

Sustainable Environmental Policy: Harmonization between National Law and Local Wisdom in Makassar City

Andi Diza Khaerunnisa¹, Fitriani Syamsu Alam², Fitrah Khaerani Burh²

¹Hasanuddin University, Indonesia

²Muslim University of Indonesia, Indonesia

ARTICLE INFO

Received: 25 May 2025
Revised: 11 July 2025
Accepted: 15 September 2025
Available online: 25 September 2025

Keywords:

Local Wisdom
National Law
Adaptive Management
Legal Pluralism
Community-Based Practices

Corresponding Author:

Andi Diza Khaerunnisa

Email:

diznis94@gmail.com

Copyright © 2025, Adaptive Governance Research, Under the license [CC BY- SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/)



ABSTRACT

Purpose: The study examines the correlation between national environmental policy and local common sense with respect to sustainable environmental management in the city of Makassar, Indonesia. It emphasizes the intersections between official law, customary knowledge systems, and natural understandings at the local level.

Subjects and Methods: The research employs a qualitative approach, drawing on interviews, on-site observations, and document analyses to capture both regulatory perspectives and community-based practices.

Results: The findings indicate that although national regulation provides the structural framework and legal authority required to address environmental management, its interpretation frequently conflicts with the socio-cultural practices of local populations. These tensions stem from the rigid prescriptions of formal regulations and institutional blind spots that fail to recognize the legitimacy of indigenous environmental norms. Makassar's local wisdom expressed through community laws, collective rituals, and ecological taboos remains vital in shaping communal environmental action but is often marginalized and insufficiently incorporated into policymaking.

Conclusions: The study argues that sustainable environmental governance should move beyond compliance-based regulation toward culturally sensitive policy development and coordinated implementation across multiple institutional levels. Successful harmonization of national law and local wisdom requires adaptive governance, trans-sectoral consultation, and legal pluralism. By situating environmental policy within management studies, the research proposes a conceptual framework of co-managed governance that balances top-down controls with bottom-up knowledge, offering practical strategies for inclusive and sustainable outcomes.

INTRODUCTION

The sustainable environmental policy has emerged at the fore front of international discussion on development, governance and ecological justice. Against this background of governance in the face of increasingly severe climate change, deteriorating environmental conditions and the rapid decline in biodiversity, there can be no doubt of the necessity to develop frameworks of policy able to guarantee a sustainable use of natural resources (Evans & Thomas, 2023).

Fueled by the environmentally friendly notion, governments in different parts of the world are developing laws that not only halt environmental destruction, but enhance the sustainability of

the environment in the future. The constant issue though is bridging the gap between the national regulatory frameworks and the local sociocultural conditions, especially in the countries where the national traditions of indigenous knowledge and customary law are still strong like Indonesia (Omweri, 2024).

Indonesia, which stands out as an environmentally diverse country and socio-culturally popular one, can be regarded as an example of how environmental policy can combine with strongly felt local traditions and ecological knowledge of the community (Hutahayan & Fernandes, 2024). The Indonesian legal system has it in form of the incorporation of local wisdom in the management of the environment stipulated in law No. 32/2009 on the protection and management of the environment (Ministry of Environment and Forestry, 2009).

This law means that the governance of environment should incorporate the local knowledge systems as a necessary aspect of the sustainable development. However, concerns around practice, local knowledge tends to be assimilated in a very uneven and symbolic way into national policy and even surface level. A more specific case in point is the municipality of Makassar located in South Sulawesi which gives us a very valuable context of studying the intersection of national environmental policy with forms of localized knowledge systems (Setiawan et al., 2024; Gani et al., 2025). The city, as a fast-urbanizing coastal metropolis, is faced with numerous environmental issues, which involve coastal erosion, coastal pollution, shrinking mangroves ecosystem, and uncontrolled city sprawl (Sharma & Pathak, 2024).

At the same time, the locality also maintains quite healthy cultural customs, which include the independence of the *siri, na pacce*, a philosophy based on the concepts of honor, respecting one another and upholding the community that tends to influence the region in the issues of environmental management. Such values are incorporated in the existing practice concerning the forestry, coastal management and water conservation. Such bottom-up environmental stewardship has however been increasingly sidelined by rising bureaucratic and technocratic methods of environmental management (Mugnai, 2022).

There is multi-level structure of administration in place in Indonesia where general policy is developed on the federal level and regional authorities deal with its implementation (Maulida & Juwono, 2025). However, empirical research proves that the responsiveness or flexibility of environmental management has not been improved relatively evenly through decentralization. Instead, Local governments often go through the problem of finding ways of interpreting the national requirements, eventually leading to inefficiency in enforcement and a lack of fit with on-the-ground realities.

As shown in the case of Makassar, the existence of such malaises is compounded by the relative inability of domestic regulators to coordinate regulatory regimes with the customary institutions thus creating a governing vacuum whereby neither normative orders nor national laws are effective. The involvement in the local wisdom in the environmental policy means more than just a symbolic form of respect; it is a fundamental ingredient to achieving sustainability. According to empirical research, Indigenous and local people have adaptive and holistic knowledge systems, which are placed on the principle of intergenerational equity (Mohd et al., 2023).

These systems include customary regulations, cyclical calendars, group-based decision-making process, and prohibitions governing sustainable use of natural resources. By neglecting or superseding these systems when managing regulations nation-states risk disaffecting communities affected by these regulations and undermining compulsions to obey the regulations and raise opposition. Conversely, to the extent that it is locally based and strategically integrated with policy shields, local wisdom in a policy discourse can increase policy legitimacy, engender stewardship, create both culturally specific and context specific solutions.

Back to Makassar, local communities within its explorer city have previously portrayed strength in adapting to the environmental change by means of the indigenous knowledge systems. As an example, customary practices such as limiting specific fishing equipment and designation of sacred areas have been part of the customary marine tenure that have often led to conservation results that are higher than formal controls. These practices, however, are progressively marginalized by a top-down policy interventions, which do not involve locals in either planning

or implementation (Sanga et al., 2022). Moreover, the local wisdom has been considered as anecdotal or of lesser value than scientific knowledge and thus its institutional credibility and practice have been compromised.

Tarigan & Hafandi (2024) said that, the call among various groups to expand the more pluralistic and inclusive framework of environmental governance has been gathering pace in the last one decade, both globally and within Indonesia. There are growing beliefs among the researchers and practitioners on hybrid arrangements flanked by formal state control and traditional norms and hence developing co-management structures, bringing legal requirements within the confines of the local cultural circumstances. In the case of Makassar City, this type of hybrid governance is not only practical, but rather necessary due to the very limited opportunities of state-centered environmental interventions and the gradual loss of traditional ecological behavior in a context of rapid urban development and modernization (Rusnaedy et al., 2021).

This paper, thus, enters a wider body of knowledge on sustainable governance in the sense that it critically evaluates the mingling of national environmental law and local wisdom in Makassar. It does not refer to this interaction as a clean-cut execution process but a complex sociopolitical bargaining between participants, organizations, and knowledge systems. The study therefore adds a growing literature worldwide which underlines the significance of context-sensitive, culturally embedded and participatory environmental policy in Indonesia and beyond.

METHODOLOGY

The study described in the present research adopts an organizational form of a case study and Makassar is the key object of inquiry. Qualitative design: The qualitative design was considered adequate to answer the research questions in the study because it provides delicate and sophisticated analysis of such social phenomenon as the cultural, institutional, and regulatory aspect facing in the process of aligning national environmental policies with the local wisdom. The case-study approach that is aligned with the operationalization provided by Yin (2014) is an analytically robust approach to the contextually particular circumstances under which the environmental governance is being implemented and is then negotiated among various stakeholders in the heterogeneous socio-cultural environment in Makassar. This research was conducted at the capital of the province of South Sulawesi, the city of Makassar situated in Indonesia. The selection of Makassar as the main case study is based on the fact that it can demonstrate simultaneously two paradigmatic patterns rapid urban growth with a high level of environmental stress and the coexistence of traditional values and local wisdom expressed in the community life. Three intentionally chosen subdistricts namely T amalate, Mariso and Ujung Tanah were used as major field sites. These districts are situated in a nearby location with the coastline, traditional settlements and regions affected by environmental degradation and the interaction with the formal governance mechanism and the traditional practices was clear. Both primary and secondary data were used in the process of the present study. Three types of primary data, namely in-depth interviews, participant observation, and systematic field notes, were used and triangulated by detailed notes of the interactions and observations that the participants made. Secondary data forms were in the form of legal materials, regional policy documents, locally regulated law materials, academic reports, and NGO reports concerning environmental governance in Makassar. The integration at these sources was used to enhance the reliability as well as the validity of the findings in that the researcher was able to compare and check results of the various sources and standpoints that were deemed as being very different in approach.

Data Collection Techniques

The data collection process involved several qualitative methods:

In-Depth Interviews

In-depth, semi-structured interviews formed the core of primary data collection. A total of 22 key informants were interviewed, including: Local government officials (from the Environment and Forestry Office of Makassar), Customary leaders and elders, Community environmental activists, religious leaders with ecological influence, Local NGO representatives, Community members from affected or culturally significant areas.

Participant Observation

The researcher also engaged in direct participant observation during community rituals, environmental events, and informal community gatherings. Particular attention was paid to cultural expressions of environmental stewardship, such as coastal clean-up rituals, customary prohibitions, or symbolic practices tied to natural resource use. Observations were recorded in detailed field notes to capture both verbal and non-verbal insights relevant to the research themes.

Document Analysis

Relevant documents were collected and analyzed to contextualize the interview and field data. These included: National environmental policy texts (e.g., Law No. 32/2009), Local regulations regarding waste management, coastal protection, and urban development, Transcripts of customary rules or *customary law*, NGO publications and community declarations related to ecological rights and local wisdom.

Data Analysis Techniques

Data analysis followed a thematic analysis approach (Braun & Clarke, 2006), which allowed for the systematic identification and interpretation of key patterns within the qualitative data. The analytical process involved several steps: Familiarization with Data: All interview recordings were transcribed verbatim and reviewed alongside field notes and observation journals. Initial Coding: Codes were manually assigned to segments of data based on recurring concepts, such as “local ecological norms,” “policy conflict,” “institutional adaptation,” and “customary environmental regulation.” Theme Development: Codes were then grouped into broader themes that reflected the research focus, including “community-led conservation,” “barriers to policy harmonization,” and “legal recognition of local wisdom.” Interpretation: The themes were interpreted in relation to the research questions and theoretical grounding, with attention to contradictions, contextual meanings, and stakeholder perspectives.

Participant Selection and Sampling

This study employed purposive sampling to select participants who possessed direct knowledge or experience relevant to the topic. Key criteria included: Direct involvement in environmental governance (as policymakers or implementers), Holding a recognized role in customary or cultural leadership, Engagement in community-level environmental initiatives, Experience in navigating national and local environmental regulations.

RESULTS AND DISCUSSION

Under the conditions of the qualitative orientation of the study, the findings are outlined in a thematic form that helps to give an idea about those fields to see the harmonization of the national law with the local wisdom or the lack of such handful. Those spheres relate to conventional community-based environmental practices, the dynamics and limitations of the national policy execution into the local context, as well as the points of clashing and meeting between the two circles. All the themes are expanded using narrative explanations which include the institutional views whereby the administrative and cultural aspects of sustainable environment governance in the region are brought out. This is the empirical foundation of the discussion and its managerial implication outlined below.

Local Wisdom in Environmental Practices in Makassar

Makassar is one of the oldest coastal cities in Indonesia, which is characterized by a rich history of the maritime culture and a varied system of the local wisdom that controls the interaction with the environment and the natural resource management. It is this wisdom, which can be defined as local knowledge, which can be seen as the combination of both cultural and ecological knowledge and bestows as a basis of sustainable practices across generations. Combining the Bugis-Makassar customary norms with Islamic moral thought, it anthropologically captures moral prescriptions, prohibitions, shared rituals, non-formal regulatory norms, which define relations to landscapes, water, forests, and marine life. Incidental to such a cultural structuring

is a philosophical doctrine of *siri na pacce*. This is the moral doctrine that emphasizes self-respect (*Siria* concerns the approach towards others and the environment as well. Transgression like contamination of water supply or overutilization of sea resources is not seen as a legal breach or a practical error but rather flouting of societal honor and duty. Accordingly, there is a normative framework in place that defines environmental stewardship as part of ethical and social self, which creates an effective sense of responsibility at the individual as well as collective levels. In several fishing communities on the beaches of Ujung Tanah and Tamalate, traditional ecological practice cannot go without the local fishing abilities.



Figure 1. The Diagram Table of Local Wisdom Practices in Makassar

Older people and longtime fishers use seasonal calendars, wind conditions, lunar cycles to know the best seasons and places to fish hence avoiding over exploitation. Sometimes the oral tradition, e.g., enshrined in the term *pappaseng* (meaning transmitted exchanges between elders and younger generations), requires that mangrove be conserved, that immature fish be avoided during harvest, and that specified spawning sites be respected. In as much as these oral instructions are never codified by the formal law, they are very respected and even culturally binding and they are like authoritative informal rules. In the city of Makassar and the district surrounding Gowa there are several traditional spatial names, such as Tanah Adat and sacred areas as well as *To Lotang* (guardians of forests). Such areas are taken to be sacred or of religious importance and such areas are governed under strict rules which are enforced by customary authorities. As an example, the harvesting of tree specimens cannot occur without an assent in the form of ritual, as some days can do without fishing or forest deforestation due to ecological or religious reasons. A violation of such norms might trigger a process of collective punishment or social expulsion, both of which turn out to act as strong forms of social control against environmental degradation.

At the same time, local traditions and practices like the so-called *gotong royong* (mutual cooperation) are also critical in maintaining cleanliness and the stability of the environment. Any efforts made towards the preservation of the hygiene of the population such as regular cleaning of the drainage system and surroundings made on the coasts are organized not due to official governmental requests but through the common duty. Such practices are practical in nature but, at the same time, they include a symbolic component that makes the social fabric stronger and increases the responsibility toward a common environment. Such efforts are paired to Islamic teachings about *taharah* (cleanliness) and (stewardship) in some urban *kampongs*, allowing religious mindset to join the ecological environment. The Imams and Ustads who are the religious leaders in Makassar have further advocated environmental awareness by introducing ecological

messages in the sermons. The Islamic thinking on khalifah fil Ard (stewards of the Earth) and proscriptive prescription on (wastefulness) has been repeatedly mentioned in relation to modern issues like plastic waste, illegal logging and flooding in urban areas. The combination of the spiritual quest and environmental ethics promotes the ethical soundness of environment sustainable behavior among the community.

Much as local wisdom has been an outstanding element of Makassar group memory, the strains of modernization, economic spread, and inconsistency in the application of the law have led to a progressive decline in the same. Youths, especially the ones who have been in developed institutions privileging sciences paradigm versus local epistemologies are increasingly alienated when it comes to traditional knowledge. At the same time, some of the traditional authorities have been experiencing a drop in their abilities to practice the norms of environmental stewardship, mostly due to a more bureaucratized governance model and pursuing external financial gains, particularly in a long-coastal areas that are being used as prime tourist and real-estate-development sites. However as proven by empirical evidence, community and indigenous ecological knowledge may be found to be very agile and probable when taken into consideration and included in the mainstream planning.

Activities led by local NGOs and community-level groups, including especially the Karampuang Environmental Collective and Makassar Green Community Forum, auger well: they are involved in recording, preserving, and even in some instances remaining traditional practices, but simultaneously are using contemporary environmental activism. A case in point is the traditional marine conservation zones that have been recently codified in municipal proposals of eco-tourism zoning, participatory mapping exercises, which now lines up the traditional ecological zones alongside formal administrative boundaries. That local wisdom in Makassar is contentious and a living breathing body of knowledge, continuously influencing the way of acting on the environment and environmental governance. It becomes resilient because it has strong roots in the common identity, moral values, and social custom. The above findings indicate that to be a resource rather than romanticized anachronism, local wisdom can turn into an invaluable asset in the development of formulating sustainable environmental policies that are rooted in their core in the community and respectful of the environmental facts and the cultural identity of Makassar.

Implementation of National Environmental Policy at the Local Level

The case of translation of national environmental policy into local practice in the city of Makassar is an example of multi-dimensional negotiation of sets of legislation, administrative capacity, and social-cultural dispensation. Indonesia has enacted broad laws which are meant to achieve sustainability in the environment among which is the Law No. 32 of 2009 on Environmental Protection and Management. However, the extent at which these national instructions are allowed to mature into effective local practice is dependent on a concoction of institutional and situation-specific circumstances. Other notable variables in the case of Makassar are governance structures, budgetary limitation, inter-sectoral coordination as well as the unique socio-ecological setting of the city. The environmental agency which is known as the Dinas Lingkungan Hidup Kota Makassar or the Makassar City Environmental Agency is the main implementing agency at the national level. They include issuing environmental permits, undertaking environmental impact assessment (AMDAL), monitoring the management of wastes and implementing the standards of pollution management. In the empirical observations using the data collected a common picture of institutional deficiencies that are persistently faced by the agency may be observed; these are the constant shortages of personnel in the agencies, training of personnel in technical manners and limited agencies operating budgets.

They hamper the effective and even implementation of environmental laws especially in places where there is a likelihood of having a high population density in urban and peri-urban settlements that overlap with ecologically fragile regions. One of the major factors that hamper

the process of translation of local policy is that the nature of articulating national regulatory prescriptions produces something that is inherently top-down and tends to avoid making differentiation based on the particular context of that policy. Directives are distributed as standard which do not matter how the local environment and cultural traditions are. This results in the municipal officials developing a bias in their work aimed at following the procedures instead of problem-solving. To take one example, environmental monitoring operations are often restricted to official record-keeping, such as checklist inspections and license renewals, and staying proactive in terms of community interactions and ecological threat evaluation. Such a disposition towards what might be called the mode of paper-based compliance leads to the latter rather than the former.

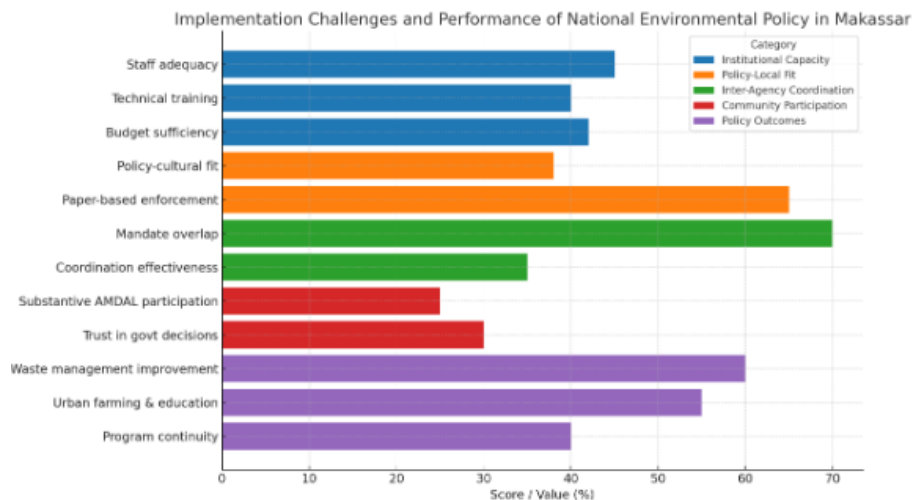


Figure 2. Implementation Challenges and Performance of National Environmental Policy in Makassar

An analysis on the environmental governance in Makassar shows a clear disjunction between what is required by national policies and what goes on at the local level practice. Although the national system of law regulates that the local wisdom must be referred to in the environmental management approaches, the realities at the ground level represent that this consideration is merely a nominal truth. The semi-structured field observations and interviews indicate that, by all means, a number of policy documents do mention the cultural heritage, whereas little operational structures are put forward to implement the traditional ecological knowledge into practice. Oral traditions that govern the use of the resource, communal regulations that control the coastal zone and customary taboos that control limited activities are not, in most instances, consulted when it comes to planning or enforcing regulations at formal levels. This discontinuity puts regulatory agencies at odds with local communities whose time-honored ways form the basis of important processes through which the environment is managed. Fragmentation of governance makes implementation complicated further. The roles of environmental responsibilities have been decentralized to various organizations namely the office of Public Works, Marine and Fisheries office, and Planning and Development Agency. These agencies are usually in silos with their overlapping mandates resulting in a minimal amount of coordination. This bureaucratic disjointedness has been characterized by an occurrence of conflicting land-use decisions, which have been manifested in instances of mangrove clearance, coastal reclamation and illegal dumping in low-income settlements- which have been characterized phenomena of unintended consequences of disintegrative decision-making.

Despite the focus of the national policies that emphasize on community participation as a key principle on sustaining governance, it is quite a challenge at the local level. Although in some instances community hearings and other consultations are conducted, especially when

undertaking the AMDALs, in many instances these consultations are procedural and not substantive. In most occasions, community voices are only incorporated to meet formalities but not to make substantial impacts at the end of the policymaking process. This leaves the community to feel untrusting and even some level of exclusion especially on the coastal and low-income population who are the ones mainly exposed to the grievances of the environmental degradation. Overall evaluation of the environmental policy implementation in Indonesia has revealed that although certain barriers in implementation have been outstanding, some localized programs have recorded encouraging success.

Participatory waste management, urban farming and environmental education in schools are pilot actions and examples of how the ambitions of the nation can be coupled with the commitment of the grass roots. As an example, community-based organizations in the districts of Tamalate and Panakkukang have also been partnering with local governments to promote their household-level waste sorting and plastic reduction projects, therefore proving that local initiatives targeting policies can add value to policy responses as long as they are well facilitated by the government and institutional stability. Political will and leadership are also another factor of decisiveness in implementation. Tabular fluctuations in city government often re-tune the prioritization of environmental schemes. Some mayors and subdistrict leaders have packaged urban greening and flood protection in city branding, and others have pushed environmental issues into the backburner in favor of commercial growth. These moves of city policy when not coordinated will lead to withdrawal of these programmed when the leaders change in traits and this will lead to lack of continuity of policy as well as lack of trust in what the municipality said are the policies.

Harmonization and Conflict between National Law and Local Wisdom

The relations between the national environmental law and the local wisdom in the city of Makassar are characterized by the bilaterality of integration and conflict. Though the role of (local wisdom) in maintaining the ecological balance is formally characterized in the Indonesian environmental laws, most notably in the Law No. 32 of 2009 on Environmental Protection and Management, there is in the local practice a culmination involving a combination of cooperation and conflict. Of these, the policy interpretation process, the community relations and land-use decision making processes are some of the areas in Makassar that this dynamic plays out, thus revealing the ways in which legal systems and cultural heritage systems interact (or conflict). Convergence of environmental objectives and community practices is most evident when there is no disaccord between national law and local wisdom. Most of the traditional norms practiced in Makassar are more ecological, which stresses on shared responsibility, environmental moderation and the long-term management of resources.

Ideas on *siri na pacce* which promote respect to one another as well as communal sense of responsibility, of course, favor environmental protection. The values are involved in community management of wastes, safeguarding the coastal areas, and management of access to common natural resources. An example of this is during the seasonal fishing restrictions or fishing taboos by the traditional fishing communities in Ujung Tanah and Tallo districts who take into consideration the knowledge of their ancestors based on their generation-long beliefs. These unwritten laws control excessive exploitation and comply with goals of the nation marine conservation policies. Furthermore, the authors have worked together with leaders and government officials to design environmental awareness programs in culturally relevant language. Littering and the destruction of mangroves have also been victims of campaign programs based on local proverbs, Islamic environmental ethics, and local rituals. The policy gains legitimacy in such cultural rendering and the residents will be expected to be voluntarily compliant which otherwise may harbor reservations to top-down dictations.

Coastal planning differs in many aspects including harmonization which is a very significant aspect of urban planning and environmental control. The current paper investigates the interaction between formal zoning systems and traditional spatial designations and proves that integrative methods are not rife and even. Indeed, in a number of coastal communities in Makassar, so called informal conservation zones that are traditionally understood as sacred, such as the so called and community forests are now in municipal planning documents with a formal role and input of the traditional leaders. These inclusions are indications of a rudimentary but limited acceptance by the local authorities of the requirement that sustainable environmental management ought to embrace indigenous knowledge systems as well as cultural priorities. Despite such adjustments, the study finds out that there are still conflicts with national environmental policies and local wisdom, particularly the top-down nature of policy formation. The national laws designed by central institutions tend to involve local stakeholders barely thus enforcing standard operations that could hardly translate to the actual socio-ecological conditions of a city such as Makassar. According to the study, the regulations often negate the traditional practices or do not make a consultative approach.

Traditional chiefs in coastal Makassar, to cite an example, have also complained that the problem of coastal reclamation licenses had been raised, but the people who have their lives and identity with these coastal areas did not have any say in it. Both undermine the local authority and hinder the process of ecosystems that have traditionally been preserved using the customary means. The conflicts of land- and resource-use also arise when the development goals override the cultural or ecological issues. These national-authorized projects of infrastructure development, like road development and port building, have occasionally elicited the destruction of mangrove trees or forced fishing communities to relocate. The trend is to view environmental impact assessment as a mere procedural requirement and the potential objections based on ecological motives and cultural rationale are overridden in the name of perceived economic benefit. This sort of marginalization spawns distrust and opposition hence increasing tension between the local populations and governmental forces.

In most cases the bureaucratic and technical discourse of the environmental law deviates with the oral, symbolic and experiential aspects of local knowledge. Scientific parameters, adherence measures and official enforcement are being prioritized in national laws and regulations and local culture relies on use of the narrative memory, moral principles and social consensus. The epistemological divide makes it more difficult to accommodate indigenous views, perhaps particularly in contexts where the expert consultants running the planning processes may not accord local knowledge the value that it deserves. Institutional problems also become worse in the governmental institutions. Even though the ministry of environment and forestry promotes the concept of local wisdom, other ministries such as the ministry of public work, housing and investment tend to focus more on the expansion of their duties like urban development or industrialization when neglecting the environmental protection. This staggered governance system prohibits congruency of the environmental regulation and preservation of cultures and policies that seem harmonious on paper would yield discordant results in reality.

However, there is a dynamic interplay of the national law and the local wisdom. The NGOs and progressive local governments, as well as community-based organizations are also trying out hybrid governance modes, including participatory zoning efforts, the collaborative mangrove rehabilitation efforts and the common monitoring initiatives that bring together community elders, youth clusters, and environmental officials. These practices are in their early stages though they show a possible negotiation ground between national policy objectives and local ecological knowledge. At the same time, legal and institutional tools are used by some local actors to claim their right and introduce the community-based approach to environmental management. Customary leaders and environmental activists in Makassar are becoming more and more insistent through advocacy and public campaigns to have official status in both urban planning

and environmental decision-making. In combination with a burgeoning body of discussion on the sustainability of cultural practices and environmental justice, this ground swell of activism is slowly beginning to cause policymakers to reexamine the strictness of the formal-informal governance separation.

Discussion

This empirical analysis explains how the mutual incompatibility between centralized policy tools and locally contextualized environmental practices remains intact throughout the Makassar City. Governance-wise, the findings keep the requirement to redesign, actualize, and negotiate environmental governance within and across administrative levels into focus. Policy frameworks that ignore such realities will have the chance of being institutionalized on the edge in areas with cultural constructs and environment awareness deep entrenched in communal customs as in Makassar. The assumption that policy coherence may only be achieved by means of legal formalism continues to be reductive; more than three decades of governance theory have now confirmed the conceptual superiority of polycentric, adaptable regimes of operation (Kellner et al., 2024).

Management implications are intense: sustainable environmental governance in places of cultural wealth will not solely depend on the enforcement of regulations attached to the orchestration of relations between the institutional players, social capital and knowledge systems. The oversights of local knowledge in national implementation of policies indicate a lack of adaptive management capacity and not a lack of a tradition (Månsson et al., 2023). The Indonesian experience reflects what has been found elsewhere, comparative research in Ghana the Philippines have shown similar failures in the alignment of the national and local when the central government pays scant attention to locally based environmental knowledge. Thus, the evidence of the Makassar does not only prove these tendencies but highlights the urgent necessity of the reconstruction of the models of governance on the principle of the subsidiarity when decision-making should be devolved to the lowest level which is capable of making decisions (Rahim & Abbas, 2024).

The underlying issue between organizations openly displayed in the scholarship of management has been the continued fragmentation of the state institutions (Knott & Payne, 2004). This sectoral division restricts the evolution of strong horizontal coordination relations among agencies assigned to land management, public works and environmental responsibility. This kind of siloed behavior aligns with the arguments of Berman et al. (2021) that argue that disassociated management systems of the public sector obstruct integrative solutions to environmental problems. In Makassar case, the issue of institutional fragmentation serving to reinforce the incoherence in its policy and contribute to unnecessary or conflicting interventions. The fact that there is no single point of institutional integration between the traditional systems of authority and official environmental agencies highlights a profound systems-level failure (more procedural than ideological). Although the legal structures of the country recognize the existence of Local wisdom, there are no actual structures of how this recognition should be applied and therefore the policy has the least effect other than being symbolic at best and even extractive at worst.

Such observations prompt a change in managerial mindsets, i.e., the transition to relational governance regime, rather than normative compliance models. Current literature has the same tenure as mentioned above: community-based resource management (CBRM) can best be implemented within the structures of governance which are participatory (Ng'ang'a et al., 2021). This should be however not instrumental but meaningful. In Makassar, the enactment of which is based on results of public consultations, there have been cases where they constitute a procedural formality rather than a transformative power in giving communities having their voices heard in the upstream decision-making. It is similar to other patterns in the lands of decentralized states with participation being scripted but not meaningful. Another managerial

decision is not merely to bring local actors into pre-existent governance systems but to reform these systems so as to acknowledge and relocate power away to such culturally competent community-based institutions.

Issue of knowledge integration is also very pertinent. Among the various blind-sides that exist in environmental management, perhaps, the most ignored one involves the conflict between the rationality of science and local experiential knowledge. Science is never value-free as Abdullah et al. (2022) observes, it has an institutional structuring, political utilization and social negotiation. The example of the Makassar case reflects such epistemic tension to the fullest: the documents of the policy are filled with environmental indicators, technical requirements, and the criteria of regulation, neglecting oral, ritual-based, and narrative-based environmental knowledge. Any management systems that do not allow the interplay of these knowledge systems merely repeat what Peddi et al. (2023) describes as institutional assimilation whereby there is only selected appropriation of local knowledge but without social context. This means that environmental managers should now act as epistemological mediators and mediate between knowledge regimes and never alienate the other.

In the context of resource management, the present paper is provocative and seeks to criticize current modes of cost-benefit thinking, which has been the basis of environmental planning in nations. This is evidence of the desire to maintain economic-driven infrastructure in Makassar dominating the economic rationalism prevailing in the short-term footing versus the ecological-based resilience of ecosystems in the long term. This comes as an indictment of neoliberal models of environmental governance (Sutrisno & Mahardhika, 2022) which are associated to commodify nature and neglect cultural entanglements to the landscape. This means that decision-making instruments need to be broadened to the involvement of multi-dimensional value systems, such as cultural, historical and relational valuation of land and water.

The current research highlights the central role of institutional learning and reflexivity in effective environmental governance in cultures, with reference to Makassar, especially. Such a poor environment management cannot be resolved through prescriptive processes, but instead requires institutions that can use lessons of previous interventions and can redesign strategies in an adaptive way under an inherent ambiguity. Sevä & Jagers (2013) said that, the high degree of bureaucracy that is evident in the application process of the environmental policies is therefore an extremely serious shortcoming of learning. This observation agrees with the arguments presented by Kuzmanov (2025) that systems based on rules often suppress the adaptive capacity because of discouraging experimentation. As a result, institutional cultures of iteration have to be developed at the managerial level of environmental policy so that local feedback loops will be systematically institutionalized and used to adjust regulatory designs over time.

In addition, it is demonstrated that the paper problematizes any purely technocratic handling of sustainability by reinforcing the theme of culture and power as the critical variables. Makassar is an illustration of how environmental sustainability is not an ecological or even economical goal; it is a social-political process of linkage among competing interests and values, and the institutional history. Developing this point, maintain that the issue of culture should be at the heart of sustainability and not in the margins. This means that to management scholars and practitioners sustainability strategies have to go beyond technocratic optimization and towards confronting directly the politics that are embedded in who makes decisions, the usefulness (valued with knowledge) of certain actors and who stands to gain. This level of involvement is critical towards the sustainability of the local authority and the long run ecological sustainability of the environment being studied.

CONCLUSION

This paper has shown that the success of a sustainable environmental policy in Makassar depends on the ability of the government to harmonize national regulation systems with the local wisdom

through which practices in the community are rooted. Despite having a sound normative basis provided by national legislation, there are often problems related to implementation due to little harmonization with cultural values, indigenous knowledge systems and deeply rooted community-based practices that relate to the environment. Such a misalignment triggers the social resistance approach and the failure of policies due to an institutional approach to management. In the context of public management, the implications of the findings are that there will be a shift towards a less rigid top-down model of governance to a more participative and collaborative governance. It refers to organic, adaptive historically grounded environmental ethics that take the form of local wisdom in Makassar. Omitting such values in the official policy-making process will limit the possibility of creating more sustainable and context sensitive environment governing systems. Harmonization should therefore be perceived as a cross-level managerial process that requires institutional discourse, cultural sensibility and policy elasticity. It does not just mean alignment of the norms of a legal nature but involves incorporation of shared meanings, values, and social practices. This will rely on the ability to come up with governance systems that are legally acceptable, socio-culturally contextual, adaptive, and institutionally integrative in the future of sustainable environmental management in the city of Makassar.

REFERENCES

- Abdullah, M. K., Anuar, A. R., & Hara, A. E. (2022). Contesting authority discourses in defining relations between Indonesia and Malaysia: A case study in the Kalimantan border areas. *Journal of International Studies*, 18, 191-217. <https://doi.org/10.32890/jis2022.18.7>
- Berman, E. M., Bowman, J. S., West, J. P., & Van Wart, M. R. (2021). *Human resource management in public service: Paradoxes, processes, and problems*. Cq Press.
- Evans, J., & Thomas, C. (2023). *Environmental governance*. London: Routledge.
- Gani, P. J. A., Asmal, I., Amin, S., & Nadjmi, N. (2025). Transforming slums into sustainable tourism destinations on the coast of Makassar City, Indonesia. *Journal of the Geographical Institute "Jovan Cvijic", SASA*, (00), 14-14. <https://doi.org/10.2298/IJGI250111014G>
- Hutahayan, B., & Fernandes, A. A. R. (2024). Enhancing Sustainable Built Environments through Ecotourism Villages in Mount Bromo Tengger Semeru National Park, Indonesia. In *Rethinking Pathways to a Sustainable Built Environment* (pp. 361-378). Routledge.
- Kellner, E., Petrovics, D., & Huitema, D. (2024). Polycentric Climate Governance: The State, Local Action, Democratic Preferences, and Power—Emerging Insights and a Research Agenda. *Global Environmental Politics*, 24(3), 24-47. https://doi.org/10.1162/glep_a_00753
- Knott, J. H., & Payne, A. A. (2004). The impact of state governance structures on management and performance of public organizations: A study of higher education institutions. *Journal of policy analysis and management*, 23(1), 13-30. <https://doi.org/10.1002/pam.10176>
- Kuzmanov, I. (2025). Cognitive inertia and status quo bias: Understanding resistance to change from mind to society. *Journal of Novel Research and Innovative Development*, 3(4), a393-a411.
- Månsson, J., Eriksson, L., Hodgson, I., Elmberg, J., Bunnefeld, N., Hessel, R., ... & Redpath, S. M. (2023). Understanding and overcoming obstacles in adaptive management. *Trends in ecology & evolution*, 38(1), 55-71.
- Maulida, S., & Juwono, V. (2025). Integrating Population Education within Multilevel Governance in Indonesia: A Systematic Literature Review. *Administratio*, 16(1), 85-100. <https://doi.org/10.23960/administratio.v16i1.484>

- Mohd Salim, J., Anuar, S. N., Omar, K., Tengku Mohamad, T. R., & Sanusi, N. A. (2023). The impacts of traditional ecological knowledge towards indigenous peoples: A systematic literature review. *Sustainability*, 15(1), 824. <https://doi.org/10.3390/su15010824>
- Mugnai, I. (2022). *The ECB and the technocratic politics of ideas: embedding a resilient EMU from the top-down?* (Doctoral dissertation, University of Warwick).
- Ng'ang'a, I. N., Robinson, L. W., Eba, B., Flintan, F. E., Ontiri, E. M., Sghaier, M., ... & Moiko, S. S. (2021). Comparative Analysis of CBRM Cases in Kenya, Ethiopia and Tunisia.
- Omweri, F. S. (2024). A systematic literature review of e-government implementation in developing countries: examining urban-rural disparities, institutional capacity, and socio-cultural factors in the context of local governance and progress towards SDG 16.6. *International Journal of Research and Innovation in Social Science*, 8(8), 1173-1199. <https://dx.doi.org/10.47772/IJRISS.2024.808088>
- Peddi, B., Ludwig, D., & Dessein, J. (2023). Relating inclusive innovations to Indigenous and local knowledge: a conceptual framework. *Agriculture and Human Values*, 40(1), 395-408. <https://doi.org/10.1007/s10460-022-10344-z>
- Rahim, M., & Abbas, I. (2024). The Development Characteristics of Makassar City in Past and Present. *International Review for Spatial Planning and Sustainable Development*, 12(2), 238-265. https://doi.org/10.14246/irspsd.12.2_238
- Rusnaedy, Z., Haris, A., Congge, U., & Prianto, A. L. (2021). Adaptive climate change governance in Makassar, Indonesia. *Journal of Governance*, 6(2), 244-258. <http://dx.doi.org/10.31506/jog.v6i2.12384>
- Sanga, N., Gonzalez Benson, O., & Josyula, L. (2022). Top-down processes derail bottom-up objectives: a study in community engagement and 'Slum-Free City Planning'. *Community Development Journal*, 57(4), 615-634. <https://doi.org/10.1093/cdj/bsab037>
- Setiawan, I., Hendra, A., Taebenu, M. M., Johannes, A. W., & Sidiq, F. F. (2024). Integrating Local Culture in Smart City: 'Sombere' Based Governance Collaboration in Makassar City, Indonesia. *Jurnal Bina Praja*, 16(3), 541-556. <https://doi.org/10.21787/jbp.16.2024.541-556>
- Sevä, M., & Jagers, S. C. (2013). Inspecting environmental management from within: The role of street-level bureaucrats in environmental policy implementation. *Journal of environmental management*, 128, 1060-1070. <https://doi.org/10.1016/j.jenvman.2013.06.038>
- Sharma, S. K., & Pathak, S. L. (2024). *Urbanization, Population and Environment*. Springer.
- Sutrisno, N., & Mahardhika, N. G. (2022). Liberalisation of Banking Services Under the Framework of Asean Economic Community: an Indonesian Perspective. *Hang Tuah Law Journal*, 33-45.
- Tarigan, M. I., & Hafandi, R. (2024). Law diversities for climate change: legal pluralism and climate governance in Indonesia. *Otoritas: Jurnal Ilmu Pemerintahan*, 14(3), 589-605.