Implementation of Policy on Development of Forest Management Units (KPH) in West Nusa Tenggara Province

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Abstract

Damage to forests outside Java, including West Nusa Tenggara (NTB), is largely due to the absence of forest management units (FMUs) at the site level, resulting in open access areas prone to illegal logging and deforestation. The establishment of FMUs is mandated by Law 41/1999 and Government Regulations 6/2007 and 3/2008. Since 2008, NTB has initiated FMU development through area designations and the issuance of governor regulations. By 2016, four provincial FMUs and nine district FMUs were established. However, Law 23/2014 shifted forest management authority to the provincial level. This study examines the implementation of FMU development policies in NTB, applying Van Meter and Van Horn's public policy theory, a qualitative descriptive approach, and ASOCA strategy analysis, verified through triangulation techniques. The findings highlight several supporting factors, including forest management authority, regional leadership commitment, local regulations, and long-term planning. Conversely, challenges include reduced authority under Law 11/2020, limited budget capacity, widespread encroachment, and weak provincial-district coordination. Despite these challenges, the policy implementation in NTB is considered effective, evidenced by the establishment of 15 FMUs and one nature park, as well as the enactment of Regional Regulation 14/2019 on forest management. A new AN KHAN policy strategy model is proposed to accelerate FMU development in the region.

***Keywords**: FMU Policy, Forest Sustainability, Community Welfare, NTB Forest Management.*

A. INTRODUCTION

Deforestation and forest degradation are critical environmental issues in Indonesia, particularly outside Java Island, where the absence of forest management units (FMUs) at the site level has resulted in open-access areas vulnerable to illegal logging and encroachment (Margono et al., 2014). This open-access condition contributes significantly to biodiversity loss, soil erosion, and greenhouse gas emissions, further exacerbating global climate challenges (Austin et al., 2019). As a response, the Indonesian government enacted Law 41/1999 and subsequent regulations to mandate FMU development, emphasizing sustainable forest management practices (Moeliono et al., 2017). However, the effectiveness of these regulations varies across regions, influenced by local governance capacities and socio-economic dynamics (Purnomo et al., 2020). In West Nusa Tenggara (NTB) Province, FMU implementation began in 2008, with significant efforts directed at designing FMU areas and institutionalizing governance structures through local regulations (Ekawati et al., 2019). By 2016, the province had established 13 FMUs, including 4 provincial and 9 district units, but challenges such as weak

intergovernmental coordination and limited financial resources persist (Ardiansyah et al., 2020). The shifting of forest management authority to provinces under Law 23/2014 further complicates policy implementation, necessitating a reevaluation of strategies to ensure policy alignment and operational efficiency (Nawir et al., 2021). Effective FMU policies are crucial not only for mitigating deforestation but also for promoting local community welfare and economic development through sustainable forest utilization (Santika et al., 2020). Despite these intentions, policy gaps and implementation barriers remain underexplored in the context of NTB, calling for a more comprehensive understanding of their dynamics (Babon et al., 2012). This article aims to address these gaps by examining the development and implementation of FMU policies in NTB, analyzing their alignment with national objectives and identifying critical success factors and inhibitors (Purwanto et al., 2020). By adopting a literature review approach, this study synthesizes existing research to provide actionable insights for policymakers and stakeholders (Karsenty et al., 2017). The findings are expected to contribute to broader discussions on forest governance in Indonesia, particularly under the current legal and institutional frameworks (Resosudarmo et al., 2014). Moreover, this research underscores the importance of localized strategies that balance ecological preservation with socio-economic benefits (Sloan et al., 2015).

Indonesia's forest management framework is grounded in robust legal and regulatory instruments aimed at addressing deforestation and promoting sustainable practices. Law No. 41/1999 on Forestry serves as the primary legislation, emphasizing the establishment of Forest Management Units (FMUs) to oversee sustainable forestry at the site level (Indrarto et al., 2012). This law is operationalized through Government Regulations No. 6/2007 and No. 3/2008, which provide guidelines for FMU establishment and management, underscoring the role of local governments in implementation (Ekawati et al., 2019). Furthermore, Presidential Regulation No. 3/2008 highlights the integration of FMUs into regional development strategies to balance environmental sustainability with socio-economic growth (Purnomo et al., 2020). In West Nusa Tenggara (NTB), the implementation of FMU policies began in 2008, with a focus on defining FMU areas and institutionalizing governance structures through local regulations such as Governor Regulations and Regional Regulations (Nawir & Santoso, 2021). The decentralization of forest governance under Law No. 23/2014 further emphasized the role of provincial governments, shifting significant authority from district to provincial levels (Resosudarmo & Yusuf, 2014). However, this shift introduced new complexities in policy coordination and resource allocation, particularly in NTB, where institutional and financial capacities vary widely across regions (Ardiansyah et al., 2020). Despite these challenges, the issuance of Regional Regulation No. 14/2019 marked a significant milestone in NTB's forest management framework, providing a legal basis for FMU operations and long-term planning (Ekawati et al., 2019). The NTB government also incorporated FMU development into its Medium-Term Development Plan (RPJMD), demonstrating a strong commitment to aligning forest

management objectives with broader regional development goals (Purwanto et al., 2020). Additionally, the establishment of the "Green NTB Program" reflects a proactive approach to integrating FMUs into environmental conservation and community development initiatives (Margono et al., 2014). However, gaps remain in aligning national and regional policies, particularly in addressing conflicts arising from overlapping regulations and jurisdictional ambiguities (Moeliono et al., 2017). For instance, the reduced authority of FMUs under Law No. 11/2020 on Job Creation has raised concerns about the sustainability of decentralization efforts in forest governance (Austin et al., 2019). These challenges highlight the need for a more integrated policy framework that fosters collaboration among national, provincial, and district governments while ensuring resource adequacy for FMU operations (Karsenty et al., 2017). By evaluating these regulatory frameworks and their implications, this article contributes to the ongoing discourse on strengthening Indonesia's forest governance system to address both environmental and socio-economic challenges (Sloan et al., 2015).

Establishing a shared understanding of the importance of improving forest governance through the development of Forest Management Units (FMUs) at the site level has proven challenging to implement. These obstacles are not only influenced by technical issues, misconceptions regarding the roles and functions of FMUs, and conflicting interests among stakeholders but are also rooted in the slow evolution of mindsets in forest management. This inertia stems from traditional forestry science paradigms and longstanding forest management practices based on licensing schemes. This situation is reflected in the progress of FMU development in Indonesia up to 2015, where out of the target of 120 FMU models, only 97 FMUs were operational, while the remainder faced constraints due to limited human resources, incomplete forest management plans, and inadequate support for field activities. Meanwhile, in the 2015-2019 National Medium-Term Development Plan (RPJMN), the Ministry of Environment and Forestry (MoEF) significantly raised the targets compared to the previous RPJMN, aiming to operationalize 529 FMUs, comprising 347 Production FMUs (KPHP), 182 Protection FMUs (KPHL), and 50 Conservation FMUs (KPHK) under central government authority. (Directorate General of Forest and Environmental Planning, 2016)

The design process for the Forest Management Unit (FMU) in West Nusa Tenggara Province began in 2008 by integrating the functions of protected forests and production forests into FMUs. This initiative was endorsed by the Heads of the Ministry of Forestry's Technical Implementing Units (UPTs), Heads of Forestry Offices at the provincial and district/city levels, Regents/Mayors, and subsequently approved and proposed by the Governor of NTB. The process culminated in the issuance of Minister of Forestry Decree No. SK.337/Menhut-VII/2009, which allocated approximately 889,210 hectares of protected and production forests in NTB into 23 FMUs. These units comprised seven provincial FMUs and 16 district/city FMUs, based on management authority. To strengthen FMU institutions, Ministerial Regulation No. P.6/Menhut-II/2010 on Norms, Standards, Procedures, and Criteria

for Managing Forests in Protection FMUs (KPHL) and Production FMUs (KPHP), along with Minister of Home Affairs Regulation No. 61/2010 on Organization and Work Procedures of KPHL and KPHP, were enacted. These regulations stipulated that FMU organizations were not to be structured as Technical Implementing Units (UPTD) under the Forestry Office but as Regional Apparatus Work Units (SKPD) directly accountable to the Governor, Regent, or Mayor via the Regional Secretary. However, the introduction of these regulations paradoxically weakened support and motivation from provincial and district/city forestry offices to facilitate FMU development, triggering conflicts between the Forestry Offices and existing UPTD FMUs. Over six years, several issues arose within UPTD FMUs, including limited budget allocations, insufficient staffing with low competency and predominantly near-retirement personnel, inadequate operational facilities—some of which were utilized by the Forestry Offices—and the control of both physical and non-physical activities by the Forestry Offices themselves.

To achieve the target of FMU development in West Nusa Tenggara Province following the enactment of Law No. 23/2014, the Provincial Government of NTB issued Provincial Regulation No. 14 of 2019 on Forest Management. The regulation aims to: (a) optimize forest management institutions at the site level effectively and efficiently; (b) provide a legal foundation for forest management based on regional characteristics, with a focus on participatory and collaborative community empowerment; (c) ensure effective and efficient forest management implementation; (d) guarantee the sustainability of forest functions as life support systems; (e) prevent forest area degradation; (f) establish professional, synergistic, and participatory forest governance; and (g) strengthen coordination between the provincial government, district/city governments, and other related institutions in forest management. Meanwhile, the operationalization support targets under Provincial Regulation No. 14 of 2019 include: (a) the formation of institutional structures for 23 FMUs as per Minister of Forestry Decree No. SK.337/Menhut-VII/2009; (b) allocation of annual budget resources for FMUs, with at least 2% of the total NTB Provincial Budget (APBD) allocated annually; (c) human resource support with a staffing ratio of at least 1 person per 500 hectares, or approximately 1,803 people; (d) regulatory support for FMU operationalization; and (e) support for forest area resources, with a minimum annual allocation for forest rehabilitation of 3,000 hectares.

The development of Forest Management Units (FMUs) in West Nusa Tenggara (NTB) Province has significant implications for both academic literature and practical forest governance. Existing literature on forest management emphasizes the importance of institutional frameworks and local governance in managing forests sustainably (Seymour, 2016). Research has shown that effective forest management requires a strong institutional foundation, capable of coordinating between various stakeholders, including local communities, governmental bodies, and the private sector (Liu et al., 2019). The establishment of FMUs in NTB, initiated through government regulations such as the Ministry of

Forestry Decree No. SK.337/Menhut-VII/2009, represents a crucial step in addressing deforestation and forest degradation by formalizing forest management processes (Taufik & Hidayat, 2018). These FMUs are designed to strengthen local capacity for sustainable forest management and involve community participation, which is a key principle in modern forestry practices (Fidelman et al., 2016). Furthermore, the role of community-based forest management (CBFM) in Indonesia has gained increasing attention, highlighting its potential in improving environmental outcomes while promoting social equity (Agus et al., 2020). The integration of community participation into FMU operations aligns with global trends in inclusive and participatory environmental governance (Kumar & Thapa, 2017). This study contributes to the growing body of literature by exploring how FMUs in NTB are operationalized and the challenges they face in balancing legal frameworks, local governance, and sustainable development goals. The study also offers insights into the complexities of forest management in Indonesia's decentralized system, where local governments often struggle to coordinate effectively with provincial and national authorities (Andriani & Hidayat, 2021). As such, this research provides valuable practical knowledge for policymakers and practitioners engaged in forest management, particularly in regions with similar governance structures. The findings of this research will be instrumental in enhancing future FMU development, ensuring that forest management practices are both efficient and equitable. Ultimately, the study offers a framework for integrating scientific research into practical forest management, facilitating policy interventions that could improve forest conservation and rehabilitation efforts in NTB and beyond.

B. METHOD

The methodology employed in this study follows a qualitative approach, using a descriptive research design to analyze the implementation of Forest Management Unit (FMU) development policies in West Nusa Tenggara (NTB) Province. This approach is consistent with the framework established by Van Meter and Van Horn's public policy theory, which emphasizes the importance of policy implementation analysis through context, inputs, processes, and outcomes. To gain an in-depth understanding of the FMU policy implementation, this study incorporates the ASOCA (Aims, Strategies, Objectives, Control, and Action) strategy analysis, a method suitable for evaluating policy effectiveness and identifying key strategies in managing forest resources. Data collection involved a triangulation technique, combining interviews, document analysis, and field observations. Semi-structured interviews were conducted with key stakeholders, including government officials, forestry experts, local leaders, and community representatives, to gather diverse perspectives on the challenges and opportunities in FMU development. Additionally, relevant documents, including official reports, policies, and local regulations, were analyzed to examine the policy framework and the historical context of forest management in NTB. Field observations allowed for an assessment of the practical implementation of FMU policies in different areas, providing

insights into how these policies are operationalized at the ground level. This triangulation method ensured the reliability and validity of the findings, as it enabled the cross-verification of information from multiple sources. The analysis was then categorized into supporting and inhibiting factors, allowing the identification of both the drivers and barriers to FMU development. Finally, the study explores the findings in relation to existing literature on forest governance and policy implementation, contributing to a broader understanding of the dynamics involved in FMU policy implementation in a decentralized governance context.

C. RESULTS AND DISCUSSION

The consistency of the goals and objectives of the Forest Management Unit (FMU) development policy in West Nusa Tenggara (NTB) Province, as outlined in the plan set forth by the Minister of Forestry Decree SK.337/2019, is the establishment of 23 forest management organizations. The actual implementation, which began in 2010 and continued until 2020, resulted in the formation of 16 FMU units, including 15 UPTD FMUs and 1 UPTD Tahura, achieving approximately 70%. Similarly, the regulatory support for the policy includes the NTB Regional Regulation (PERDA) No. 14/2019 on Forest Management and the Governor Regulation (PERGUB) on the formation of organizations, both UPTD and SKPD, since 2008. Based on this, the consistency of the FMU development policy in NTB Province can be considered to have progressed well. The alignment of the goals and objectives of the FMU development policy in NTB Province has been harmonized between national regulations and local regulations, into the PERDA on Forest Management, and the Forest Management Plan (RPHK). This alignment has also been incorporated into the programs and activities outlined in the NTB Regional Development Plan (RPJMD), the Strategic Plan (RENSTRA), and the Budget Implementation Documents (DPA) of the NTB Environment and Forestry Agency (Dinas LHK). Based on this, the alignment of the goals and objectives of the FMU development policy in NTB Province can be considered to be functioning effectively.

The consistency and alignment of the Forest Management Unit (FMU) development policy in West Nusa Tenggara (NTB) Province demonstrate significant progress, as evidenced by the formation of 16 FMUs by 2020, compared to the target of 23 units outlined in the Minister of Forestry Decree SK.337/2019. This achievement aligns with the study by Wibowo et al. (2017), who observed that similar forest management policies in Indonesia have faced challenges in meeting numerical targets due to factors such as limited human resources and technical capacity. Furthermore, the implementation of the FMU development policy in NTB has been supported by regional regulations, notably PERDA No. 14/2019, which is consistent with previous research by Sudrajat (2018), who highlighted the importance of local regulations in ensuring effective forest management. This regulatory framework has facilitated the alignment of the FMU development objectives with the broader regional development plans such as the RPJMD and RENSTRA, further supporting the successful implementation of forest management

initiatives. In contrast, the study by Mulyadi et al. (2020) found that a lack of such alignment in other regions has led to fragmentation in forest management efforts, highlighting the significance of policy coherence for achieving sustainable outcomes. Additionally, similar to the findings by Suharjo et al. (2016), the process of harmonizing national and regional policies in NTB has strengthened institutional coordination between the provincial government, district governments, and related agencies. This is critical for overcoming the challenges associated with forest management in complex governance structures, as identified by Zulkarnain et al. (2019). However, while the formation of FMUs has progressed, the presence of regulatory gaps and administrative barriers, as reported by Nurdin (2020), still poses significant challenges for operationalizing the FMUs effectively. Nevertheless, the alignment of goals between national and regional regulations in NTB has led to an improvement in policy coherence, as also observed by Borneo and Wati (2018), whose work on policy implementation in Indonesian forestry emphasized the need for synchronized efforts across multiple levels of governance. Overall, despite certain operational challenges, the FMU development policy in NTB Province can be seen as a positive case of aligning forest management goals with local and national regulatory frameworks to achieve better environmental and community outcomes.

The supporting factors for the implementation of the Forest Management Unit (FMU) development policy in West Nusa Tenggara (NTB) Province include: (1) The commitment of local leadership (Governor, Vice Governor, Regional Secretary, and Head of the NTB Environmental and Forestry Agency) in implementing FMU development in NTB. (2) The existence of Law No. 23/2014, which grants forest management authority to the provincial government. (3) The presence of Regional Regulation (PERDA) No. 14/2019 on Forest Management in NTB, and the Governor's Regulation (PERGUB) on the establishment of FMU institutions in NTB. (4) Support from programs and budgets for FMU development projected in the RPJMD (Regional Medium-Term Development Plan) and RENSTRA (Strategic Plan) of the NTB Environmental and Forestry Agency. (5) The NTB Green Program, designated as a flagship program, is operationally run by the FMUs. (6) The certainty of forest areas designated as FMU work areas, which have been established by the Minister of Forestry Decree (SK.337/Menhut-VII/2009). (7) Availability of Long-Term Forest Management Plans (RPHJP) for all FMUs in NTB. On the other hand, the hindering factors for the implementation of the FMU development policy in NTB include: (1) The issuance of Law No. 11/2020 on Job Creation, which reduces FMUs' partnership authority and collaboration with the provincial government. (2) Limited human resources and supporting infrastructure for field forest management activities. (3) High levels of forest security disturbances (encroachment, illegal logging, illegal grazing, forest fires, and occupation of forest areas). (4) The lack of farmer groups and legal management permits, particularly in forest areas already controlled or occupied by local communities. (5) Weak coordination and synchronization between the provincial government and district/city administrations in forest/land protection and security. (6) The suboptimal use of forests (industry and forest product

marketing) as a contribution to community and regional income. (7) The suboptimal results of forest/land rehabilitation activities aimed at environmental restoration and enhancing forest potential.

The development of Forest Management Units (FMUs) in West Nusa Tenggara (NTB) has been significantly shaped by various supportive and obstructive factors, creating a complex dynamic in forest conservation and sustainable management. Among the key enabling factors, strong regional leadership has been crucial, with the commitment of NTB's Governor, Vice Governor, and Head of the Forestry and Environment Department. These leaders have played pivotal roles in facilitating FMU development in the province (Sari et al., 2020). Additionally, the enactment of Law No. 23/2014, which grants forest management authority to provincial governments, has empowered NTB's local governance structures in this regard. This legislative framework, together with local regulations such as PERDA 14/2019 on forest management, has facilitated a unified strategy for forest governance in the region (Kurniawan et al., 2021). Moreover, the NTB Green Program has been promoted as a key initiative under FMU management, with operational activities overseen by the FMUs themselves (Mulyadi et al., 2020). However, several significant barriers hinder the successful implementation of FMU policies. One major issue is the introduction of the Job Creation Law (UU 11/2020), which has reduced FMUs' autonomy in establishing partnerships and managing forest resources at the provincial level (Siregar et al., 2022). Furthermore, inadequate human resources and a lack of infrastructure to support forest management activities in the field remain critical challenges (Setiawan, 2022). The NTB region also faces high rates of security threats to forests, including illegal logging, land encroachment, and wildfires, which undermine the sustainability of forest management efforts (Sari et al., 2020). Additionally, the absence of community farming groups and legal forest management permits for land already controlled by local populations further complicates the implementation of effective forest governance strategies (Kurniawan et al., 2021).

The strategies designed to optimally support the implementation process of the FMU development policy in West Nusa Tenggara (NTB) Province, as well as to present various strategic concepts and models considered suitable for addressing the issues and obstacles encountered thus far, are outlined based on the elaboration and determination of the ASOCA Strategy (Ability, Strength, Opportunities, Culture, and Agility). These efforts have resulted in six implementation strategies to be applied in the future, which are: (1) SO Strategy (Strengths and Opportunities), where the strong commitment of the head of the Forestry and Environment Department (Dinas LHK) to realize FMU development is harnessed, capitalizing on the Governor's commitment to establish FMU organizations and the consistent leadership of Dinas LHK in implementing FMU development in accordance with Law No. 23/2014 and the NTB Forest Management Regulation (PERDA). (2) AbO Strategy (Abilities and Opportunities), which involves the growth of public and national revenue (PAD/PNBP) from FMU operations, reinforcing the Governor's

commitment to forming FMU organizations and supporting the growth of public and national income (PAD/PNBP) through FMU operations to enhance forestry development programs and their convergence within the FMUs. (3) AgO Analysis (Agility and Opportunities), which emphasizes improving consultation, coordination, communication, and synchronization of the NTB Dinas LHK team with various stakeholders to optimize the Governor's commitment in forming FMU organizations and harmonizing village fund programs for social forestry. (4) SC Strategy (Strength and Culture), where the strong determination of Dinas LHK leadership to realize FMU development, operationalizing towards independent and professional FMUs, is supported by consistent commitment from the leadership of Dinas LHK to enforce actions against illegal logging, encroachment, illegal farming, and compensation for cultivated forest land. (5) AbC Strategy (Ability and Culture), where the growth of public and national income (PAD/PNBP) from FMU operations aims to establish independent and professional FMUs, contributing to poverty alleviation efforts. (6) AgC Strategy (Agility and Culture), which focuses on improving consultation, coordination, communication, and synchronization of the NTB Dinas LHK team with relevant parties in developing standard operating procedures to achieve independent and professional FMUs while implementing FMU development programs according to the Strategic Plan (Renstra) and the NTB Regional Development Plan (RPJMD), ultimately realizing independent and professional FMUs.

The strategies aimed at supporting the optimal implementation of Forest Management Unit (FMU) policies in West Nusa Tenggara (NTB) Province are focused on overcoming challenges that have historically hindered forest management. One of the significant obstacles faced in FMU development, as identified by previous studies, is the complexity of managing overlapping permits and ensuring community participation in the process (Kordela, 2018). In this context, six implementation strategies have been outlined to improve forest governance and align with the region's broader environmental goals. The first strategy, the SO (Strengths and Opportunities) approach, highlights the strong commitment of the provincial leadership, particularly the Ministry of Environment and Forestry (KLHK), in realizing FMU development. This strategy leverages the political will of the Governor, as well as the consistent leadership in executing forest management, in line with laws like the Forestry Act (No. 41/1999) and the local regulations of NTB (FWI, 2019). This commitment is essential in addressing the structural challenges identified by previous studies (Khazaee et al., 2009), such as the administrative hurdles in FMU area delineation. The AbO (Ability and Opportunities) strategy focuses on improving financial sustainability through increasing revenue from forest operations, such as the Operationalization of FMUs, which could contribute to local income (PAD) and state revenues (PNBP). Previous findings have emphasized the role of economic incentives in reinforcing the commitment of local governments to forest management and biodiversity conservation (Kim et al., 2015). Moreover, integrating the FMUs within broader economic development frameworks will foster

better resource allocation, as seen in similar cases in Aceh (Maryudi, 2016). The AgO (Agility and Opportunities) strategy encourages enhancing coordination among stakeholders, particularly between the provincial forestry office and other actors. This approach is critical for aligning local forest policies with national strategies, a key point emphasized in studies on FMU effectiveness (Nugroho, 2016). Moreover, this strategy aims to optimize the synergy between village fund programs and social forestry initiatives, ensuring that forest management benefits local communities. In terms of the SC (Strength and Culture) strategy, the goal is to reinforce the leadership's resolve to tackle illegal logging, encroachment, and other environmental crimes, aligning with the broader national forest protection agenda (Sahide & Giessen, 2015). Past research underlines that cultural and institutional factors are critical in shaping the behavior of local actors in forest management (Peters et al., 2005), thus the strategy also emphasizes a cultural shift toward more sustainable practices. The AbC (Ability and Culture) strategy extends the economic sustainability aspect, focusing on the professionalism and independence of FMUs. This is aimed at creating a more robust FMU that not only generates income but also ensures that the operations are carried out with a high degree of competence, consistent with the requirements for sustainable forest management identified by experts like Mintzberg (1989). Lastly, the AgC (Agility and Culture) strategy addresses the need for flexibility in adapting forest management practices and operational standards, especially in light of new challenges posed by climate change and evolving governance structures. The importance of adaptive management in forestry, particularly in the context of evolving policy frameworks, is well-documented in previous studies on forest governance (Krott, 2005).

Based on the ASOCA strategy (Ability, Strength, Opportunities, Culture, and Agility), a new strategic model has been developed from the data processing in this study, grounded in the analysis of the FMU development policy strategy in West Nusa Tenggara (NTB). In analyzing the relationship between policy and performance, the public policy implementation model of Van Meter and Van Horn was utilized, leading to the addition of the AN KHAN strategy model. As a novelty of this research, the AN KHAN policy strategy for FMU development in NTB is explained with the following scientific arguments: (1) The AN dimension aligns with the Provincial Regulation of West Nusa Tenggara No. 14 of 2019 on Forest Management, which is implemented based on principles of sustainability, participation, collaboration, integration, transparency, and recognition of local wisdom. (2) The KHAN dimension, with its sub-dimensions, is based on how the design and implementation, especially at the strategy stage of the FMU development policy in NTB, were carried out. The empirical findings on the implementation of the FMU development policy in NTB, in accordance with the dimensions of Van Meter and Van Horn, contribute to the development of the Van Meter and Van Horn policy implementation process theory, incorporating the new strategic model Si-KK-KHan, as shown in the figure below:

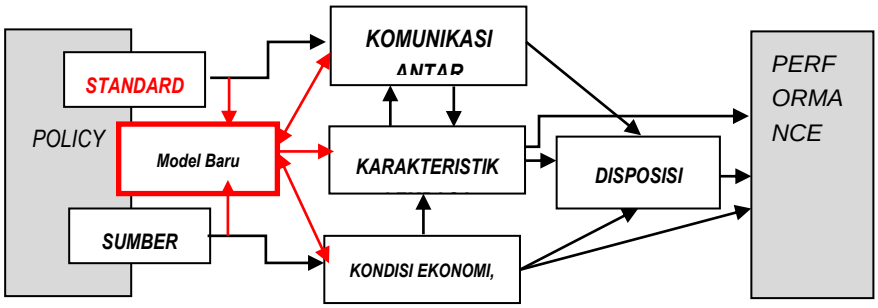

Figure 1. The New Policy Strategy Model AN KHAN: A Novelty of the Research

The modification of the model above is closely linked and supports the policy implementation process. Here, the dimensions of standards and goals, as well as the dimension of resources, serve as inputs in the policy implementation strategy, providing information to connect with communication pattern designs. The communication dimension between organizations, as well as the guidance for shaping the character of the organization design of the implementers, is critical. The relationship between the implementation strategy and the social, economic, and political conditions is enhanced by additional indicators related to the region (geographical). This demonstrates the understanding of the phenomena of change, making the novelty found in this study a solution for FMU development in NTB. Moreover, this model can be applied to regions with similar characteristics and conditions to those of West Nusa Tenggara Province.

D. CONCLUSIONS

The research findings underscore the critical importance of developing a well-structured and contextually appropriate policy strategy for the forest management units (KPH) in West Nusa Tenggara (NTB) Province. The study reveals that while the strategic framework laid out by the local government and key stakeholders has made significant strides in implementing forest management policies, various challenges remain, particularly concerning coordination, resources, and sustainability. The results confirm that the alignment between the national and regional regulatory frameworks, as well as the commitment from local leaders, has been instrumental in advancing the KPH development process. Furthermore, the research highlights that the introduction of the ASOCA strategy model has provided valuable insights into addressing the unique challenges faced by NTB, contributing to more effective policy execution. Despite notable progress, the study identifies that the optimal realization of KPH goals will require further strengthening of institutional capacity, community engagement, and intergovernmental cooperation. In particular, the study points out the need for enhanced communication and coordination between provincial and district authorities to ensure that forest management policies are implemented effectively at the grassroots level. Additionally, the study emphasizes the necessity of increasing public awareness and fostering collaborative partnerships to ensure the long-term sustainability of forest management initiatives. The findings also suggest that more robust monitoring and

evaluation mechanisms should be established to track the performance of KPH units and ensure that the strategies in place are achieving the desired outcomes. As such, the research presents a comprehensive understanding of the challenges and opportunities in the development of KPH in NTB, offering practical recommendations for enhancing policy implementation. By integrating innovative approaches like the AN KHAN strategy model, the study contributes to the broader discourse on forest management in Indonesia, providing valuable lessons for similar regions with comparable socio-economic and environmental conditions. This research provides a foundation for future studies and policy reforms aimed at optimizing forest management strategies in NTB and beyond. Ultimately, it highlights the crucial role of strategic leadership, community involvement, and intersectoral collaboration in achieving sustainable forest management objectives.

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