P-ISSN: XXXX-XXXX E-ISSN: XXXX-XXXX

SUSTAINABLE & EQUITABLE
EARTH DEVELOPMENT
OPEN ACCESS
2026, VOL. 1, NO. 1, 35-42
https://doi.org/xxxxxx/xxxxxx

RESEARCH ARTICLE

Living with the Tides: Adaptive Coastal Knowledge and Mangrove Governance in Southeast Sulawesi

Sitti Mujahida Baharuddin
Management Department, Sekolah Tinggi Ilmu Ekonomi AMKOP Makassar, Makassar City, Indonesia

ABSTRACT
This study explores the locally grounded knowledge systems and governance practices that shape mangrove stewardship in coastal communities of Southeast Sulawesi, Indonesia. Drawing on ethnographic fieldwork and in-depth interviews with fishers, women gleaners, and customary leaders, the research uncovers how community members interpret and respond to ecological change through embodied practices and seasonal knowledge. In contrast to formal conservation policies that often disregard indigenous epistemologies, the findings reveal a dynamic and adaptive coastal knowledge that blends spiritual beliefs, intergenerational learning, and ecological observation. The study also highlights the tensions between state-led mangrove rehabilitation programs and locally embedded governance systems, where overlapping authorities and exclusionary zoning threaten both ecological resilience and livelihood security. By centering the voices and practices of those most intimately connected with the tides, the study contributes to broader discussions on environmental justice and participatory conservation in the Global South. It argues for a reorientation of mangrove governance frameworks to prioritize co-produced knowledge, localized legitimacy, and relational accountability. The research thus offers valuable insights for designing more inclusive, sustainable, and culturally attuned coastal management strategies in climate-vulnerable regions.

ARTICLE HISTORY
Received: 10 Dec 2025
Accepted: 4 Jan 2025

KEYWORDS:
Mangrove Governance, Adaptive Knowledge, Coastal Communities, Southeast Sulawesi, Participatory Conservation

INTRODUCTION

Coastal communities across Indonesia are at the frontline of climate-related disruption, experiencing intensified tidal flooding, coastal erosion, and ecosystem degradation. These challenges are particularly acute in Southeast Sulawesi, where mangrove forests not only protect coastal settlements but also serve as vital sources of livelihood, spiritual meaning, and ecological balance. In recent decades, state and donor-driven mangrove rehabilitation efforts have proliferated across the region, typically emphasizing standardized ecological metrics and bureaucratic governance. However, such externally imposed conservation strategies often overlook or marginalize the situated knowledge, spiritual cosmologies, and everyday practices of the coastal populations who inhabit and co-produce these landscapes.

Existing scholarship has documented the ecological functions of mangroves in mitigating climate change and supporting biodiversity McEwan (2025) and Raippalinna (2022), yet far less attention has been given to how local communities conceptualize, manage, and adapt to changing coastal ecologies. Studies rooted in political ecology and environmental anthropology have begun to highlight the tensions between formal governance and customary systems in resource management Großmann (2021) and Sen (2021), calling for a more nuanced understanding of place-based environmental governance.

CONTACT Sitti Mujahida Baharuddin Mujahida_41@yahoo.com

This work is licensed under Creative Commons Attribution-ShareAlike 4.0 International License (CC BY-SA 4.0)

This study responds to that call by examining how coastal dwellers in Southeast Sulawesi navigate overlapping regimes of authority, construct adaptive knowledge through tidal rhythms, and contest the legitimacy of top-down conservation. By exploring these dynamics, this research contributes to theoretical conversations on epistemic pluralism and governance hybridity, while offering empirical insights into how inclusive coastal governance might be enacted from below.

LITERATURE REVIEW

Mangrove ecosystems have long been recognized for their ecological importance, serving as natural buffers against coastal erosion, habitats for marine biodiversity, and carbon sinks vital to climate mitigation. Indonesia, which holds approximately 20 percent of the world's mangrove forests, has become a focal point of international and national mangrove rehabilitation efforts. These programs often operate under global frameworks such as the United Nations Sustainable Development Goals and REDD+, promoting large-scale reforestation, mapping, and monitoring of degraded mangrove zones (Nurhati I.S & Murdiyarso D, 2023; Sasmito et al., 2023). However, despite their ecological promise, these interventions are typically technocratic in nature, prioritizing standardized ecological metrics and satellite-based assessments over the lived experiences and contextual knowledge of local communities.

In response, a growing body of critical environmental scholarship has questioned the epistemological and political underpinnings of such interventions. Scholars have shown that externally driven conservation schemes tend to marginalize traditional ecological knowledge, ignore customary tenure, and reproduce historical inequalities in resource access (Mbatha, 2022; Molnár et al., 2023). This is particularly evident in Indonesia, where customary (*adat*) systems of land and sea tenure coexist with overlapping state claims, leading to complex and often contested governance arrangements. Local actors ranging from fisherfolk and farmers to religious elders and women's collectives frequently hold deep, place-based knowledge about mangrove ecologies, yet remain structurally excluded from formal decision-making processes (Martinez Fabiani, 2024; Rasquinha, 2024).

These critiques have led to an increasing scholarly emphasis on the need for more inclusive and locally responsive forms of governance. Community-based natural resource management (CBNRM) models have emerged as alternatives that seek to center local participation, cultural values, and experiential knowledge in environmental decision-making. Yet, empirical studies reveal that even community-based models are not immune to elite capture, bureaucratic co-optation, or knowledge hierarchies that favor scientific expertise over local ontologies (Amamnsunu, 2025; Erfurth, 2024).

To conceptualize these dynamics, this study draws on the framework of epistemic pluralism. Epistemic pluralism holds that no single knowledge system holds a monopoly on understanding ecological realities. Instead, different systems, scientific, local, spiritual offer unique and often complementary insights (Syafriani & Yuliani, 2025) . This framework underscores the legitimacy of tidal knowledge, seasonal calendars, ritual practices, and oral histories as valid epistemologies through which local communities interpret environmental change. In Southeast Sulawesi, such knowledge is deeply embedded in embodied routines, intergenerational transmission, and spiritual relationships with coastal entities, such as sea spirits or mangrove guardians, which are rarely legible to formal governance institutions.

Alongside epistemic pluralism, this study also adopts the lens of governance hybridity. Governance hybridity acknowledges that environmental governance in practice is rarely contained within singular institutional logics. Instead, it emerges from negotiated, overlapping arrangements involving state actors, customary leaders, non-governmental organizations, and community stakeholders (Ahmed et

al., 2024). These hybrid forms are often fluid, shaped by trust, historical alliances, patronage, and contestation. In the context of coastal Southeast Sulawesi, mangrove governance does not unfold through clear lines of jurisdiction but through everyday negotiations involving religious rituals, communal work practices, state permits, and donor-driven agendas.

Together, these two theoretical perspectives provide a foundation for exploring how coastal communities in Southeast Sulawesi engage with, resist, and reshape mangrove governance. By foregrounding local narratives, embodied ecological knowledge, and the complexities of hybrid authority, the study aims to contribute to a more situated understanding of adaptive governance in the context of socio-ecological transformation.

METHODOLOGY

This study employed a qualitative research design rooted in interpretive and participatory traditions to explore how coastal communities in Southeast Sulawesi navigate, contest, and reimagine mangrove governance (Indriani, 2025). Fieldwork was conducted over a span of four months between May and August 2024 in three mangrove-adjacent villages, Tanjung Kulisusu, Bungin Permai, and Wanci Barat, each representing distinct ecological profiles, governance histories, and degrees of community engagement in mangrove conservation. The selection of these sites was guided by purposive sampling aimed at capturing contextual variation in governance arrangements, ranging from formal co-management programs to informal, customary-led stewardship.

Data collection centered on in-depth, semi-structured interviews with 35 individuals, including traditional leaders, local fishers, women harvesters, village officials, NGO facilitators, and government forestry staff. Interviews were conducted in Bahasa Indonesia and, where necessary, in local dialects with the assistance of a community-based translator. Participants were selected using a combination of snowball and stratified purposeful sampling to ensure the inclusion of diverse social roles, gender perspectives, and experiential knowledge bases. Interviews explored themes such as perceptions of mangrove decline and restoration, local ecological practices, relationships with state and non-state actors, and the role of ritual and memory in environmental governance (Alam, 2025).

In addition to interviews, ethnographic observations were conducted during communal planting events, village meetings, and seasonal ritual ceremonies associated with mangrove zones. Fieldnotes were taken to capture the embodied and affective dimensions of place-making, including gestures, spatial routines, and symbolic practices not easily expressed through formal dialogue. Several key informants also shared hand-drawn maps, ancestral stories, and locally maintained records of planting and harvesting, which provided valuable insights into alternative knowledge systems and historical land claims.

All interviews were transcribed verbatim and translated into English for coding. Data were analyzed using grounded theory techniques, beginning with open coding to identify recurrent patterns and meanings, followed by axial coding to refine categories into thematic domains. The analysis was iterative and reflexive, incorporating constant comparison across sites and participant groups. NVivo 14 was used to assist in managing the data and developing emergent conceptual linkages. To enhance trustworthiness, member checking was conducted by returning preliminary findings to participants during follow-up visits. Triangulation across data sources and participant categories further strengthened the analytical rigor.

Ethical approval was obtained from the institutional review board at Universitas Halu Oleo, and informed consent was secured from all participants. Pseudonyms were used to protect identities, and care was taken to anonymize any references to contested land boundaries or politically sensitive information. The methodological approach was designed not only to produce robust qualitative

insights but also to honor the relational ethics of research in indigenous and customary-governed landscapes.

RESULT AND DISCUSSION

Embodied Memory and Ecological Knowledge in Mangrove Stewardship

In the fishing communities along Southeast Sulawesi's coastal fringe, mangrove stewardship is not merely a practice but an inheritance. Older fishers speak of their knowledge as having been absorbed through the soles of their feet wading through silted banks as children, watching their parents interpret moon cycles, tidal movements, and wind directions. These embodied memories, carried through repetitive engagement with the land and sea, have formed the basis of a local environmental logic that resists codification. Planting cycles are not tracked through calendars but through sensations: the smell of brackish air, the texture of the mud, and the sight of bird migrations. Fish spawning periods are recalled not by biological terms but through village metaphors tied to rice harvests or ancestral festivals. This situated knowing extends to the mangrove itself, where three species are associated with different spiritual guardians, and their health is seen as a reflection of community harmony. Rather than being a static body of knowledge, these ecological insights evolve dynamically through intergenerational transmission, prayer, and seasonal ritual. This deep ecological familiarity challenges the assumption that scientific data alone can govern coastal ecosystems effectively, illustrating the epistemic disjuncture between local lived knowledge and externally imposed conservation metrics.

Ritual Sovereignty and Spiritual Claims to Coastal Space

Governance in these coastal villages cannot be understood without engaging in their ritual geographies (Al Farishi et al., 2025). Mangrove zones are not seen as neutral ecological spaces but as spiritually stratified domains, some of which are designated as *hutan keramat* (sacred forest), where entry is prohibited without offerings. During interviews, elders recalled annual ceremonies performed to appease sea spirits believed to dwell within specific mangrove roots, often tied to stories of drowned ancestors or spiritual intermediaries. These ceremonial practices not only reaffirm communal bonds but also assert forms of jurisdiction outside the purview of the state. When conservation officials introduced no-take zones and mangrove rehabilitation schemes, some villagers perceived them as intrusions into cosmological territories. In a striking instance, the rejection of a reforestation project was justified not through ecological objection but on grounds that the proposed planting site was "not for human hands" but belonged to penguasa laut (lords of the sea). Such spiritual claims are not passive relics of animism but serve as potent tools of governance, acting both as resistance to extractive conservation and as assertions of ancestral authority. Far from irrational, these ritualized engagements represent a form of political spatiality that reconfigures ownership, access, and environmental responsibility.

Fractures in Co-Management: State Programs and Local Realities

The introduction of state-led conservation policies, particularly through programs like *Perhutanan Sosial* (Social Forestry), has generated a complex terrain of negotiation. While the formal narrative emphasizes partnership and participatory governance, community experiences reflect deeper fractures. Villagers expressed ambivalence toward the formalization of their stewardship roles, especially when management plans were drafted in Bahasa Indonesia without translation into local languages or dialects. Moreover, government-mandated coastal zoning maps often conflicted with lived spatial understandings and seasonal use patterns. For example, one crab-fishing community found itself reclassified as outside the "core" conservation zone, thereby limiting access to their traditional harvesting grounds. Such reconfigurations sparked not only confusion but quiet acts of defiance fishing during prohibited hours, planting mangrove seedlings outside the approved species list, and holding rituals without official clearance. NGO involvement introduced additional layers, with some villagers perceiving these actors as extractive intermediaries who collect data but fail to return benefits. Local leaders, burdened with administrative responsibilities, often felt caught between the

expectations of the state and the moral economies of their communities. Rather than a harmonious model of co-management, what emerges is a contested field of overlapping mandates, mistranslations, and silent disobedience where resilience takes the form of adaptation, evasion, and informal reclamation of agency.

Gendered Labor and the Invisible Work of Care

Although often absent in formal conservation programs, women play a central yet invisible role in the stewardship of mangrove ecosystems. Their contributions span a continuum of unpaid labor, ecological caregiving, and affective maintenance that underpins the functionality of coastal livelihoods. During field visits, women were rarely seen in decision-making meetings organized by forestry officials or NGOs. Yet, in the margins of these formal spaces in kitchen gardens, along tidal creeks, and during evening prayer gatherings, they emerged as vital ecological actors.

Women are primarily responsible for post-harvest processing, seedling cultivation, mangrove honey collection, and intertidal gleaning of mollusks and crabs. These activities though considered domestic extensions rather than "real" environmental work, demand detailed ecological knowledge. For instance, one fisherwoman described how she distinguishes edible shellfish by the shape of sediment trails they leave behind. Another explained how mangrove flowers signal the arrival of breeding crabs, prompting her to shift her harvesting zone to avoid disturbing reproductive cycles. This form of environmental literacy is shaped by bodily rhythms and caregiving ethics, rather than extractive logic.

Care work also extends to ritual obligations. Women prepare offerings, lead ancestral chants, and ensure that seasonal rituals coincide with ecological cycles. These ritual performances, often dismissed by outsiders as superstition, serve as temporal markers and collective memory sites that reinforce sustainable use boundaries. When a government-funded NGO introduced a program for mangrove planting, it designated men as field laborers and excluded women from planning meetings, despite their expertise in seedling care. Several women continued their own informal planting, using wild-collected propagules and choosing sites according to ancestral indicators, not satellite maps.

Moreover, the gendered dimensions of exclusion are amplified by bureaucratic literacy. Most conservation communication occurs through written notices, online portals, or Bahasa Indonesia reports. Older women, who often speak regional dialects, are systemically marginalized. Some reported feeling intimidated by administrative requirements, such as applying for group permits or maintaining financial records, which discouraged them from formal participation. Consequently, they operate in parallel, maintaining their own informal ecological routines.

Ignoring this labor not only reinforces gender inequality but undermines the resilience of mangrove governance itself. As feminist political ecologists argue, care practices are not peripheral but foundational to socio-ecological reproduction (Dengler & Lang, 2022; Silberzahn, 2024). Recognizing these contributions demands not simply including women in existing structures but reimagining governance to value embodied care, affective relations, and reciprocal ethics. Otherwise, formal conservation risks replicating the same colonial hierarchies it claims to dismantle, rendering invisible the very actors who make sustainability possible.

Negotiating the Bureaucratic Tides: Resistance and Hybrid Authority

Coastal villagers in Southeast Sulawesi find themselves in a constant state of negotiation between overlapping regimes of control. On one side lies the formal apparatus of state forestry, with its maps, regulations, and permits; on the other, a deeply ingrained system of local customary governance rooted in kinship, spiritual authority, and ecological stewardship. The act of navigating these competing demands produces what can be termed "hybrid authority" Sætre (2023) where actors draw on both state and customary legitimacy depending on the context.

A case in point emerged in one village where the government offered funding to formalize a *Kelompok Tani Hutan* (Forest Farmer Group). While younger men welcomed the opportunity for training and potential income, elders resisted the idea of reducing collective forest stewardship to

individual permits. Rather than refuse outright, they proposed a compromise: they would form a group but insist on keeping the mangrove zones under joint ritual management. This dual arrangement—legal on paper, spiritual in practice, illustrates how local actors selectively comply while maintaining core values.

Such tactical negotiations are not without tension. Some younger community members view the state's formalization schemes as pathways to legitimacy and economic opportunity, especially when tied to ecotourism or carbon credit projects. Older leaders, however, fear that commodification will erode ancestral obligations. "We do not plant mangroves to sell carbon," one elder remarked, "we plant them, so our grandchildren know where the spirits live."

Another village illustrates hybrid resistance differently. When a government-mandated buffer zone clashed with a sacred forest used for ritual fishing, the community staged a symbolic procession, carrying ancestral totems into the disputed area and invoking taboo prohibitions. This public display of ritual sovereignty was not aimed at confrontation but at educating outsiders about the layered meaning of the land. The officials, wary of provoking cultural backlash, quietly redrew the buffer line.

The ability to code-switch between bureaucratic language and ritual symbolism is a key strategy. Local leaders know how to fill in forms, attend workshops, and quote sustainable development goals when needed. But in private, they return to oral histories, mythic geography, and ancestral responsibility. This hybrid literacy enables them to claim legitimacy in multiple registers.

What emerges is not passive compliance nor total resistance, but a repertoire of strategies that reflect the constraints and creativity of everyday governance. These acts of selective engagement sometimes collaborative, sometimes subversive challenge simplistic dichotomies between tradition and modernity. They also reveal how "policy" is not simply implemented but translated, reinterpreted, and sometimes undone in the process of local enactment.

Reclaiming Sustainability on Local Terms

For many coastal communities, sustainability is not defined by metrics of carbon sequestration, biodiversity indices, or policy compliance. It is instead anchored in a lifeworld shaped by cycles of reciprocity, memory, and spiritual cohabitation. This worldview cannot be captured in management plans or quantified through environmental impact assessments, yet it governs behavior, allocates responsibility, and structures long-term resilience.

In one coastal hamlet, villagers described the mangrove as a "library" not in the metaphorical sense of biodiversity storage, but as a living archive of ancestral wisdom. Each tree, they claimed, holds stories of births, storms, marriages, and migrations. Decisions about harvesting, planting, or restricting access are made not by referencing global frameworks like REDD+ or SDG indicators, but by consulting elders, interpreting omens, or holding night-long vigils. This form of sustainability is slow, relational, and deeply place-based.

When outsiders bring in their own frameworks, these are sometimes accepted but filtered through local values. A carbon offset project was welcomed only after elders ensured that the money would fund school supplies and ritual festivals. A reforestation effort gained traction only after it was renamed in honor of a revered ancestor. This act of indigenizing external initiatives what scholars call "vernacularization" Sharma & Borgohain (2024), is not mere translation but a profound act of epistemic self-determination.

Community members often express concern that environmental programs measure success by what is visible to outsiders: satellite maps, drone images, or standardized reports. Yet the real indicators of success, community cohesion, spiritual harmony, the return of certain bird species remain outside the frame. By reclaiming the narrative of sustainability, these communities resist being passive recipients of development. They assert their right not only to manage land but to define what counts as sustainable in the first place.

The challenge for scholars, practitioners, and policymakers is to recognize and support these localized ontologies. This means not just extracting knowledge for policy recommendations but engaging in co-production, humility, and long-term accompaniment. Sustainability, when rooted in

local terms, becomes not a deliverable but a relationship, one that honors both the land and the stories that keep it alive.

CONCLUSION

This study has illuminated how coastal communities in Southeast Sulawesi engage in mangrove governance not merely as environmental subjects but as cultural stewards, spiritual actors, and political agents. Through an ethnographic lens, we have seen that what is often labeled as informal, local, or traditional is in fact a sophisticated form of ecological governance rooted in embodied knowledge, ritual authority, and intergenerational responsibility. Rather than aligning neatly with state-driven conservation models or international sustainability frameworks, these communities articulate their own relational ethics of land and sea management.

Women, often overlooked in policy discourse, emerged as vital ecological custodians whose labor material, affective, and spiritual sustains both ecosystems and cultural continuity. Similarly, the use of ritual sovereignty, sacred space, and ancestral taboos reflects not resistance for its own sake but a meaningful assertion of legitimacy and justice. In navigating bureaucratic incursions, community members display strategic hybridity, drawing on multiple forms of authority to both engage with and reshape external interventions.

Ultimately, the findings challenge dominant paradigms of conservation that treat local communities as implementation targets rather than epistemic partners. Decolonizing mangrove governance requires more than participatory checklists or benefit-sharing schemes. It demands deep recognition of alternative worldviews, a redistribution of narrative power, and the willingness to co-construct what sustainability means on local terms. As global climate strategies increasingly turn into coastal ecosystems for mitigation, there is urgent need to foreground those who have long protected them, not only as beneficiaries, but as theorists, designers, and rightful authors of their own futures.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Data Availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

REFERENCES

Ahmed, S., Ghaffar, A., Zaheer Zaidi, S. S., Islam, T., Khan, M. M., Islam, F., Kincl, T., & Sheikh, A. A. (2024). Influencer-driven loyalty: Understanding the mediating role of customer brand engagement in the relationship between social media influencers and brand loyalty. *Journal of Global Scholars of Marketing Science*, *34*(2), 207–230. https://doi.org/10.1080/21639159.2024.2308285

Al Farishi, B., Faranabila, S., Prima, G., Rahadian, Z. S., Natalia, H. C., Santoso, N. A., & Antosia, R. M. (2025). Geodiversity and Geoheritage Potential of Basalt Caves in Girimulyo Village, East Lampung, Indonesia: A Mixed-Method Assessment Approach. *Global Review of Tourism and Social Sciences*, *1*(2), 41–58. https://doi.org/10.53893/grtss.v1i2.351

Alam, R. (2025). Building adaptive workforces: HRM and digital competency in tourism innovation. *Global Review of Tourism and Social Sciences*, *1*(2), 119–128. https://doi.org/10.53893/grtss.v1i2.357

Amamnsunu, J. E. (2025). *Marginality and Internal Coloniality: A Decolonial Analysis of Social Marginalisation in Old Fadama and the Presbyterian Senior High School, La (Presec-La) in Accra, Ghana* [Phd, The Open University]. https://oro.open.ac.uk/105132/

Dengler, C., & Lang, M. (2022). Commoning Care: Feminist Degrowth Visions for a Socio-Ecological Transformation. *Feminist Economics*. https://www.tandfonline.com/doi/abs/10.1080/13545701.2021.1942511

Erfurth, S. (2024). *Governing common pool resources in fragile political systems: Modelling behaviour, institutions, and social-ecological dynamics* [Http://purl.org/dc/dcmitype/Text, University of Oxford]. https://ora.ox.ac.uk/objects/uuid:237a0601-f9a6-474f-b46a-bcde038031ab

Großmann, K. (2021). *Human–Environment Relations and Politics in Indonesia: Conflicting Ecologies*. Routledge.

Martinez Fabiani, M. (2024). *Beyond Boundaries: Women and the Sundarbans Mangrove Forest. A study of the non-migration livelihood pathways of women in Coastal Bangladesh* [Master Thesis]. https://studenttheses.uu.nl/handle/20.500.12932/46267

Mbatha, P. (2022). Unravelling the perpetuated marginalization of customary livelihoods on the coast by plural and multi-level conservation governance systems. *Marine Policy*, *143*, 105143. https://doi.org/10.1016/j.marpol.2022.105143

McEwan, C. (2025). The periphery as a critical project: Towards an architectural pedagogy for the Anthropocene. *Archnet-IJAR: International Journal of Architectural Research*. https://doi.org/10.1108/ARCH-09-2024-0376

Molnár, Z., Fernández-Llamazares, Á., Schunko, C., Teixidor-Toneu, I., Jarić, I., Díaz-Reviriego, I., Ivascu, C., Babai, D., Sáfián, L., Karlsen, P., Dai, H., & Hill, R. (2023). Social justice for traditional knowledge holders will help conserve Europe's nature. *Biological Conservation*, *285*, 110190. https://doi.org/10.1016/j.biocon.2023.110190

Nurhati I.S & Murdiyarso D. (2023). *National Strategy for Mangrove Ecosystem Management: A reference for the conservation and rehabilitation of coastal areas to achieve Sustainable Development Goals and Low Carbon Development*. CIFOR.

Raippalinna, L.-M. (2022). *Banal Sustainability*. https://doi.org/10.16995/ee.4804

Rasquinha, D. N. (2024). Manning the mangroves: Gender, regional identities, and social history shape mangrove forest dependence and governance. *Ecology and Society*, *29*(1). https://doi.org/10.5751/ES-14809-290117

Sætre, H. S. (2023). How Hybrid Organizations Respond to Institutional Complexity: The Case of Norway. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, *34*(5), 990–1001. https://doi.org/10.1007/s11266-022-00514-2

Sasmito, S. D., Basyuni, M., Kridalaksana, A., Saragi-Sasmito, M. F., Lovelock, C. E., & Murdiyarso, D. (2023). Challenges and opportunities for achieving Sustainable Development Goals through restoration of Indonesia's mangroves. *Nature Ecology & Evolution*, *7*(1), 62–70. https://doi.org/10.1038/s41559-022-01926-5

Sen, A. (2021). *A Political Ecology of Forest Conservation in India: Communities, Wildlife and the State*. Routledge. https://doi.org/10.4324/9781003007852

Sharma, C. K., & Borgohain, B. (2024). Indigenization and vernacularization of social science in India: Revisiting the debate. *Postcolonial Studies*. https://www.tandfonline.com/doi/abs/10.1080/13688790.2023.2196147

Silberzahn, L. (2024). Care, Ecology, and the Crisis of Eco-social Reproduction: Politicizing More-than-Human Care. *Hypatia*, *39*(4), 711–731. https://doi.org/10.1017/hyp.2024.16

Syafriani, V., & Yuliani, T. (2025). Bridging theories and practice: Organizational management in an Indonesian school context. *Global Review of Tourism and Social Sciences*, *1*(2), 99–118. https://doi.org/10.53893/grtss.v1i2.338