiversity, where the number of CRR initiatives has increased in recent years. Fieldwork was based primarily in North Sulawesi. These initiatives vary widely in scale, actors involved, and motivations—from government-led programs and private sector projects to community-driven efforts and tourist-facing restoration 'experiences'. Many of these projects blur the lines between environmental care, commercial interest, and public legitimacy - raising critical questions about who governs restoration practices, to what ends, and with whose knowledge. Drawing on ethnographic fieldwork with stakeholders from NGOs, government, tourism and the scientific community, this research examines how coral restoration works in practice: how power is distributed across actors, how legitimacy is performed and contested, and how governance is enacted not only through formal policy but also through material infrastructures, economic incentives, and environmental imaginaries. By situating CRR within broader questions of ocean, this paper offers new insights into the politics of restoration, and reflects on what meaningful, inclusive, and ecologically responsible coral futures might look like.

Anita Lateano is a PhD researcher in the School of Architecture and Cities, based at the University of Westminster. Her work uses multispecies approaches to explore coral reef conservation in North Sulawesi, Indonesia, focusing on human-reef relationships, environmental justice, and arts-based research methods. She is particularly interested in how conservation practices can be reimagined through collaboration, sensory engagement, and non-human participation. Alongside her doctoral research, Anita is a research fellow at the University of Birmingham, working on a participatory decolonisation project within the business school. The project explores co-creative approaches to institutional change and has produced a Sage white paper titled *Decolonising a Business School in Context: From Theory to Practice*. Anita has a background in social anthropology, with professional experience in the environmental NGO sector, which includes WWF-UK. Her wider interests include environmental politics, decolonial methods, and interdisciplinary research that supports social and ecological transformation.

Vernacular Ocean Governance and the Epistemologies of Crisis: Rethinking Coastal Management in Rembang, Indonesia

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Coastal degradation along the northern coast of Java exemplifies the growing disjuncture between national ocean governance frameworks and the lived realities of coastal communities. This study focuses on Rembang Regency, a coastal region in Indonesia, to examine how marine degradation manifests through massive abrasion, chronic pollution, and the loss of local livelihoods, particularly in the tourism sector. The pollution of seawater and coastal areas caused by domestic waste and fish processing industries has also generated persistent odor and environmental discomfort.

This study employs a qualitative research method. Research data were collected through field observations, in-depth interviews, and documentation. Data were analyzed using N-Vivo software to capture narratives and thematic patterns constructed by governments and local communities, complemented by Vos Viewer to identify contemporary trends in academic research on ocean governance. The findings reveal that the governance system in Rembang has become fragmented and multi-level since the enactment of Law No. 23/2014, which transferred marine management authority from district to provincial levels, thereby widening the gap between policy design and local ecological realities.

Without responsive policies, coastal communities have developed informal governance mechanisms grounded in cultural and spiritual practices. Sedekah Laut, a traditional sea-offering ritual, reflects an alternative epistemology of governance that recognizes the sea as a moral and living entity rather than a mere resource. Ultimately, the Rembang experience calls for rethinking ocean governance not through uniform policy prescriptions but contextual, place-based understandings that bridgeecological and cultural knowledge.

Yoga Aldi Saputra is a young lecturer at the Department of Public Administration, Faculty of Social and Political Sciences, Diponegoro University, Semarang, one of Indonesia's leading public universities. He earned his Master's in Public Policy and Management from Universitas Gadjah Mada, Yogyakarta, under a full scholarship from the Government of Indonesia. His research focuses on environmental governance, coastal management, and sustainable tourism development in SoutheastAsia. He has published in an international Scopus-indexed journal, including *Advancements and Challenges of Government-Initiated Tourism Development for Sustainable Livelihood: The Case of the Mandalika Destination, Indonesia (Q2, 2025)*, which examines the intersection of policy, sustainability, and community-based development. Beyond teaching, he actively engages in community service projects related to coastal resilience and rural empowerment, emphasizing participatory approaches to sustainability. As an early-career academic, Yoga seeks to deepen his scholarly capacity and contribute to broader discussions on Southeast Asian governance and environmental policy.

Ports, Papers, and Power:
Aceh and the Riau Archipelago

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This paper examines how coastal governance emerged and persisted in Aceh and the Riau Archipelago, using manuscriptsand port correspondence as evidence of practical rule at sea. Using philology and history, it brings together Malay legalmaritime codes associated with Melaka and Johor, as well as Riau, and early nineteenth-century letters of Riau port officialsthat document the authority of the syahbandar, dues, pilotage, and licensing. The study then traces the afterlives of theseprescriptions in Acehnese panglima laot by-laws to show how rules for seasonal closures, gear limits, sanction ladders, andspatial zoning remain intelligible as living technologies of ocean order. Web accessible copies and editions enable cross-manuscript checking, while brief interviews with custodians and fishers serve only to validate terminology in contemporaryuse. Findings indicate that manuscript devices organise sea space, mediate conflict, and calibrate extraction under climatepressure and logistics expansion, which counters the view that treats ocean governance as a static legal frame. The paperproposes a manuscript on metrics translation that renders community rules into workable indicators for policy while protectinglocal autonomy through legal pluralism. It concludes by outlining how Singapore can function as a regional node forrecognition, standard-setting, and arbitration, connecting archival insights to present-day ocean governance across the Straits.

Fakhriati, MA, is a senior researcher at the National Research and Innovation Agency (BRIN), located on Jalan Gatot Subroto, Jakarta. She earned her master's degree from Leiden University and her doctorate from Universitas Indonesia. She was also a fellow of the Drewes Fellowship at Leiden University, the Netherlands. In addition to her research activities, she currently serves as Executive Director of UNESCO-BRIN's Management of Social Transformation program, which focuses on translating research into policy and knowledge into action under the theme: Utilizing Local Knowledge for Disaster Risk Reduction for Vulnerable Groups Using Information Technology. She is also an active member of the Research Ethics Clearance Committee at BRIN. She has also served as the managing editor of the *Heritage of Nusantara* since 2012. Additionally, she serves as a reviewer for various national and international journals regularly. Dr Fakhriati is also a prolificwriter, publishing in both nationally and globally indexed international journals. Two examples of her works are "Making Peace with Disaster: A Study of Earthquake Disaster Communication through Manuscripts and Oral Traditions", published in *Progress in Disaster Science* (2023), and "Local Cultural Coping Strategies to Mitigate the Impact of Baribis Fault Disasters", published in *Journal of Infrastructure, Policy and Development*, Vol. 8, No. 8 (2024).

Tapping Fishers' Maritime Expertise for a Marine Community-led Conservation Area: A Case Study from the Western Tebrau Strait, Malaysia

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The Tebrau Strait is a narrow waterway between Singapore and Malaysia. Its western end is flanked by industrial development, oil and gas storage, wholly reclaimed mixed developments, and ports. Yet fishermen continue to eke out a living here as they have done for over a century, and endangered species continue to roam vast intertidal and subtidal seagrass meadows and coastal mangrove forests. Even though these habitats and a tiny Malaysian island are designated in the most recent local plan as Environmentally Sensitive Areas Level 1, it cannot be designated a marine park given the competing demands for both marine and terrestrial space. However, a local fisheries community organisation (myKP Pendekar Laut – Sea Warriors' Community) has been engaging with local and federal government agencies to propose an OECM (Other Effective Conservation Measures) as a multi-stakeholder platform to monitor these vital ecosystems and mitigate issues that may arise from industry, development and large vessel traffic. The idea is that the local fisheries community will lead or have a prominent role in this initiative as the fishermen are the ones who observe ecological changes, evidence of pollution or accident, and other often imperceptible changes at sea every day. It is their generational understanding of marine species behaviour, weather, and water movements, as well as daily in situ observations of conditions in the strait that are crucial elements for an effective OECM. This case study shares the story of a 17-year community initiative that evolved fromenvironmental education to community empowerment, so as to be able to contribute scientific observations (through citizen science and local ecological knowledge) to policy. This paper will also propose possible structures for this OECM,encompassing UN-level frameworks like Environmentally and Biologically Sensitive Area (EBSA) criteria and other UN frameworks that take into consideration local community cultures and local knowledge.

Serina Rahman is a conservation scientist who uses ethnography, studies of human-habitat interactions, and explorations into art to tell the stories of the fishermen and seagrass meadows of the Western Tebrau Strait amongst whom she has been immersed since 2008. It was there that she co-founded a community organisation, Kelab Alami, to help the community cope with unavoidable change, as well as document and highlight local fishing heritage, ecological knowledge and maritime expertise. This evolved into the myKP Pendekar Laut initiative: a Sea Warriors collective of fishermen working for equity, social justice and the preservation of their livelihoods. By day she is a lecturer in the Southeast Asian Studies Department at the National University of Singapore, and Associate Fellow at the ISEAS-Yusof Ishak Institute. Her research interests are primarily artisanal fisheries and seagrass ecology, community empowerment, and Malaysian rural politics. She uses citizen science, inclusive sustainability education, and community ecotourism to help this community of Mukim Tanjung Kupang earn supplementary incomes, prolong marine-based livelihoods, and broadcast the importance of their natural habitats to a world beyond their village boundaries. She teaches about the sea, environmental politics, religion and magic. She has myriad academic, institutional, and other publications, as well as online productions under her name, encompassing her varied interests, all anchored in the shores of this rural Malaysian fisheries community.

Customary Consensus and Contested Conservation:
Plural Imaginaries of the Sea in West Aceh, Indonesia

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This paper examines how the Meulaboh Declaration (2010) emerged as a local attempt to manage disputes among fishermen on Aceh's west coast, where different ways of knowing and governing the sea met. The declaration followed years of violent tension between groups using mini-trawl nets and those defending traditional fishing practices. In trying to end the conflict, Panglima Laot—Aceh's customary maritime institution—worked with the local Fisheries Agency and the FAO to create a shared rule for the sea. Based on interviews and focus group discussions, this paper traces how adat laot (customary sea law) shaped the process of building and sustaining consensus. It governed not only who could fish, when, and where, but also how balance with marine life was maintained. While the FAO introduced a conservation language of marine protected areas and sustainability indicators, Panglima Laot anchored the discussion in moral authority, embodied knowledge, and community accountability. This paper argues that the Meulaboh Declaration shows how ocean governance is never just technical or legal; it is also ethical, affective, and relational. The case invites us to think about consensus not as a perfect end-state but as a fragile practice of coexistence that links global conservation imaginaries with local moral worlds. Ultimately, the Meulaboh case offers a critical point for imagining ocean governance, where customary authority and multispecies ethics are not residual traditions but active contributors to a more inclusive, culturally grounded, and ecologically attuned future of the sea.

Rizanna Rosemary, PhD, is a senior lecturer in the Department of Communication Studies, Faculty of Social and Political Sciences, Syiah Kuala University. Her research focuses on media, health, environmental communication, disaster risk reduction, and disability inclusion. She leads the Knowledge Management and Disaster Communication cluster at the Tsunami and Disaster Mitigation Research Center and is a researcher at the International Center for Aceh and Indian Ocean Studies. Her study "In Search of Sustainable Consensus on Environmental Disputes in Aceh" examines how cultural frameworks and dialogue sustain environmental peacebuilding. Her publications include *Unveiling the 'Green': Media Coverage on the Aceh Green Vision* (Springer Nature) and *Efficacy Information in Government's Initial Responses to COVID-19* (*International Journal of Disaster Risk Reduction*). She serves on the editorial board of *BMC Public Health* (Springer Nature).

Arum Budiastuti is a lecturer at the Faculty of Humanities, Airlangga University, Indonesia. She earned her PhD in Cultural Studies from the University of Sydney, Australia. Her research explores the intersections of material culture, science and technology studies, infrastructural studies, and environmentalism. In 2019, she contributed a chapter on rural aquaculture to *Sustaining Seas: Oceanic Space and the Politics of Care*, edited by Elspeth Probyn (Rowman & Littlefield). Her engagement with ocean and multispecies relations is informed by her past professional experience in a seafood export and import company. She also serves as a peer reviewer for *Science, Technology, and Human Values* (Sage Publications).

Dual Habitats above and below the Sea Surface:
Japanese Mariculture Research, Plastics, and Asia's Coastal Concentrations of Marine Biomass and Nutrients

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This paper explores multi-species interactions between humans and marine life in Japan and other parts of Asia during the latter half of the twentieth century. Mariculture—the farming of marine organisms—has seen a substantial global increase in production since the mid-twentieth century. I address why and how the mariculture-related coevolution between humans and marine species in Japan sought to reorient coastal marine food webs toward human consumption. I argue that the construction of floating mariculture structures—new dual-habitat structures for marine species and humans—facilitated human access to submerged habitats, enabling the concentration and extraction of large marine biomass. Unlike sluice-gate embankments enclosing fish, floating raft and cage structures, initially made from natural materials and, after the 1950s, quickly replaced by plastic materials of the Age of Oil, were designed to vertically integrate two habitats, one on each side of the sea surface. They intentionally simplified and localized previously complex interactions within marine ecosystems that had shaped coastal fisheries. The design work of Japanese mariculture pioneers after WWII was strongly driven by socio-economic problems, including the freshz memories of postwar famine and wartime limits on fisheries yield. Yet within Japanese waters, it was also constrained by multiple environmental problems, including land reclamation that destroyed nursery grounds, petrochemical pollution, overfertilization, and coastal overfishing. Consequently, in the second half of the twentieth century, Japanese mariculture practices made strong contributions to mariculture growth, related environmental problems, and changes in spatial planning and marine resource management in other parts of East and Southeast Asia, where they also reinforced the Cold War logic of ocean development (Blue Revolution) accompanying the agricultural GreenRevolution and providing seafood for Japanese and other consumers.

Stefan Huebner is Senior Research Fellow at the National University of Singapore's Asia Research Institute and President of the Society of Floating Solutions (Singapore). He is interested in oceanic history, with a special focus on industrialization and urbanization of marine regions since the mid-twentieth century. His second monograph on *Earth's Amphibious Transformation: A History of the Oceanic Anthropocene* will be released by Cambridge University Press in July 2026. Recent articles were published in *Climate Risk Management, Ocean and Coastal Management, Channel NewsAsia*, and *Journal of Global History*. He also co-edited *Oceanic Japan: The Archipelago in Pacific and Global History*. In 2019, he served as a U.S. SSRC Transregional Research Fellow at the Harvard University Asia Center, where he was previously a Fulbright scholar in 2018.

Too Much and Too Little:
Singapore's Contradictory Relationship with (Sea) Water

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Singapore, a low-lying island city-state, is increasingly confronted with the challenges of sea-level rise and intensified coastal flooding due to climate change. In response, the government has initiated extensive coastal protection measures, including the construction of barriers, elevation of shorelines, and reinforcement of existing seawalls and revetments. While these interventions are essential for national resilience, they also heighten spatial and social pressures within an already densely populated urban environment. At the same time, Singapore is striving to achieve water self-sufficiency through the expansion of desalination and NEWater technologies. This dual relationship with the sea, as both a vital resource and an existential threat, reveals tensions and trade-offs in the nation's approach to environmental governance. Rising sea levels and changing salinity regimes may increase treatment requirements for desalination, while limited coastal space and protective infrastructure compete with potential sites for future water facilities. Moreover, narratives of technological progress often obscure the long-term ecological costs and uneven distribution of environmental burdens.

This paper examines this apparent contradiction, the understanding of the ocean both as a threat and as an opportunity, by analysing Singapore's evolving ocean and water governance as a site where strategies of protection, production, and adaptation intersect. It explores how the sea is simultaneously framed as a boundary to be defended and a resource to be mobilised, asking which forms of knowledge, practice, and experience become visible, or are rendered invisible, when climate adaptation and water security are pursued together. By situating Singapore's case within broader debates on ocean governance and climate adaptation, the paper reflects on the limits and possibilities of technology-centred resilience in the Anthropocene.

Alicia Gutting is Wallenberg NTU Postdoctoral Fellow in the School of Social Sciences at Nanyang Technological University (NTU), Singapore. In 2024, Alicia completed her PhD in History of Science, Technology and Environment at KTH Royal Institute of Technology in Stockholm, Sweden. In her PhD thesis she examined the nuclear history of the Rhine River basin with a distinct focus on the relationship between water and nuclear energy from the 1950s until today. In her current postdoctoral project, "Unconventional Water Supply in Times of a Changing Climate: A Historical Analysis of Singapore's Success with Desalination in a Global Perspective", Alicia expands on her PhD research, addressing complex water-energychallenges.

The Sea of Speculations:
Governing the Uncertain through Thailand's Landbridge Project

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Thailand's proposed Landbridge Project—connecting the Andaman Sea with the Gulf of Thailand through deep-sea ports, intermodal rails and highways, and energy pipelines—has been heralded by the state as a strategic corridor of inter-oceanic connectivity and a new maritime artery of global trade. Yet beyond its economic and logistical ambition lies a deeper epistemic project: the reterritorialization of the sea into a governable extension of land. In this paper, I argue that the Landbridge functions as a speculative fiction of governance, where logistics, economy, and ecology are re-scripted into a technopolitical fantasy of seamless inter-oceanic flow. This fantasy, however, depends upon the suppression of uncertainty, fluidity, and the more-than-human agencies that compose the oceanic world it claims to master. Seeing Landbridge as both infrastructure and imagination, the paper examines how legal, technical, and political frameworks codify anthropocentric authority, reducing marine life to resources or impacts rather than participants in governance. Reading against these constraints, the paper argues for a posthuman legality which asks not only how to regulate the sea but how to listen to its claims and to treat marine ecologies as kin and co-legislators in governance. By bringing speculative infrastructures into conversation with oceanic ontologies and posthuman legalities, the paper calls for rethinking governance from the standpoint of the ocean with an ethics of uncertainty, unruly coexistence, and multispecies justice that resists the terrestrial impulse to make the sea knowable, governable, and still.

Jakkrit Sangkhamanee is Associate Professor of Anthropology at Chulalongkorn University, Bangkok, Thailand. Engaging with ecological anthropology, posthumanism, and science and technology studies, his research engages with environmental infrastructures, hydrological knowledge, and amphibious urbanism in Thailand and Southeast Asia's climate and resource politics. His recent works explore speculative infrastructures, amphibous ecologies, and the cosmopolitics of more-than-human worlds. He is the author of a Thai book *Thalasso-Anthropology: Ethnographies of Technology, Multispecies, Materalities, and Stories beneath the Sea*. He has also contributed a book chapter on "Diving into Underwater Anthropocene: Vital Materiality and the Becoming of a Shipwreck" in *Southern Anthropocenes* (Routledge, 2025). Across his writing and research projects, Jakkrit examines how infrastructures, ecologies, and speculative imaginations intertwine to generate new forms of environmental and cosmopolitical thought and affect in Southeast Asia.

Ocean Governance, Green Transitions, and the Making and Unmaking of Port Efficiency in Singapore's Seas

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The 'beating heart of the maritime industry', 'lifeblood', 'backbone', and 'main artery' of the global shipping economy, the commercial port, is a central node and 'gateway' between trading nations. Today's 'mega ports' have become logistics, financial, and energy hubs reflecting an intersection of multi-scaled stakeholders navigating complex legal jurisdictions, geopolitical tensions, commodity, labor, and financial markets, and economic crises when they arise. The port is nothing if not dynamic and demands critical attention as the formal organizations of global ocean governance (IMO) and regional governance blocs (EU) are actively making, through policy and regulations, the conditions for 'greener materialities of the sea'.

The Port of Singapore is one of the most significant 'mega ports' worldwide in terms of the aforementioned characteristics, while also host to the world's largest bunker hub, fueling a large portion of the world fleet and their domestic economy. This context has helped ground Singapore's commitment to transition to a multi-fueled future and in the process is necessitating a reconceptualization and operationalization of their port economy and ocean-spaces. At Singapore Maritime Week in 2024, digitalization and decarbonization were coupled as pillars of the future, and key stakeholders noted that the Port of Singapore will be measured against their success at integrating the pillars—a new framework for 'Port Efficiency'.

Using a heterodox political-economy approach to problematizing the notion of port efficiency in Singapore, this paper positions efficiency as an unruly logic of oceanic accumulation and ocean governance. Helping to make this claim the paper relies on a set of three efficiency and decarbonization strategies: 'Just-in-Time' (JIT) for vessels, 'regulatory sandboxes', and fuel trials, all of which are taking place in Singapore's port-waters. I argue that these efficiency strategies bring into view a process of crisis-making veiled in varied forms of ocean governance.

Elizabeth Sibilia is a critical human geographer who explores the ways in which the global maritime sector produces uneven geographies. Empirically, she interrogates this by 'following' stakeholder assemblages, routes, and vessels that help reveal how toxic and chemical land/sea-scapes are necessarily produced for the reproduction of maritime capital. Her regional focus is on the maritime-scapes in South and Southeast Asia. She is currently a research affiliate in the Department of Geography at the University of California, Berkeley. While in residence, she is completing an article for the forthcoming *Themed Issue in Environment and Planning D: Society and Space*, titled "Contemporary Ports and the Politics of Being in Motion", while also serving as a guest editor. The issue and article are the final deliverables for her recently completed ERC funded Postdoctoral Fellowship, "Between Sea and City: Ethnographic Explorations of Infrastructure, Work, and Place around Leading Urban Container Ports" (PORTS), at the University of Oslo. For PORTS, she conducted ethnographic research on the Port of Singapore centering on how Singapore's port spaces and infrastructure are being made and remade in the context of energy transition. Her work has been featured in *Anthropologica, Environment and Planning C: Politics and Space, Focus on Geography*, and in *Environment and Planning A: Economy and Space*.

The Pacific's Cyber Infrastructures:
Detangling Regulatory Tensions amongst Multiple Actors

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Critical information infrastructures (CII) are essential for the Pacific's internet connectivity and tackling digital divides. Yet, they often overlook Indigenous perspectives, stir geopolitical rivalry, and raise social, environmental, and cybersecurity concerns. Moreover, existing regulatory frameworks governing CIIs are fragmented at best, and clashing at worst.

This puzzle raises the following questions: How do tensions between antagonistic legal regimes and stakeholders shape the Pacific's CII governance? Which legal innovations have Pacific communities been advancing to mitigate such tensions?

This research project critically examines regulatory tensions between investment, climate, and cybersecurity laws governing CIIs, as well as Indigenous rights and data governance on one hand, and socioeconomic/geopolitical tensions between various actors, i.e. states, investors, and Indigenous communities on the other. To this purpose, it adopts a postcolonial lens, mainly drawn from Global South and 'Third World Approaches to International Law' (TWAIL) literature.

In critiquing Foucault's theoretical foundation of discursive powers, it hypothesises that existing regulations often fail to consider in a polyvocal manner the Pacific's unwritten forms of governance and customary laws, such as 'rahui' for environmental resources protection, or 'mataqali/tokatoka' for communal customary land ownership.

The project further expands the Pacific's 'talanoa' approach of inclusive, participatory, and open dialogue successfully integrated into international climate proceedings of the United Nations Framework Convention on Climate Change (UNFCCC)'s Conference of Parties (COP).

To substantiate above arguments, this project uses doctrinal, empirical, socio-legal, comparative, theoretical, and normative methods.

This project's geographical and thematic scope focuses on CII projects in Melanesia and Polynesia, chiefly funded by China through development aid projects, and juxtaposed with those by other players like Australia and the US.

With related laws and remedies pertaining to digital infrastructures and sovereignty continuously in the making, this projectfocuses on three sets of case studies:

First, internet submarine cables, instantiated by Papua New Guinea's Kumul Submarine Cable Network under China's Digital and Maritime Silk Road.

Second, Google's South Pacific Connect Initiative connecting French Polynesia, Fiji, the US and Australia.

And third, Tuvalu's Digital Nation, allowing for virtual sovereignty even after territorial disappearance due to sea-level rise, and for which Tuvalu is upgrading its CIIs with US/Australia-funded submarine cables.

Francine Hug is Lecturer at Western Sydney University and leads the Nepal Modern Slavery Project in cooperation with the National Human Rights Commission of Nepal. Her research spans AI in legal education, practice, and research, just energy transition and energy justice litigation, as well as cyber/energy/climate regulations in Oceania. Previously, she was a postdoctoral fellow at the Chinese University of Hong Kong, focusing on fossil fuel phase-out and just energy transition in the Asia-Pacific. At the East-West Centre (USA), she examined the impact of energy/technology investments on Indigenous rights in the Pacific. Prior to academia, Francine worked as a senior economic officer at the

Swiss Embassy to China, Mongolia, and North Korea; served in non-governmental organisations in Tanzania, Haiti, Peru, and South Africa; and gained experiences at the Organisation for Security and Co-operation in Europe, International Olympic Committee, and Siemens.

The Industrial Littoral and Compensation Ecologies in Singapore

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One of Singapore's greatest environmental success stories is the mangrove restoration project at Pulau Semakau, an uninhabited island in the Singapore Straits. The restored area, where more than 40,000 mangrove seedlings have been planted across two sites, also contains a coral reef nursery, a seagrass meadow, and some of the most ecologically diverse littoral zones in the country. This ecological haven was created as a compensation landscape for the 13 hectares of mangroves lost during the construction of the Semakau Landfill, the world's first offshore landfill formed entirely in seaspace.

This paper uses the industrialization of the littoral zone in Singapore's Western Islands as an entry point to examine the co-production of environmental governance and petrochemical infrastructural assemblages. The littoral zone was originally an ecological term describing the interface between terrestrial and aquatic environments, an area shaped by fluctuating water levels and varying salinity. In Singapore, indigenous communities historically built prawn ponds and kelongs (wooden fish traps) to take advantage of this biologically diverse intertidal zone. These practices gradually disappeared with legal interventions, such as the 1920 Foreshores Act that recognized foreshores and submerged land as state property, and the rise of Singapore's petroleum industry.

By the late nineteenth century, the island of Pulau Bukom had become a major hub for the predecessor of Shell, and the island was the site of Singapore's first petroleum refinery constructed in 1960. The littoral zone was reshaped through successive mergers with surrounding islands and land reclamation, setting the tone for "offshoring" the petroleum industry to reduce the risk of industrial disasters on the mainland. Subsequently, in 1975, Pulau Semakau was earmarked for a new petrochemical complex, and islanders were relocated to Singapore or other nearby islands. The plan, however, was never realized, and the emptied islands were eventually converted into a landfill in the 1990s. While the construction of the landfill was underway, Singapore then turned to combine seven islands into what is known today as Jurong Island, a gated petrochemical complex formed through layered pipelines, causeways, land reclamation, and an underground petroleum storage facility. It is also home to Jurong Island Pond, the largest constructed stormwater retention pond in the country, and the petroleum island's answer to nature-based solutions.

By examining the co-production of "ecological" landscapes and petroleum infrastructure in Singapore's industrial littoral, this paper builds on Victor Savage's work on "environmental possibilism," in which environmental manipulation is legitimized in the name of national development and security. Within this framework, the environment becomes subject to continual redesign, often rationalized through discourses of "greening" or sustainability. The anthropogenic natures produced are perceived to be equally or more valuable than the original. In this context, the industrial littoral illustrates how "compensation ecologies" do more than replace the environments that have been displaced; they also reconfigure public imaginaries of marine ecologies in places that are no longer accessible to their communities.

Dorothy Tang is a landscape architect and Assistant Professor in the Department of Architecture at the National University of Singapore. Her research and practice is concerned with the intersections of infrastructure and everyday life, especially in communities confronting large-scale environmental change. She has published and exhibited widely on the relationship between infrastructure development, resource extraction, and urbanization processes. Her current work explores the histories of water and engineering, the infrastructural landscapes of development in Southeast Asia, and the geopolitics of transnational watershed management.

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