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Local Wisdom as a Pillar of Sustainable Environmental Policy: An Environmental Governance Perspective

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ABSTRACT

***Purpose**: This paper examines local wisdom as a fundamental component in the thinking and implementation of sustainable environmental policy under the broader process of environmental governance. It critiques the dominance of purely technological and top-down approaches, and instead advances hybrid, participatory, and culture-sensitive models.*

***Subjects and Methods:** The study adopts a quantitative correlational research design to examine the statistical relationship between community observation of traditional ecological practices and outlooks on environmental management in selected destinations in Indonesia. A total of 375 respondents were engaged across culturally diverse regions of Bali, South Sulawesi, and West Nusa Tenggara. Using structured Likert-scale questionnaires, the survey measured three central dimensions of local wisdom: ritual practices, intergenerational knowledge transfer, and customary penalties, along with their relationship to governance outcomes.*

***Results:** The results indicate that there is a close and positive correlation between the strength of local wisdom and the effectiveness of environmental governance. Multiple regression analysis further demonstrates that these three elements of local wisdom maintain a statistically significant relationship with governance performance, explaining 53.6% of the observed variance. These findings confirm that conventional environmental behaviors, embedded in culture and tradition, are dynamic and community-based modes of governance that enhance compliance, legitimacy, and conservation effectiveness.*

***Conclusions:** The study contributes to management and public policy literature by providing empirical evidence on the integration of local knowledge systems into formal governance frameworks. By reframing communities as co-governors rather than passive beneficiaries, the paper highlights the strategic importance of local wisdom as a sustainability resource that strengthens policy innovation, institutional performance, and long-term ecological resilience.*

INTRODUCTION

Making the environment sustainable is one of the most topical problems of the twenty-first century. In spite of the demand of ambitious climate-action and resource-conservation plans under international agreements and countries-level frameworks, a number of the initiatives do not create lasting, community-scale change (Farnault & Sarr, 2024). Against this policy deficit, the importance of cultural and locally tailored practices, especially indigenous and traditional-based ones, have been gaining widespread attention within the research and practitioner communities in the context of foundations of sustainable environmental governance.

Local wisdom, as a specific aspect to accumulated, cross-generational knowledge, practice, and beliefs that has become part of the cultural identity of the community, offers itself as a unique, untapped avenue to the development of an environmentally responsible approach to behavior. In the Indonesian context, local wisdom cannot be separated with the ecological and cultural diversity in the archipelago. Traditional communities, cross island, ethnic groupings have in the past been organized under environmental-management systems such as the Sasi in Maluku, the Subak in Bali, the Awig-Awig in Lombok, which govern the use of the natural-resources, perform sustainability regulations, and promote environmental ethics held in common among members of the group (Barus, 2021).

As a rule, these systems are regulated based on traditional law, which focuses on harmony with nature, reciprocity, and the long-range management. However, regardless of the proven sustainability of the two above mentioned practices, mainstream environmental policy in Indonesia has on many occasions sidelined or ignored their roles in preference of technocratic, top-down approaches which are less able to capture the nature of socio-ecological contexts found in immediate environments (Scott et al., 2022).

Recent studies have shown that a large percentage of environmental policies are not having sustainable results and this observation can be partly blamed on relegation of community expertise and involvement. The scholars argue that policies that are not contextualized at the local levels face increased chances of opposition, suffer low compliance and are organizational inefficient. However, on the contrary, governance mechanisms become flexible and resilient when communities are involved based on their knowledge systems, and when local norms and practices are incorporated into the formal policy (Alberio & Soubirou, 2022).

Local wisdom thus exists not as a cultural artifact but rather as an active form of environmental management that helps to achieve ecological literacy and lead to the development of pro-environmental behavior, as well as, participatory decision making (Wardhani et al., 2024). The latest research efforts also show that environmental policies with the integration of local wisdom bear more effective results especially in forest management, marine conservation and sustainable agriculture (Aldyan et al., 2024). As another example, the Dayak people of Kalimantan use the traditional method of rotation to guarantee a recovery of the forest, and local customs often contain a ban of the exploitation of sacred ecosystems beyond reasonable limits.

Such examples point to the fact that the traditional practices are not counter to contemporary science but form supplementary systems towards the ecological objectives. Nevertheless, these synergies are often underestimated due to the policies of institutional pollution of vernacular knowledge in comparison with formalized and formalized sciences. In the literature of environmental governance, the use of local wisdom requires that the rejection of command and control is replaced by a decentralized, polycentric system that recognizes the rights of the communities, their cultural integrity, and the informal means of regulation (Zhang, 2024).

The Decentralization law adopted by Indonesia to maximize local control has hap-hazard generated the actual community development in environmental management paradigm. This gap has revealed the need to have empirical studies that not only propagates the theoretical estimates within local knowledge but also quantifies its real-life impact on policy performance using tangible measures (Gopal et al., 2024). Such an inclusive participatory governance is emphasized in the discourse on sustainable development, presented by the United Nations Sustainable Development Goals (SDGs) as Goal 13 (climate action) and Goal 15 (life on land).

International agreements clearly support the role of the indigenous knowledge and local communities in the environmental conservation like Convention on Biological Diversity (CBD) and Paris Agreement (Padilla, 2023). However, international norms have not translated into local policy practices evenly and still require local evidence in order to integrate the system. The given piece of work thus deals empirically with local wisdom as a quantifiable element of sustaining a long-term environmental policy, followed by specific consideration of multiple ecological cultures in Indonesia. In analyzing a relationship between the level of following by communities the traditional ecological knowledge and environmental performance and the efficacy of the policy,

the study aims to make a statistically proved and grounded addition to the piece on environmental governance (Newig & Fritsch, 2009; Yu, 2015; Hezri & Dovers, 2006).

It is hoped that the findings would serve national policy formulation and international discourses on how the traditional knowledge system can become the basis of sustainable development. The economic uncertainty and fragmentation in ecological terms of the present epoch make local wisdom a realistic, culturally contextualized and historically tried path to sustainability. Introducing such wisdom into the environmental governance is not only a strategy but also a moral imperative to embrace the custodianship of the indigenous and local communities about the natural environments within which they live (Padilla, 2023). As environmental issues are becoming more sophisticated, knowledge gained through local experience will probably become irreplaceable in coming up with comprehensive and long-term policies.

METHODOLOGY

Research Design

The research design that will be employed in this investigation is a quantitative correlational research design in order to identify the role of local wisdom in shaping out sustainable environmental policy in a governance dimension of sustainable development. The use of such a framework would allow measuring and analyzing the relationship between the degree of community compliance to the local wisdom and the success of Environmental governance in a systematic fashion. The proposed study aims to uncover patterns, correlations and predictive elements through employing statistical methodologies in support of integration of traditional ecological knowledge into official policies. The construction of the research design is specifically designed to ensure that it is objective, reproducible and that the results can be generalized to other, similar communities across the region of Indonesia.

Population and Sample

This piece of investigation research focuses on local communities known to have maintained the indigenous environmental activities in a number of areas in Indonesia: Bali, South Sulawesi, and the West Nusa Tenggara. They were purposively selected given the existent cultural frameworks of environmental stewardship in these areas, Subak, Amateang and Awig-Awig. In each region, stratified random sampling was employed so that demographic variation was achieved along the domains of age, gender, occupation (indicating the traditional leaders, farmers, and fishermen), and educational achievement. The final sample that consisted of 375 respondents was layered democratically such that it saved the balance of demographic and cultural diversity and not to limit statistical power of the correlation and regression analysis.

Data Collection Techniques

Indeed, primary data were collected by the application of a structured questionnaire aimed at the identification of measurable measures of local wisdom compliance and the perceptions of the environmental governance performance in the area. The scale used in the instrument was a 5-point Likert (responses were anchored in the following wordings: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree and Strongly Agree). The survey had three general parts (1) demography, (2) local wizardry (communal practices, customary regulations, intergenerational knowledge transfer), and (3) feelings of environmental governing success degree (flaw implementation, involvement, transparency, and sustainability results). In order to test the reliability and translucency of the instrument, a pilot survey was conducted amongst a small population of respondents recording a Cronbach alpha of 0.86, thus confirming a high internal consistency. Collected data were taken by the enumerators themselves (both personally and on the internet) on the basis of accessibility and network availability in the respective areas.

Operational Definitions and Variable Indicators

Local Wisdom can be described as a continued dependency through conventional wisdom, eco-behavior and environmental governance, conventional regulations that are rooted in a nation and are followed throughout the nation. Some of the features are active involvement in the traditional ceremonies, adherence to customs rules, reverence to sacred natural sites, and community

sanctions in case of ecological offence. Effectiveness of Environmental Governance on the other hand holds the views of the community as to how the community translates the environmental policies dispensation and enforcements with monitoring of the environmental policies. The key signs that indicate the degree to which the community is actually empowered can be determined by the levels at which it is represented in decision making processes, the extent at which the local institutions are responsive in entirety and the levels at which the traditional actors are incorporated in the policy discussions and achievement of the objectives related to natural resource sustainability as rated by the community itself.

Data Analysis Techniques

The quantitative answers that were specific to the questionnaire method of gathering information were analyzed to both use descriptive studies as well as inferential studies before statistical analysis was attempted. To combine demographic profiles and general patterns of response, descriptive statistics, in particular, mean, standard deviation, and frequency distribution, were used. Pearson correlation was used to conduct inferential analyses (and looked at the magnitude and the direction of the relationship between local wisdom and perceived environmental governance effectiveness), and multiple linear regression meant to establish the extent to which the local wisdom variable predicted the governance outcomes, and controlled demographic variables, including age, level of education, and region. Statistical analyses were carried out using SPSS version 25, at a level of significance set at $p < 0.05$.

Validity and Reliability

To ensure construct validity of the research tool, the instrument was presented to a committee of experts in matters affecting the environment policy, local culture and social-science research. Their comments served in the next adjustment of wording items and their consistency with the studied constructs. Validity of construct was then determined through exploratory factor analysis (EFA) and was found that items had loaded on dimensions as per their theoretical expectations. The internal consistency of every subscale was also calculated by using Cronbach alpha and all scales had more than 0.70 in their values showing acceptable reliability.

RESULTS AND DISCUSSION

The study has a normative objective of following an empirical evaluation of how the use of local wisdom embodied in rituals, inter-generational transfer of knowledge and conventional form of sanctioning tend to sway the perceived efficiency of the process of managing the environment in Indonesia. With the well-organized quantitative approach, the study will attempt to move beyond normative assumptions and to provide quantifiable data that demonstrate how traditional ecological practices can be used as a governance instrument in modern politics. The next segment will present findings that happened as a result of descriptive and inferential processes i.e. Pearson correlation and multiple regression assessment to permit the attentiveness of the nexus between local wisdom and the results of environmental governance. These data provide the empirical grounds behind the discussion and policy implications listed next.

Table 1. Pearson Correlation between Local Wisdom and Environmental Governance Effectiveness

Variables	Mean	SD	1	2
1. Local Wisdom	4.12	0.52	1.000	
2. Environmental Governance Effectiveness	4.05	0.49	0.687 ($p < 0.001$)	1.000

A positive association between local wisdom and perceived effectiveness of environmental governance is very strong based on the presented correlation analysis ($r = 0.687$, $p < 0.001$). Such evidence shows an increase in the proximate compliance with local knowledge is related to an increase in perceptions of the effective governance at the community level. The level of association coefficient indicates that the traditional ecological knowledge has a significant contribution in the process of implementation together with the acceptance of the environmental policy to the masses.

Table 2. Model Summary of Multiple Regression Analysis

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	0.732	0.536	0.531	0.335

These results of multiple regression analysis (at the current point) confirm that the local wisdom has a strong impact on the understanding of the effectiveness of the environmental governance. The last model has an R value of 0.732 implying that there was strong positive linear relationship between the composite variable in the local wisdom to the outcomes of environmental governance. In addition, the coefficient of determination (R 2) was 0.536, which means that 53.6 % of the variation in the environmental governance effectiveness is explained by three predictors: observing ritual practices, transmission of knowledge through generations and enforcement of customary norms and sanctions. The goodness of fit of an adjusted R 2, which is slightly lesser, 0.531, supports the integrity and applicability of the model. The calculation of the standard error of the estimate presented 0.335, the measure indicating that predictions made with the help of the regression are fairly precise as the average deviation between the predicted and observed values was rather low.

Table 3. ANOVA of the Regression Model

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	28.920	3	9.640	85.901	0.000
Residual	25.000	371	0.067		
Total	53.920	374			

The detailed summary of the findings is shown in Table 1. According to the ANOVA table, the model used is what we call statistically significant since its F-value is commendable at 85.901, and the level of significance at $p < 0.001$. This shows that overall, the regression model is significant in its ability to predict the dependent variable. The three independent variables possess positive coefficients that are significant i.e. statistically significant. The strongest repercussions included adherence to ritual practices (beta = 0.278, $p < 0.001$), existence of customary norms and sanctions (beta = 0.267, $p < 0.001$) and intergenerational knowledge transmission (beta = 0.222, $p < 0.001$). Such findings show that societies in which traditional nature-related rituals are pursued, environmental values are ubiquitously transferred between generations and environmental damage is the subject of local punishment have a tendency to report richer perceptions of environmental policy being carried out effectively.

Table 4. Coefficients of the Regression Model

Predictor Variables	Unstandardized B	Std. Error	Beta	t	Sig.
(Constant)	1.132	0.142	—	7.972	0.000
Adherence to Ritual Practices	0.314	0.062	0.278	5.065	0.000
Knowledge Transmission	0.243	0.058	0.222	4.190	0.000
Customary Sanctions & Norms	0.288	0.064	0.267	4.500	0.000

The results of the regression coefficient as contained in table 4 clarifies the effect of the individual contribution of each of the components of local wisdom to the effectiveness of environmental governance. The three predictor variables adherence to ritual practices, knowledge transmission, and customary sanctions and norms have significant positive relationships with the dependent variable as the p-value of all the three is smaller than 0.001. Of these variables, the adherence to ritual practices shows the greatest effect of standardized beta coefficient (0.278) and unstandardized coefficient (B 0.314). According to the results of the regression, the regression coefficient shows that perceived level of governance effectiveness in the environment increases by 0.314 units with an increase of community adherence to traditional rituals as all other factors are kept constant. The second significant variable is that of customary sanctions and norms where this variable has a standardized beta value of 0.267 and its unstandardized B value of 0.288 would indicate that traditional sanctions and norms are also the central factors when it comes to control of the actions of the environment and also shaping of governance perceptions.

Knowledge transmission which is the third predictor corresponds to having relatively weak but strong effect with it being beta value and B of 0.222 and 0.243. Although it has a slightly weaker influence, it is an important and statistically significant factor of governance effectiveness. The constant parameter 1.132 calculates the level of effectiveness of environmental governance whose all predictor variables are set at 0, which is almost impossible in reality. The values of t in all these predictors are significantly high, ranging between 4.190- 5.065 and hence confirming the strength of the effects of each of the variables. All these results indicate that the three aspects of local wisdom in terms of rituals, normative, and cognitive each add up to improve the performance and legitimacy of the environmental systems of governance and individual systems as well as combination of governance systems. This, therefore, makes the importance of maintaining and institutionalizing the traditional knowledge, norms and rituals as part of the management of policy directions.

Reframing Local Wisdom as a Strategic Asset in Governance

The traditional conceptualization of monitoring sustainability as an externally applied requirement applied in management science; however, in order to enshrine the principle into an honest system of practice the addition of local wisdom becomes no longer an option but a principle guiding the practice. Through sound statistical methodology, the current research shows that local wisdom is not a fringe custom but a resourceful tool in pro-sustainability environmental management. The implications of the findings are instant in relation to the public management, the policy design, and the institutional practice. Unlike the top-down approaches through which communities are portrayed as a passive recipient of policy, the analyses present a form of governance that re-locates emphasis on the role of citizens as collaborators in achieving sustainable results. Technocratic planning and bureaucratic compliance-based frameworks (Arlt, 2024) can no longer avoid factors indicating that, within sociocultural capital (e.g., in the form of ritual, transmission, and sanction), there exists a hard determinant of policy performance, rather than a soft factor.

The extant global management has observed the cultural twist in governance (Permatasari et al., 2023), yet, it has fallen short in measuring exactly how cultural, traditional and local knowledge can be translated into performance. This study redresses the lack of empirical research on that topic. There, it concurs with the assertion that the dynamics of policy effectiveness is not only part of institutional design but also the element of social embedding. Recently, Clark (2021) have embraced the importance of collaborative governance through which civic traditions provide influences of the consensus and compliance. The present work confirms the given theory and specifies that the models of management must take the cultural dimensions and incorporate it into the logic of its functioning at least in issues of environmental sustainability where results are unarguably localized.

Empirical evidence that currently exists indicates that local wisdom does not only play a symbolic role in terms of providing legitimacy but also a practical role in governing. It does it by mobilizing informal systems of rule that are often more effective than formal regulation in eliciting compliance (Potluka, 2021). In the Indonesian setting, these systems have been perpetuated by maintaining mechanisms like Sasi, Swing-Wing, and Hutan Adat which though are not based on the state infrastructure still manage to maintain order in the ecology. As they are, their source of operational power lies in the internalization of community environmental values and the instantaneousness of sanctions in the case of violation of these theorizations which, often, cannot be replicated by state-of-the-art environmental agencies. A management point of view allows them (these informal institutions) to teach us (us i.e. people) things about adaptive leadership and decentralized accountability (Shams et al., 2024) that are crucial in the hustling world of the eco-system.

Managerial implication is thus straightforward; environmental governance organizations in the form of either a public agency, non-governmental organizations or one of the partners in a private

agency are to take part in the shift in their mind frame towards stewardship rather than control. This redefinition is needed since local wisdom functions in acquiring endogenous drivers of action instead of regulatory compulsion, providing more sustainable results of behavior. The argument of the present issue is supported by the literature in the field of behavioral governance according to which compliance is not an obligatory condition when it is perceived to be not an obedience but the normative situation that is consistent with identities and moral frameworks of individuals. At a managerial level, this is a line of difference between governing transactionally and transformational, between enforcing rule and aligning values (Wang et al., 2021). The given research can contribute to the developed literature of knowledge pluralism in the field of environmental management. By tradition, the public management has been inclined to give priority to formal, scientific and mostly Western-centric paradigms of knowledge, pushing the rest in the outer margins of the paradigm (Haque, 2022). Having found empirically that intergenerational knowledge transmission is indeed an important predictor of governance outcomes, the present study fits into an emerging literature that makes claims of indigenous knowledge systems as equally valuable compared to other forms of management resources in adaptive approaches.

Simultaneously, it questions the managerial obedience to the interventions that are conducted based on expertise by recommending an inclusive governance intelligence, which combines both formal and informal sources of epistemology (Moon, 2023). The paper also throws some light on the political-economic aspects of the valorization of local wisdom. The process of environmental governance is often arranged under complex power relations where decentralization discourse may hide elite inclination or de-centralization (Ma et al., 2023). In the case of local knowledge being given verbal recognition but little or nothing in form of resources and legislation, local knowledge becomes symbolic interaction instead of practical involvement. This means that a successful management needs to go beyond the tokenism and ensure that the traditional ecological governance is entrenched structurally using the co-management regime as well as legal pluralism as well as its participatory budget. To realize this transformation, the re-skilling of the environmental managers is called upon beyond ecological measurements of the environment into sociocultural literacy and governance through relations.

In terms of the operationalization of social capital in environmental management discourse, the current study contributes to the latter. Where extant literature usually views social capital as an abstract concept, the current analysis makes it more tangible by employing the concepts of ritual practice, norms enforcement and intergenerational continuity. These aspects have echoes with the Agbejule et al. (2021) statement that horizontal networks, trust and shared norms enhances institutional performance which is the claim. Additionally, the further study by Johnston (2024) supports the allegations of Putnam, proving that local networks of trusts are able to decrease transaction costs in addition to increasing conformity of rules. The results, however, provide a workable plan to the resource-starved agencies in managerial terms: through the involvement of these community-based facilities, managers can achieve more effective policy at reduced cost and with increased legitimacy.

One must however raise a note of caution. The instrumental value of local wisdom is confirmed through the study but, at the same time, the issue of institutional integration is also displayed. Analog-rhythmic traditional knowledge systems do not harmonies well with those management practices that focus on digital acceleration, policy cycle and bureaucratic schedule. Mending this temporal and epistemic gap would require hybrid institutions that have the ability of translation between such systems without losing their integrity (Bennett, 2023). In line with this, the management scholarship needs to respond to the quest of creating governance arrangements that are concurrently scalable, context-sensitive, standardized, and situated, which is an undertaking that supersedes the traditional paradigm of efficiency and rational control because of viewing governance as a cultural and relational phenomenon.

The study, as a result, is not just another input on the environmental policy debate but a booster in the entire field of management. It challenges both researchers and teachers to re-examine prevailing paradigms, and to put governance front and center in the form of a relational, a cultural process. Curriculum in public administration and environmental planning is accordingly advised to introduce ethnography, anthropology, and indigenous epistemologies into those traditional competencies of curriculum concerning systems theory and public finance. Today, managerial competence has been reconceptualized to embrace cultural intelligence, ethical humility and ecological literacy, skills that ought to support not augment technical competence.

Discussion

The findings of this study confirm that local wisdom is not merely a symbolic heritage but a measurable determinant of environmental governance effectiveness. Regression results demonstrate that adherence to ritual practices ($\beta = 0.278$; $B = 0.314$; $p < 0.001$) exerts the strongest influence on governance outcomes. This suggests that ritualized forms of environmental engagement provide communities with moral authority, social cohesion, and compliance mechanisms that go beyond external enforcement. When rituals reinforce ecological values, individuals internalize environmental norms, which in turn translates into increased legitimacy and performance of governance systems. Customary sanctions and norms ($\beta = 0.267$; $B = 0.288$; $p < 0.001$) emerge as the second most influential factor. This result reflects the disciplinary power of traditional institutions, where violation of ecological rules is met with immediate and culturally embedded penalties. Unlike bureaucratic sanctions, which are often delayed or inconsistently applied, customary sanctions operate with immediacy and are rooted in shared moral expectations. Such mechanisms explain why communities are more likely to comply with local rules than with abstract regulatory directives.

Knowledge transmission ($\beta = 0.222$; $B = 0.243$; $p < 0.001$), although slightly weaker in effect, remains a statistically significant predictor. This underscores the importance of intergenerational transfer of ecological knowledge in sustaining governance over time. Knowledge embedded in narratives, oral traditions, and daily practices ensures continuity of environmental stewardship even in the absence of strong institutional frameworks. Taken together, the three predictors explain 53.6% of the variance in governance effectiveness, confirming that cultural-ecological dimensions are central, not peripheral, to environmental policy. These results extend the literature by offering empirical validation to theories of collaborative governance (Clark, 2021) and knowledge pluralism (Haque, 2022; Moon, 2023). They also resonate with the arguments of Putnam and Johnston (2024) that trust and shared norms can reduce transaction costs and strengthen compliance. From a managerial perspective, the findings suggest that institutions cannot rely solely on regulatory compulsion or technocratic control. Instead, stewardship-oriented governance that aligns with cultural identity and community values offers more sustainable pathways.

The practical implication is that public agencies, NGOs, and private actors must shift from transactional enforcement toward transformational engagement, enabling local communities to act as co-governors rather than passive recipients of policy. Finally, the study highlights a tension between traditional ecological systems and modern bureaucratic regimes. While rituals, norms, and knowledge function effectively at the local level, their integration into formal policy frameworks often encounters resistance, institutional gaps, or tokenistic recognition. Addressing this requires hybrid governance models that bridge formal and informal epistemologies, ensuring that cultural mechanisms are institutionalized without being diluted. In sum, this research provides strong empirical evidence that local wisdom through ritual, normative sanctions, and knowledge transmission constitutes a strategic asset in environmental governance. Far from being peripheral traditions, these practices shape compliance, legitimacy, and adaptive resilience, offering a foundation for sustainable and culturally embedded policy innovation.

CONCLUSION

A stringent quantitative study is found in the current study that formulated the fact that local wisdom is the cornerstone of the effectiveness of governance of the environmental factors. This study confirms once again that sustainable environmental policy has to be incorporated as part of the already existing cultural systems functioning in the communities, which is proved by the works of traditional ecological knowledge, which in this case focuses on ritual practices, intergenerational transfer, and customary norms. The results make most challenging the sociotechnical story that managers favor because of their emphasis on technocratic authority and uniform prescription, thus showing the desirability of ecological governance being consistent with the values, identities and lived practices of those to whom it applies. The implications are very big in terms of management. The voice of the locals must no longer be treated as a marginal or auxiliary element in the policy formulation, implementation and evaluation efforts but a central policy approach. Government organizations should invest in related governance systems of hybrid powers with formal regulatory governments and local norms which increase openness, credibility, and the endurance of permanence. Moreover, sociocultural fluency and pluralistic frameworks of knowledge should be integrated into management training (on both the institutional and practitioner levels) to enable practitioners to not only identify communities as stakeholders, but as co-governors of environmental systems. In the end, the study suggests a paradigm change in the governance of the environment: to shift the paradigm of systems of control to communities of empowerment, designs of compliance to practices of values. It is not a thing of the past; it is a lifeline the future of the sustainable policy. Institutionalization and recognition are not just a practical requirement but a moral requirement in a bid to achieve just, resilient and inclusive environmental governance.

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