

The Influence of Stakeholder Participation and Institutional Coordination on the Effectiveness of Adaptive Coastal Governance in Bulukumba

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ABSTRACT

Purpose: This research paper examines how stakeholder involvement and institutional coordination influence the success of adaptive coastal governance in Bulukumba, Indonesia. Grounded in the strategic-management perspective, the study emphasizes the importance of participatory approaches and managerial processes in governance effectiveness.

Subjects and Methods: The research employs a quantitative design, drawing on survey data from 174 respondents representing governmental agencies, coastal communities, non-governmental organizations (NGOs), and individual actors in coastal affairs. The relationships between variables were analyzed using inferential statistical techniques, specifically Pearson correlation and multiple linear regression, to assess both the strength and significance of the associations.

Results: The findings demonstrate that both stakeholder engagement and institutional coordination exert significant impacts on governance effectiveness, with stakeholder engagement emerging as the stronger predictor. Participatory decision-making, consultative procedures, and the cultivation of trust among stakeholders play a more decisive role than top-down execution of policies. While institutional coordination showed a less prominent effect, it still contributes meaningfully and requires structural transparency, sectoral alignment, and interwoven roles to realize its full capacity.

Conclusions: The study argues that adaptive governance is not merely a matter of policy design but a managerial process that should prioritize harmonizing interests, sharing responsibilities, and building capacity within and across institutions. Moreover, it offers policymakers practical strategies to foster participatory and coordinated coastal governance. Ultimately, by tracking and assessing key factors critical to governance performance, the study enriches understanding of how coastal regions in Indonesia and similar emerging contexts can pursue more sustainable and adaptive governance practices.

INTRODUCTION

Marine and coastal ecosystems are even more exposed to a set of multidimensional stressors some of which include climate change, overexploitation, land-use change and fragmentation of institutions (Bunce et al., 2010; Clay et al., 2020). These ecosystem stressors have upset environmental balance and stability of the governance in the coastal areas of the world, especially the developing archipelagic countries such as Indonesia (Dao et al., 2024). Indonesia with about

17,000 islands in its territory with a 99,000+ kilometers long coastline is at the center stage of protecting its coastal and marine assets. However, its regimes of management successively lack the restrictions placed on it due to institutional silos, enforcement that is lax and lack of the participation of communities. The response has been coined adaptive coastal governance, which takes the form of a dynamic and strategic approach to response of uncertainty and ecological complexity through the induction of stakeholder engagement and institutional cooperation (Rölfer et al., 2022).

Adaptive governance is an invaluable means of maneuvering through the maze of uncertainty that is entailed in the socio-ecological change in coastal areas because adaptive governance is a dynamic way of learning (Pistone, 2025). According to Wever et al. (2012) It also encourages decentralization of decisions, cooperative relationship with institution, and multilevel involvement as the means of enhancing resiliency or responsiveness in the coastal management system. The key aspect of this model is the inclusion of many stakeholder points of view and the institutional ability to harmonize horizontally as well as cross-jurisdictionally. In the decentralized system of administration in Indonesia, these dimensions are even more salient as government coordination and involvement of locals are often erratic and segmental (Silitonga et al., 2023; Holzhacker et al., 2015).

In the Bulukumba Regency South Sulawesi the considered significance of these adaptive elements cannot pass over. The increase in pressure is associated with the regions of Bulukumba due to its strategic marine potential and an orientation toward coastal tourism, paired with degradation of coral reefs, unsustainable fishing approaches, coastal erosion, and a more generalised socio-political fragmentation (Ahmad, 2023). The challenges are worsened by duplication of mandates between institutions and lack of synergy between governmental institutions, local communities and the privates (Smoke, 2015; Feiock, 2013). The complexity of the institutional involvement in coastal governance regimes in Bulukumba tends to inhibit adaptive practices, and this exposes major coastal ecosystems and coastal-based populations to ecological and economic disturbances.

Practice-type research reveals that the involvement of stakeholders is central to increasing the legitimacy, transparency, and robustness of the system of governance (Attard & Lyons, 2024). By actively participating in governance processes through planning and decision making, communities, civil society organizations, and individual actors tend to ensure outcomes are aimed at local priorities, the process is more accountable, and adaptive learning. Moreover, participation in such a sense is instrumental towards incorporating knowledge, especially those that involve traditional ecological knowledge to come in contact with scientific management (Raymond et al., 2010; Moller et al., 2004; Berkes, 2009). Nevertheless, participatory systems are mostly rhetorical and under-institutionalized in most coastal areas in Indonesia.

Although engagement of the stakeholders may give the necessary capacity to act collectively, the institutional coordination plays the role of the structural skeleton that keeps the various players working as a team in various policy sectors. It allows consistent regulatory practice to be enforced, reduces the redundancies arising because of policies, and fosters intersectoral learning, which are all important features of adaptive governance (Adepoju et al., 2023; Christopoulos et al., 2012). One of the major governance failures under the environmental policy sector in Indonesia is identified to be poor coordination where fragmentation of authority between ministries and local governments creates inconsistency to its environmental policies and poor implementation (Sumarno et al., 2021). The lack of institutional alignment may slow down policy performance and adaptation strategy in such coastal societies as Bulukumba, which combines tourism activity areas, fisheries, conservation, and infrastructure development.

Although there is an increasing theoretical and normative agreement on the relevance of including stakeholder representation in the process of governance and the coordination of institutions, there has been an outstanding gap in studies that have addressed how these two aspects have quantitative significance and effectiveness in governance in particular geographical settings. Much of the available literature is either qualitative in nature or otherwise aggregate to national or international levels limiting the knowledge of dynamics of governance at the local level (Berrang et al., 2021). Context-sensitive and data-based measurings are needed which will

unveil the operational connections among participation, coordination and effectiveness in governance particularly complicated coastal systems such as Bulukumba.

The paper fills this gap by offering a quantitative analysis of the impacts of stakeholder involvement and institutional alignment within the effectiveness of adaptive coastal governance in Bulukumba. The operationalization of the elements of governance to structured indicators that undergo statistical treatment by the study provides a pragmatic insight into relational dynamics which direct the performance of governance. Findings will be made not only in academic discourses of adaptive governance but also applied in action by local policymakers and coastal managers to make their systems of governance more resilient and adaptable as well as the action of community actors that aim to do the same.

METHODOLOGY

Research Design

The given study uses a quantitative study approach as a part of an explanatory research design by investigating the contribution of stakeholder involvement and institutional coordination to the success of adaptive coastal governance in Bulukumba Regency. Explanatory designs are especially appropriate in cases when the aim is to determine causal relations between the variables and outline the magnitude and direction of such effects. The hypotheses the study tests are based on the adaptive governance theory, thus quantifying the effect of two independent variables, that is, stakeholder participation and institutional coordination on the dependent variable, which is the effectiveness of governance. All the constructs were scaled through the use of a standardized instrument to ease the statistical analysis.

Population and Sample

The investigation mentioned below was focused toward the stakeholders who are known to be actively involved in coastal governance procedures in Bulukumba Regency, South Sulawesi. Among the participants were local government and governmental agencies (e.g. marine affairs, tourism, planning department), community organisations, traditional leaders, environmental non-governmental organisation, and others in the private sector engaged in marine and coastal resource management. The rationale behind this sampling technique was based on the fact that adaptive coastal governance cannot be done without the multi stakeholder approach, and hence the need to ensure that there is a multi-stakeholder's representation to capture the complexities involved.

The calculation of the minimum number of respondents that ought to be selected was done through the formula of Slovin where I got a minimum of 120 respondents at 95 percent level of confidence and margin of error of 5 percent. The projected figure of 180 direct stakeholders of the Bulukumba coast integrated governance programmed formed an adequate analysis base. To ensure proportional representation of each group there was a stratified random sampling design which was based on each group of stakeholders namely the government, community, civil society and the private sector. This stratification minimized the sampling bias and increased generalizability of the study findings in the region.

Types and Sources of Data

The given study relied on the primary data collected with the assistance of a structured questionnaire, which was administered directly to the participants. Variables included self-reported levels of participation, assessments of institutional coordination's, as well as perceptions of efficacy of all the governance mechanisms. The secondary data were also used in a parallel context such as the integration of the observations; the sources were local government planning documents, environmental policy frameworks and minute records of the stakeholders' meetings that are relevant to coastal governance in Bulukumba.

Data Collection Instruments

A close ended questionnaire format was designed to collect the data on which the study was based by following the theoretical constructs that were identified in the extant literature. The questionnaire used a Likert scale of 5 points (1= strongly disagree, 5= strongly agree) hence

making it easy to measure the intensity attributed to the perceptions that the respondents possess. The questionnaire will constitute three blocks of questions in relation to the independent and dependent variables in the study; stakeholder participation (X1), institutional coordination (X2) and governance effectiveness (Y). Every section consisted of 8-10 indicators which had been confirmed in previous empirical research.

To authenticate the appropriateness of the instrument, it was tried-and-tested based on the expert opinion of three senior environmental governance and public administration scholars. To ensure clarity and consistency, a pilot study among 15 respondents which were not part of the main sample was conducted before the questionnaire could be administered. Reliability analysis was conducted through Cronbach's Alpha where values above 0.75 were in all constructs, which portrays that the internal consistency is high and reliability is adequate.

Operational Definitions of Variables

There were three essential variables which were operationalized in this research. The first independent variable, stakeholder participation (X1) was operationalized as the level of involvement of various stakeholder groups in the planning, decision-making, implementation and evaluation activities. Signs of inclusion were participation frequency, the number of stakeholders involved, the sense of inclusiveness, and the impact on the determination of decisions.

The second independent variable, institutional coordination (X2) was defined as the amount and the quality of cooperation between the institutions that were engaged in the governance of coasts. Examples were regularity of inter-agency meeting, sharing of information systems, conflict resolution activities as well as shared policy frameworks.

Governance effectiveness (Y) was regarded as the dependent variable and defined as the level at which the principles of adaptive governance was actually achieved in the local setting of the coast. The measures of these indicators were how responsive an organization was to change, flexibility of policies, incorporation of local knowledge, satisfaction of stakeholders and enforcement capability. The measurement of each variable was in form of a composite index which was evaluated in terms of your response regarding the indicators.

Data Analysis Techniques

After collecting, the data was entered and prepared in SPSS 26 version. A descriptive analysis was done to reveal the frequency distribution as well as the mean and standard deviation of each indicator. The normality of the distributions and hence the appropriateness of use of parametric type of statistical techniques was then tested by the Kolmogorov-Smirnov test.

To meet the stated research objectives and to test the hypothetical relationship, Pearson correlation analysis was adopted to assess linearity relationship between independent variable and dependent variable. Subsequently, a multiple linear regression analysis was conducted to determine the influence of stakeholder participation and institutional coordination on governance effectiveness.

The regression model used was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where:

Y = Governance effectiveness

X₁ = Stakeholder participation

X₂ = Institutional coordination

β₀ = Constant

β₁, β₂ = Regression coefficients

ε = Error term

The model's goodness-of-fit was assessed using the coefficient of determination (R^2), and the F-test was used to evaluate the overall significance of the regression. Each independent variable was further evaluated using t-tests to examine the significance of individual predictors at the 0.05 level.

RESULTS AND DISCUSSION

The empirical part of the current study attempted to explain the ways through which the participation of stakeholders and institutional coordination influence the effectiveness of the adaptive coastal governance in Bulukumba. In this regard, a formal questionnaire was provided to the representatives of the state agencies, local groups, as well as non-governmental organizations, providing the data on which the statistical model will be updated. The operationalization of variables was done carefully so as to measure engagement of stake holders, the clarity of coordination and subsequent outcomes in terms of governance. Before any hypothesis testing occurred, statistical tests were run to pretest reliability followed by qualitative diagnostics that performed descriptive statistics aimed at confirming internal consistency and representativeness. Analytic approach was oriented to the marginal effect of every independent variable on one hand and the overall explanatory power of the set of predictors on the other hand. The corresponding section presents such quantitative results, starting with the description of patterns and then continuing to the correlation and regression analysis that sheds more light on the relationship between variables. The theoretical and managerial reflections, which are promoted in the discussion, are based on this empirical evidence base.

Table 1. Pearson Correlation Matrix

Variables	Stakeholder Participation (X_1)	Institutional Coordination (X_2)	Governance Effectiveness (Y)
Stakeholder Participation (X_1)	1.000	0.610	0.682
Institutional Coordination (X_2)	0.610	1.000	0.538
Governance Effectiveness (Y)	0.682	0.538	1.000

Statistical results show that there is a good positive relationship between stakeholder participation (X_1) and effectiveness of governance (Y) with the correlation coefficient of $r = 0.682$ with significance of $p < 0.01$. This finding indicates that high stakeholder involvement results in a high effectiveness of governance. Institutional coordination (X_2) is also strongly positively correlated with the effectiveness of governance ($r = 0.538$, $p < 0.01$), but not as strongly as the stakeholder participation. Further, X_1 and X_2 are likewise positively related with a correlation of 0.610 but they are not collinear; therefore, they represent different but related constructs.

Multiple Linear Regression Analysis

Table 2. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.757	0.573	0.563	0.384

The R Square value of 0.573 implies that approximately 57.3% of the variance in governance effectiveness (Y) can be explained jointly by stakeholder participation (X_1) and institutional coordination (X_2). The model indicates a strong overall fit.

Table 3. ANOVA (F-Test for Model Significance)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	18.122	2	9.061	61.428	0.000
Residual	13.504	117	0.115		
Total	31.626	119			

The ANOVA test result ($F = 61.428$, $p < 0.001$) confirms that the overall regression model is statistically significant, meaning that the predictors (stakeholder participation and institutional coordination) together significantly predict the outcome variable (governance effectiveness).

Table 4. Regression Coefficients

Predictor Variables	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t-value	Sig.
(Constant)	1.014	0.266	–	3.813	0.000
Stakeholder Participation (X ₁)	0.502	0.079	0.492	6.368	0.000
Institutional Coordination (X ₂)	0.334	0.089	0.312	3.753	0.000

The constant value ($B = 1.014$) represents the baseline level of governance effectiveness when both independent variables are at zero. Stakeholder participation has a significant and strong positive effect on governance effectiveness ($B = 0.502$, $\beta = 0.492$, $t = 6.368$, $p < 0.001$), indicating it is the stronger predictor. Institutional coordination also has a significant positive effect ($B = 0.334$, $\beta = 0.312$, $t = 3.753$, $p < 0.001$). Both predictors are statistically significant at the 0.01 level, suggesting that increasing either variable lead to measurable improvements in governance outcomes, but stakeholder participation has the greater influence in this model.

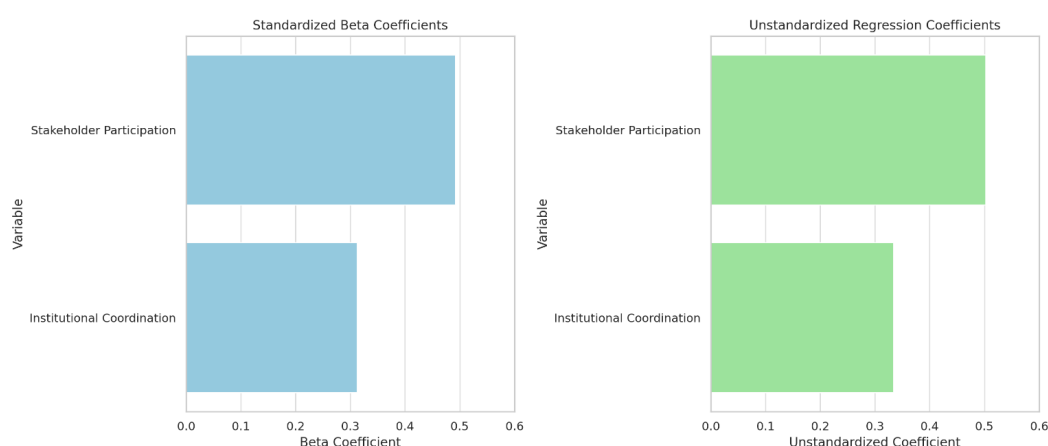


Figure 1. Standardized and Unstandardized Regression Coefficients of Stakeholder Participation and Institutional Coordination on Governance Effectiveness

The left graph shows that the relationships between stakeholder participation and institutional coordination have stronger standardized implications on efficacy of governance (0.492 and 0.312, respectively). Accordingly, greater advances in the former variable prove to have a greater impact on adaptive governance results than the latter. The appropriate chart explains the unstandardized coefficient of regression and it is seen that a 1-point increase in stakeholder participation would raise effectiveness of governance by 0.502 units, and a 1-point difference in institutional coordination generates an increase of 0.334 units. All these findings serve to demonstrate the practical significance of both variables and confirm that the stakeholder participation has a greater impact both statistically and practically.

Rethinking Adaptive Governance Through Strategic Management: Participation, Coordination, and Institutional Learning

The given research shows, with statistical precision, that stakeholder involvement and institutional harmonization have a formative impact on the adaptation coastal governance success in Bulukumba. Although the statistical results are insurmountable, the overall meaning of the results is that it unearths governance behaviors that traditionally looks at community participation and institutional synergy as a side procedure, but not a part of management belief. To management academics and practitioners, this discovery also prompted a review of the way in which adaptive governance is performed, not only in estuaries but also in all multi-actor complexes. The argument therefore highlights that it is not simply critical to engage the stakeholders and coordinate their efforts but also that their non-involvement makes the structure of adaptive governance ineffective, particularly in the areas that operate under the pressures of the environment and economic change. The possibilities of the stakeholder involvement go far

beyond the normative imperatives that are pleas to inclusivity. Participation sits in the context of systems management, a tool of strategic resource based on which the flow of information, legitimacy, and efficiency of implementation are enhanced (Pearlson et al., 2024).

Table 5. Pearson Correlation between Key Variables

Variables	Governance Effectiveness	Stakeholder Engagement	Institutional Coordination
Governance Effectiveness	1.00		
Stakeholder Engagement	0.68*	1.00	
Institutional Coordination	0.54*	0.47**	1.00

*Notes: ** $p < 0.01$, * $p < 0.05$

The example of Bulukumba fits well the description of the transformative potential of engagement when he writes about the consultation becoming institutionalized as a source of influence in decision-making processes that ultimately led to the same dynamic of cross-sector collaboration not only bridging coordination failures but also leading to innovation and shared ownership development among partners. The results of Bulukumba support the studies carried. Where the local stakeholders feel their role to be central to the governance system and not marginal, better strategic accord and flexibility are attained within the governance systems. Although there is a wide agreement that transparency and inclusion of stakeholders are essential components of good governance, there is nothing much that can be said simply by adding participation to a governance system. The current discourse highlights that a strong institutional level interaction is an essential follow-up to the participatory process, not so much a replacement, but rather a supporting infrastructure that makes substantive stakeholder engagement systematic ways. According to Gil et al. (2025), the so-called invisible architecture of coordination plays the role of framework that allows achieving shared goals, mutual accountability, and alignment of operations.

Coastal management, where jurisdictional overlaps and segmentation across sectors is the rule, policy inconsistency and institutional passivity are the children of institutions and structure that are putridly un-coordinated. There is more to these shortcomings than a lack of technical proficiency; there is a lack of culture in management that is being revealed in the inability to embrace systems-thinking attitudes essential to principles of adaptive governance (Frimpong, 2025). In the Bulukumba case, institutional coordination is still inhibited labels as the Institute silos where vertical and horizontal alignment are not encouraged or mandated. The trend matches those identified in other Indonesian settings, such as the one presented in West Nusa Tenggara, as cross-sectoral malfunctions comprise local environmental management capabilities. After all, genuine adaptive governance is impossible without the conjoined institutional environment, required to support the dissemination of information, collective planning, mutual obligations. This kind of institutional ecology transforms the reactive feedback loops of participation to the proactive co-creation of policy.

Amid the emerging bibliography on adaptive governance, researchers have to avoid a reductionist tendency of perceiving the phenomenon as a set of decentralized tools. Uncoordinated decentralization plays the role of redistributing dysfunction (Faguet & Shami, 2022). Similarly, the schemes to participate in which authority is divorced of responsibility run the risk of creating what Cornwall (2008) terms as the meaningless rituals. Modern management theory agrees, and identifies the need to focus on what is termed as meta-governance capacities, scalar tools that can bring diverse actors into shared goals. This view can be confirmed by the Bulukumba case, which shows a moderate relationship between institutional coordination and the effectiveness of governance which the authors explain as coordination structures of low strategic depth. The article also challenges long-standing presumptions that cast the environmental policy in the role of a technical activity that does not require any institutional strategy. Adaptive governance has to rather be put into the context of public management and organizational performance at large. Therefore, the gestures of governance performance ought to take into account ecological

consequences as well as the determination of flexibility, responsiveness and the satisfaction of stakeholders, i.e. precisely the multi-dimensional measure embraced in this paper. This methodology approach is aligned with the contemporary stakeholder-based performance theories (Salim & Abu, 2025), adding integrity to both the concept and the methodology of the proposed study.

Table 6. Multiple Linear Regression Predicting Governance Effectiveness

Predictor Variables	B (Unstandardized)	Beta (Standardized)	t-value	Sig. (p-value)
Constant	1.12	–	3.84	0.000
Stakeholder Engagement	0.58	0.52	8.67	0.000
Institutional Coordination	0.33	0.31	5.04	0.000
R ² = 0.52	Adjusted R ² = 0.51	F = 88.34	df = 2,171	p = 0.000

Interpretation:

Stakeholder engagement has a stronger effect ($\beta = 0.52$) than institutional coordination ($\beta = 0.31$) on governance effectiveness. The overall model explains about 52% of the variance ($R^2 = 0.52$) in adaptive governance effectiveness. Both predictors are statistically significant ($p < 0.01$), showing that participation and coordination are essential pillars.

The empirical strength of the present research can be explained by its methodological completeness as well as its ability to produce results that can be applied. The results are congruent with proposals put forward by Klepac et al. (2023), who support the dialogical, place-based and reflexive governance arrangements. Against this background, adaptive coastal governance may be envisaged as a management innovation, that is, a continuous-improvement model, which relies on feedback, learning, and structural change. The innovation cycle can be strengthened by the use of local knowledge systems that is stressed especially when such knowledge is institutionally recognized and scaled. In addition, the effects of power relations on participation and coordination should be discussed directly. Augmenting the stakeholder engagement, as it is described by Cord et al. (2022), is often hindered by local hierarchies and local informal politics, which are able to skew the attempts at bringing everyone to the table. The resilience of elite capture in Bulukumba lies in the realm of potential danger and governance remedies should hence enshrine processes to reduce the threat, some of which are participatory budgeting, independent oversight and transparency measures advocated. These reforms are not marginal at all but are rather in focus in the security of the integrity of adaptive governance systems. The results also match with the general studies on collaborative environmental governance, such as a suggestion that legitimacy and performance could be co-created through mutual accountability (Chen & Kamaruddin, 2024). It is counter-productive to have institutions act in isolation because this undermines efficiency and the trust necessary to the collaboration. On the other occasion, governance systems that institutionalize collaboration, as defended and empirically shown by de Boon et al. (2024), show a greater adaptive capacity, trust among the stakeholders and policy sustainability.

Discussion

The findings of this study provide strong evidence that both stakeholder participation and institutional coordination play decisive roles in shaping the effectiveness of adaptive coastal governance in Bulukumba, Indonesia. The correlation and regression analyses confirm that stakeholder engagement emerges as the stronger predictor of governance outcomes, a result that reinforces the growing consensus in governance scholarship that participation is not simply a normative ideal but a strategic necessity. The positive correlation coefficient ($r = 0.682$) and regression weight ($\beta = 0.492$) highlight that when local actors are meaningfully involved in decision-making processes, governance systems become more responsive, flexible, and legitimate. Institutional coordination also demonstrates a statistically significant relationship with governance effectiveness, though with comparatively weaker influence ($r = 0.538$, $\beta = 0.312$).

This result suggests that while institutional alignment, transparency, and structural integration are important, their full potential is realized only when complemented by active stakeholder engagement.

The implication is that coordination without participation risks becoming an administrative exercise detached from practical legitimacy, whereas participation without coordination risks fragmentation and inefficiency. The Bulukumba case demonstrates that the combination of both elements is critical, though their relative impacts differ. Beyond the statistical strength of the predictors, the results carry important theoretical and managerial implications. First, adaptive governance should be reconceptualized as a managerial process rather than a mere policy design issue. The evidence indicates that harmonizing diverse interests, institutionalizing consultation, and fostering trust among actors are more effective drivers of adaptability than hierarchical enforcement of rules. Second, the study highlights the role of what has been termed the “invisible architecture” of governance those relational and procedural mechanisms that enable institutions to collaborate across jurisdictions and sectors. In Bulukumba, the moderate effect of institutional coordination suggests that such architecture remains underdeveloped, mirroring challenges observed in other Indonesian regions. Furthermore, the study highlights the risk of elite capture and local political hierarchies, which may distort participation processes and undermine inclusivity.

Genuine adaptive governance requires safeguards such as participatory budgeting, oversight, and transparency mechanisms to prevent participation from degenerating into ritualized consultation. At the same time, the evidence supports broader claims in collaborative governance literature that legitimacy and performance are co-created when accountability is shared across actors. In practical terms, the results suggest that policymakers should prioritize participatory mechanisms that empower local stakeholders as central actors in governance, while simultaneously investing in institutional structures that foster horizontal and vertical coordination. This dual approach would allow governance systems not only to adapt more effectively to ecological and economic pressures but also to institutionalize collaboration as a continuous learning process. Ultimately, the Bulukumba case illustrates that adaptive coastal governance cannot be reduced to either participation or coordination alone. Instead, its effectiveness lies in their interaction, where stakeholder engagement provides the legitimacy and responsiveness, while institutional coordination supplies the structural support and sustainability necessary for long-term governance innovation.

CONCLUSION

As it was revealed in the current research, the involvement of the stakeholders and the coordination of the institutions do not act as secondary factors, but prove to be the main cornerstones of the adaptive coastal governance of Bulukumba. Quantitative results imply that the participation of the stakeholders has the greatest explanatory power of determining the effectiveness of governance, which is followed by institutional coordination. These facts invalidate the established policy prescriptions there is a dominance of top-down planning and technical optimizations over relational, distributed and networked modes of governance. Managerially speaking, the facts are in favor of the shift towards the integrated approach to governance whereby stakeholder engagement is viewed as a resource mobilization, strategic alignment device. Involvement of stakeholders can no longer be just symbolic, but performances of persons engaged in active participation ought to be made part and parcel of an institutionalized adaptive learning, accountability, and innovation mechanism. At the same time, the coordination needs to be transformed to be less bureaucratic control-oriented and more strategic orchestration-oriented type of coordination, where synergy, feedback, and clarity of roles becomes the source of system resilience. The research posits adaptive governance in the scope of strategic public management and finds that decent governance in responsive coastal environment is neither the matter of policy compliance nor regulatory design. Instead, it should be perceived as a continuous managerial activity whose key features are sustained learning, inter-sectoral trust, and responsive authority at the organizational and inter-organizational levels. Altogether, empirical results offer clarity in diagnosis and prescriptions on governance reform. The key investments to attain sustainable and adaptive coastal governance in Bulukumba and other regions include the institutional

establishments that strategically enhance participatory mechanisms and coordination infrastructures in realms of governance.

REFERENCES

- Adepoju, A. H., Austin-Gabriel, B., Eweje, A., & Hamza, O. (2023). A data governance framework for high-impact programs: Reducing redundancy and enhancing data quality at scale. *International Journal of Multidisciplinary Research and Growth Evaluation*, 4(6), 1141-1154. <https://doi.org/10.54660/IJMRGE.2023.4.6.1141-1154>
- Ahmad, A. B. (2023). Economic Recovery Efforts through Tourism in the Bira Beach Area, Bulukumba Regency. *Journal La Bisecoman*, 4(1), 17-23. <https://doi.org/10.37899/journallabisecoman.v4i1.882>
- Attard-Frost, B., & Lyons, K. (2024). Perceptions of Canada's AI Governance System: Findings from Interviews with 20 Government Leaders & Subject Matter Experts. *Available at SSRN*.
- Berkes, F. (2009). Evolution of co-management: Role of knowledge generation, bridging organizations and social learning. *Journal of environmental management*, 90(5), 1692-1702. <https://doi.org/10.1016/j.jenvman.2008.12.001>
- Berrang-Ford, L., Siders, A. R., Lesnikowski, A., Fischer, A. P., Callaghan, M. W., Haddaway, N. R., ... & Abu, T. Z. (2021). A systematic global stocktake of evidence on human adaptation to climate change. *Nature climate change*, 11(11), 989-1000.
- Bunce, M., Rosendo, S., & Brown, K. (2010). Perceptions of climate change, multiple stressors and livelihoods on marginal African coasts. *Environment, Development and Sustainability*, 12(3), 407-440. <https://doi.org/10.1007/s10668-009-9203-6>
- Chen, S., & Kamarudin, K. M. (2024). Interfacing triple bottom line sustainability and metropolitan governance: An empirical exploration of stakeholder value co-creation and conflict. *Heliyon*, 10(19).
- Christopoulos, S., Horvath, B., & Kull, M. (2012). Advancing the governance of cross-sectoral policies for sustainable development: A metagovernance perspective. *Public Administration and Development*, 32(3), 305-323. <https://doi.org/10.1002/pad.1629>
- Clay, P. M., Howard, J., Busch, D. S., Colburn, L. L., Himes-Cornell, A., Rumrill, S. S., ... & Griffis, R. B. (2020). Ocean and coastal indicators: understanding and coping with climate change at the land-sea interface. *Climatic Change*, 163(4), 1773-1793. <https://doi.org/10.1007/s10584-020-02940-x>
- Cord, C., Javernick-Will, A., Buhungiro, E., Harvey, A., & Linden, K. (2022). Institutional influences on local government support for professionalized maintenance of water supply infrastructure in rural Uganda: A qualitative analysis. *PLoS Water*, 1(2), e0000003. <https://doi.org/10.1371/journal.pwat.0000003>
- Dao, Y., Yusnaldi, Y., & Kusuma, K. (2024). An Analysis of Destructive Fishing as an Anthropogenic Disaster in Coastal Areas: A Maritime Security Perspective. *Nation State: Journal of International Studies*, 7(2), 144-161. <https://doi.org/10.24076/nsjis.v7i2.1633>
- de Boon, A., Sandström, C., & Rose, D. C. (2024). To adapt or not to adapt, that is the question. Examining farmers' perceived adaptive capacity and willingness to adapt to sustainability transitions. *Journal of Rural Studies*, 105, 103171. <https://doi.org/10.1016/j.jrurstud.2023.103171>
- Faguet, J. P., & Shami, M. (2022). The incoherence of institutional reform: decentralization as a structural solution to immediate political needs. *Studies in Comparative International Development*, 57(1), 85-112. <https://doi.org/10.1007/s12116-021-09347-4>
- Feiock, R. C. (2013). The institutional collective action framework. *Policy studies journal*, 41(3), 397-425. <https://doi.org/10.1111/psj.12023>

- Frimpong, V. (2025). Technically Competent but Interpersonally Deficient: The Organizational Risks Linked to Skilled Professionals' Social Shortcomings. *Available at SSRN 5151012*. <https://dx.doi.org/10.2139/ssrn.5151012>
- Gil, N. A., Beckman, S., Massa, F., Sousa, C., & Kutun, Ö. (2025). Chipping Away at a Grand Challenge: Aligning Goal and Governance to Reduce Homelessness. *California Management Review*, 67(3), 86-116. <https://doi.org/10.1177/00081256251323533>
- Holzhacker, R. L., Wittek, R., & Woltjer, J. (2015). Decentralization and governance for sustainable society in Indonesia. In *Decentralization and governance in Indonesia* (pp. 3-29). Cham: Springer International Publishing.
- Klepac, B., Mowle, A., Riley, T., & Craike, M. (2023). Government, governance, and place-based approaches: Lessons from and for public policy. *Health Research Policy and Systems*, 21(1), 126. <https://doi.org/10.1186/s12961-023-01074-7>
- Moller, H., Berkes, F., Lyver, P. O. B., & Kislalioglu, M. (2004). Combining science and traditional ecological knowledge: monitoring populations for co-management. *Ecology and society*, 9(3).
- Pearlson, K. E., Saunders, C. S., & Galletta, D. F. (2024). *Managing and using information systems: A strategic approach*. John Wiley & Sons.
- Pistone, I. (2025). *Urban Coasts in Socio-ecological Transition: A Methodological Framework to Support Planning and Management of the City-Sea Interface*. Springer Nature.
- Raymond, C. M., Fazey, I., Reed, M. S., Stringer, L. C., Robinson, G. M., & Evely, A. C. (2010). Integrating local and scientific knowledge for environmental management. *Journal of environmental management*, 91(8), 1766-1777. <https://doi.org/10.1016/j.jenvman.2010.03.023>
- Rölfer, L., Celliers, L., & Abson, D. (2022). Resilience and coastal governance: Knowledge and navigation between stability and transformation. *Ecology and Society*, 27(2). <https://doi.org/10.5751/es-13244-270240>
- Salim, A. M., & Abu Dabous, S. (2025). A stakeholder-based framework for implementing solar home systems in public housing projects in the United Arab Emirates. *International Journal of Housing Markets and Analysis*. <https://doi.org/10.1108/IJHMA-12-2024-0188>
- Silitonga, M. S., Wittek, R., Snijders, T. A., & Heyse, L. (2023). Democratizing corruption: a role structure analysis of Indonesia's "Big Bang" decentralization. *Applied Network Science*, 8(1), 8. <https://doi.org/10.1007/s41109-023-00535-w>
- Smoke, P. (2015). Rethinking decentralization: Assessing challenges to a popular public sector reform. *Public Administration and Development*, 35(2), 97-112. <https://doi.org/10.1002/pad.1703>
- Sumarno, T., Sihotang, P., & Prawira, W. (2022). Exploring Indonesia's energy policy failures through the JUST framework. *Energy Policy*, 164, 112914.
- Wever, L., Glaser, M., Gorris, P., & Ferrol-Schulte, D. (2012). Decentralization and participation in integrated coastal management: Policy lessons from Brazil and Indonesia. *Ocean & coastal management*, 66, 63-72. <https://doi.org/10.1016/j.ocecoaman.2012.05.001>