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Collaborative governance in food policy affairs: an examination of peatland damage mitigation strategies In Sungai Apit Regency, Indonesia

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Abstract

The degradation of peatlands attributable to anthropogenic activities, including the conversion of land for agricultural purposes and unsustainable land use practices, has culminated in a reduction of local food productivity and has adversely impacted food security in the Sungai Apit Subdistrict of Siak Regency, Indonesia. This research endeavor seeks to critically assess the efficacy of collaborative governance in the amelioration of peatland degradation and its ramifications on food policy. The methodological framework employed in this study is qualitative descriptive, utilizing data collection techniques that encompass comprehensive interviews, empirical field observations, and rigorous document analysis. The results indicate that institutional frameworks and leadership dynamics are pivotal dimensions that significantly affect the efficacy of collaborative efforts, notwithstanding the observed weakness in coordination among stakeholders. The predominance of governmental authority in decision making processes, coupled with a general lack of public awareness regarding the significance of peatland conservation, constitutes substantial barriers to progress. As a strategic intervention, the implementation of food diversification initiatives, such as the cultivation of hybrid coconuts, maize, and sweet potatoes, is advocated to mitigate reliance on rice and to enhance local food security. The study advocates for the fortification of participatory platforms, the enhancement of cross-sectoral coordination, along with community empowerment through educational programs and innovations in eco-technology. By adopting a more inclusive approach to collaborative governance, there exists a potential to foster sustainable food systems within regions characterized by vulnerable ecosystems, such as peatlands.

Keywords: *collaborative governance, peatlands, food policy, mitigation strategies*

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Introduction

Food security represents a significant global challenge due to climate change, ecosystem degradation, and rapid population growth (Brown et al., 2021; Marta et al., 2024). National-level food policies in many countries are limited, especially regarding the integration of diverse stakeholder perspectives on food security (Mockshell & Birner, 2015). Addressing these issues necessitates a pluralistic and inclusive policy approach to achieve effective outcomes. Food security encompasses not only health, but also economic, social, and environmental dimensions (Saint Ville et al., 2017).

According to the findings of the Central Statistical Agency, rice production in Indonesia between January and May 2021 attained a volume of 17.51 million tons. In the context of Riau Province, the recorded rice harvest area for the year 2020 was 64.73

thousand hectares, yielding a production output of 243.69 thousand tons. Furthermore, a significant concern remains regarding the food security status of Riau Province, which is notably low, attributable to the predominance of certain stakeholders in determining food policy in the region, particularly the Food, Crop, and Horticulture Department of Riau Province. Initiatives aimed at augmenting food production represent a critical component of successful food security development. However, currently, the enhancement of food production is not accompanied by effective measures to mitigate food insecurity, which signifies the inability of the population to access adequate food an undesirable circumstance in the context of food development in any nation, as food insecurity not only impacts nutritional adequacy but can also precipitate social, political, and security vulnerabilities (Ariani & Hermanto, 2013). Food insecurity manifests in two distinct forms: chronic and transient. Chronic food insecurity refers to the persistent unavailability of food resulting from a household's inability to procure necessary sustenance due to poverty, whereas transient food insecurity denotes temporary reductions in food access caused by circumstances such as natural disasters (Mahfi et al., 2008).

Sufficient food availability within a region serves as an indicator of the population's capacity to meet their food consumption needs. This implies that regions characterized by high or adequate food availability are likely to reflect more favorable conditions regarding food consumption (Febriamansyah & Tarumun, 2015). Despite the elevated levels of food availability in Riau Province, this metric does not accurately represent the food consumption patterns of its populace; quantitatively, it surpasses the recommended adequacy standard of 2,000 kcl/cap/day as stipulated by the National Food and Nutrition Widyakarya. Nevertheless, in terms of quality, the situation remains suboptimal due to the insufficient diversity, nutrition, and balance in the dietary patterns of Riau residents. Food security is intricately linked to various stakeholders and the processes involved in developing strategic interventions.gi, and food governance arrangements (Doernberg et al., 2019).

The challenges encountered are attributed to the inadequate collaborative governance that encompasses governmental entities, the private sector, and local communities in addressing the issue of peatland degradation. Despite the initiation of various projects, the level of coordination among stakeholders remains insufficient, thereby engendering discrepancies in the execution of sustainable food policies. The significance of orchestrating stakeholders within a unified framework of policies and objectives necessitates cross-sectoral collaboration to effectively engage with food policies and initiatives implemented by governmental bodies, private enterprises, and local agricultural producers. Consequently, integration emerges as a fundamental aspect of the food system, wherein inter-sectoral, cross-scale, and interconnected actors can function optimally (Arcuri et al., 2022). Nonetheless, the complexity of policy transformation is contingent upon the extent of institutionalization of public policy, with the robustness or fragility of such institutionalized policies varying across sectors, including the Food Agriculture sector, which is no exception (Alpha & Fouilleux, 2018). The quantity of food actors, such as private organizations, governmental agencies, and business entities engaged in the political economy of food security and sustainability, has witnessed a significant increase. This evolution has led to a reconfiguration of food policy concerns that now interface with emergent challenges, including climate change and the political economic dynamics pertaining to the sustainability of food security (Swinnen & Vandevelde, 2018).

On the contrary, peatlands serve a pivotal function in fostering environmental sustainability and facilitating local food production. Nonetheless, anthropogenic activities, including the conversion of land for agricultural purposes and unsustainable land transformation practices, have inflicted considerable harm upon peatlands. In the Sungai Apit District of Siak Regency, the degradation of peatlands has a direct correlation with the decline in food productivity and an escalation in the community's reliance on external food supplies. This scenario heightens the vulnerability of sustainable food security within the region, necessitating coordinated policy interventions. The significance of Collaborative Governance in mitigating peatland degradation and enhancing food production in the Sungai Apit Regency cannot be overstated. Consequently, the collaborative governmental approach towards addressing peatland degradation and bolstering food production in the Sungai Apit Regency is anticipated to serve as a crucial solution in efforts to optimize the agricultural sector's performance. Fundamentally, Collaborative Governance encompasses initiatives undertaken by various stakeholders to achieve a shared objective or concept that defines the cooperative dynamics among specific parties. An examination of existing literature reveals that the majority of prior investigations have predominantly concentrated on the technical or environmental dimensions of peatlands, while the facets of multisectoral collaboration within the framework of local food policy remain insufficiently addressed (Albintani et al., 2025).

This research endeavors to assess the efficacy of collaborative governance in addressing the degradation of peatland ecosystems and its subsequent implications for food policy within the Sungai Apit Regency. In particular, this investigation aims to: (1) examine the structural arrangements of institutions, patterns of leadership, and collaborative mechanisms that engage principal stakeholders; (2) ascertain both facilitators and obstacles encountered in the enactment of collaborative governance; and (3) offer actionable recommendations for the formulation of sustainable food policies in areas characterized by fragile ecosystems, such as peatlands. The anticipated outcomes of this research are expected to yield novel insights for policymakers in the construction of adaptive and inclusive strategies aimed at enhancing food security.

While the body of research concerning collaborative governance and food security has expanded significantly, there remain considerable deficiencies in the examination of the dimensions of multisectoral collaboration within the framework of local food policy in areas with ecologically vulnerable systems such as peatlands (Carrad et al., 2022). A majority of earlier investigations have predominantly concentrated on either technical or environmental considerations, neglecting the complexities inherent in the interactions among stakeholders (Grech et al., 2020). Furthermore, the dearth of studies that incorporate local viewpoints in the management of natural resources renders the existing literature less applicable to the Indonesian milieu. This research endeavors to address this deficiency by offering a comprehensive analysis of how diverse actors across various sectors can effectively contribute to the resolution of these intricate challenges.

The originality of this investigation resides in a holistic methodology that amalgamates collaborative governance with the mitigation of peatland degradation and food policy at the localized level. This inquiry not only enhances the theoretical framework of collaborative governance but also furnishes actionable insights for policymakers in formulating sustainable food security initiatives (Arcuri et al., 2022). By concentrating on the Sub-Regency of Sungai Apit as a case study, this research provides a distinctive contribution to the existing body of literature by underscoring the

significance of institutional frameworks, leadership dynamics, and collaborative mechanisms in the governance of peatlands. The findings of this research are anticipated to serve as the foundation for the formulation of collaborative models that may be adapted in other regions exhibiting comparable ecological characteristics.

Research Methods

This investigation utilizes a qualitative descriptive methodology to examine the social phenomena related to the execution of collaborative governance in the alleviation of peatland degradation and its ramifications for food policy (Fadli, 2021). This methodological approach was selected to elucidate interactor relationships, collaboration dynamics, and the various factors that influence the efficacy of governance policies (Brugha & Varvasovszky, 2000; Reed et al., 2009) The data utilized in this study is derived from both primary and secondary sources. Primary data was acquired via comprehensive interviews with pivotal stakeholders, such as the Head of the Siak Regency Food Security Agency, Tri Handro Pramono, the Head of the Food Security Unit (UPT) of the Sungai Apit Regency Food Agency, M. Nasir; the Head of Sungai Apit Sub-district, Tengku Muktasar; NGOs, the Center for International Forestry (CIFOR), and the Farmers' Group (GAPOKTAN), as well as traditional leaders of Sungai Apit Regency. Additionally, field observations were performed to gain insights into the conditions of peatlands, as well as the dynamics of interactor collaboration. Conversely, secondary data was gathered from official policy documents, governmental reports, statistical information from the Central Statistical Agency, along with pertinent scholarly articles.

The data collection methodologies encompass comprehensive interviews and observational field studies. Furthermore, extensive interviews were administered to investigate the perspectives and experiences of stakeholders concerning peatland management policy and food security (Saint Ville et al., 2017). Additionally, observational field studies were performed to ascertain the conditions of peatlands and the dynamics of collaboration within the research environment.

Technical data analysts engage in systematic inquiry; initially, the data is distilled to streamline and extract pertinent information pertinent to the primary focus of the investigation. Subsequently, the distilled data is manifested in the form of descriptive narratives, tabular representations, and visual diagrams to elucidate patterns of collaboration, delineate the roles of various stakeholders, as well as to identify factors that exert influence on food policy. Finally, the process of drawing conclusions is conducted iteratively by referencing the theoretical framework of collaborative governance to ascertain key findings, facilitating factors, and barriers in the context of peatland damage mitigation and its ramifications for food security. Through this methodological approach, the research aspires to furnish a holistic understanding of the efficacy of multisectoral collaboration in the pursuit of sustainable development objectives.

Results and Discussion

Description of Peatland Damage in Sungai Apit Regency

Sungai Apit Subdistrict constitutes one of the administrative subdivisions situated within the Siak Regency of Riau Province, with the elevation of the administrative center of the District Region being 2 meters above sea level,

accompanied by a minimum temperature recorded at 120°C and a maximum temperature of 28°C, alongside an average annual precipitation amounting to 3,487 mm/year. The Sungai Apit subdistrict, located in Siak Regency, Riau Province, is characterized by peatland ecosystems that exhibit a heightened susceptibility to degradation, particularly due to the occurrence of forest and land fires. The predominant catalyst for these conflagrations is anthropogenic activity, notably land clearing through incineration, which is further intensified by the exceedingly arid conditions prevalent in peatland and adjacent undergrowth. Such circumstances have precipitated a scenario where fires escalate in intensity, rendering them increasingly challenging to mitigate..

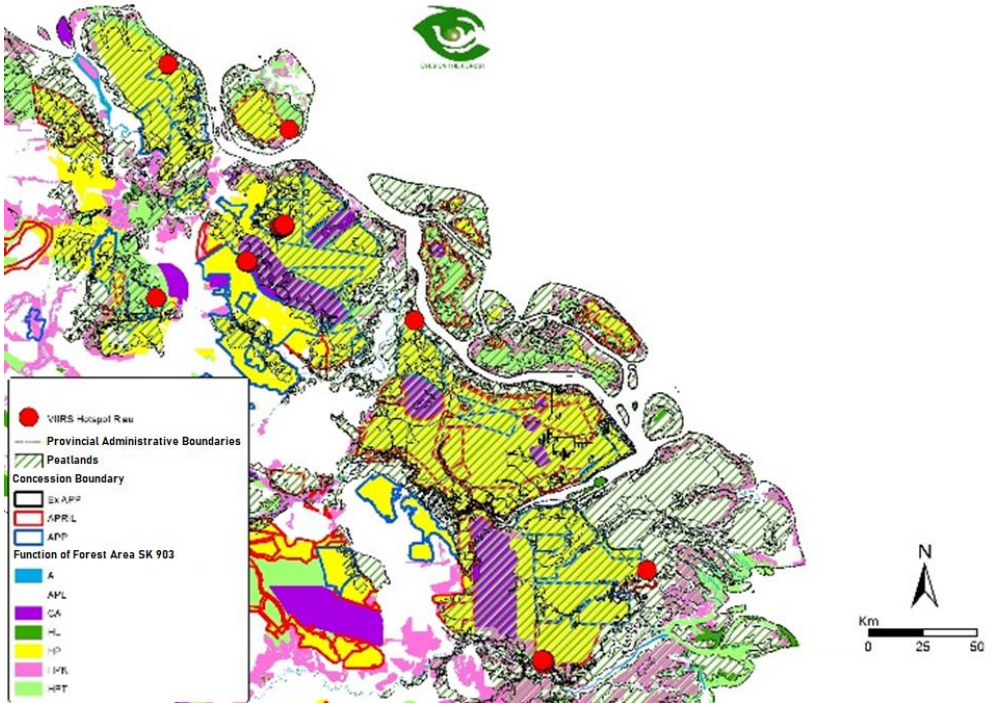

Figure 1. Peatland Fires

Source : processed by author

Figure 1 presented herein elucidates the spatial distribution of fire incidents within Riau Province for the year 2021, revealing a cumulative total of 59 identified fire occurrences situated within the peatland zone exceeding a depth of 4 meters. The majority of these localized occurrences exhibit a heightened susceptibility to combustion, which is particularly evident in areas designated for concession, characterized by elevated firepoint intensity. This distribution underscores the critical necessity for vigilant land fire monitoring in deep peat ecosystems, considering the considerable repercussions that fires have on carbon emissions and environmental deterioration. Furthermore, the prevalence of prominent fire points within concession territories signifies an imperative for enhanced corporate accountability and stewardship in land management practices, particularly in ecologically fragile peatland areas. Through a synergistic collaboration involving governmental entities, the private sector, and local communities, strategies for fire risk mitigation can be refined to bolster sustainable land management and alleviate additional ecological repercussions in the Riau region, specifically within the distinctive Siak districts of the Suangi Apit subdistrict.

Insecurity zoning shows that the Sungai Apit Subdistrict is in an area with a high to very high risk of fire. This is influenced by environmental issues, like the easily

ignitable nature of peatlands, as well as social and cultural practices, such as land clearing through burning and disputes over land use. To combat peatland damage caused by fires, thorough prevention and management actions are necessary (Prayoga et al., 2024). One of these actions was the adoption of no-burn farming methods by local residents (Ekawati et al., 2024). Therefore, peatland damage in the Sungai Apit Regency is primarily due to fires started by human actions and worsened by environmental conditions. Preventive initiatives through education and the use of sustainable no-burn farming methods are vital steps to ensure the longevity of peatlands in the area.

Collaborative implementation of peatland goverment to food policy in Sungai Apit

In particular, the collaborative efforts of the government in mitigating peatland degradation and their subsequent influence on food policy within the Sungai Apit Sub-district will present several fundamental political alternatives regarding the modalities of transitioning to a more sustainable food system (Candel & Pereira, 2017). The impediments to resilience exhibited by policymakers, as elucidated in this study, align with prior evaluations of Agricultural Policy which indicated that food policy, characterized by insufficient support for adaptability, conversely stifles transformative potential (Buitenhuis et al., 2020) The leadership within this framework orchestrates previously disparate stakeholders and initiatives under a unified policy and objective framework by engaging in cross-sectoral collaboration, involving food policies and programs implemented by governmental bodies, private entities, and local agricultural producers. Consequently, the integration of various sectors, scales, and associated stakeholders is essential for the optimal functioning of the food system (Arcuri et al., 2022).

In the examination of governmental collaboration pertaining to the mitigation of peatland degradation and its consequent effects on food policy ,(Kabullah, 2022) this research endeavors to elucidate the dynamics of governmental collaboration in the context of peatland damage mitigation and its ramifications for food policy. Elements influencing the collaborative governmental efforts in peatland damage mitigation and their implications for food policy within the Sungai Apit Regency are also addressed.

Collaborative Governance fundamentally examines the foundational circumstances pertaining to institutional architecture, leadership dynamics, and the collaborative mechanisms enacted by each participant (Suparni, 2024; Wismayanti, 2024; Yamin et al., 2024)**.** The Food Policy within the Sungai Apit Regency encompasses foundational conditions, institutional frameworks, leadership paradigms, and collaborative processes. Furthermore, the findings derived from interviews pertinent to this investigation reveal a spectrum of divergent perspectives and highlight the principal actors involved in Peatland management and their consequential influence on Food Security policies in the Sungai Apit Regency.

Subsequently, the outcomes derived from interviews conducted with each stakeholder participating in the Collaborative Governance framework concerning peatland degradation mitigation and its ramifications on agricultural policy were subjected to comprehensive analysis to elucidate the diverse perspectives pertaining to the Collaborative Governance framework in the management of peatland degradation and its influence on agricultural policy within the Sungai Apit Regency, as detailed below.

Table 1. Government Collaboration in Controlling Peatland Damage

Stakeholders	Description
Siak Regional Government	Identifying the importance of data-driven policies for mitigating peatland degradation. However, the Siak government tends to dominate decision-making without inclusively involving other actors.
Private Sector	Contributed by providing agricultural equipment and plant seeds, but felt less involved in the policy planning stage.
Farmers and Local Communities	Farmers are often passive participants in Siak government programs. Local communities have little awareness of the importance of peatland conservation.

Source: processed by author, 2025

The agricultural stakeholders expressed a sentiment of insufficient governmental recognition, contending that they were relegated to mere self-reliance alongside the community. Consequently, it is imperative that the institutional framework is further reinforced within the context of Government Collaboration to effectively manage peatland degradation and the resultant food policies in the Sungai Apit Subdistrict. Both private entities and governmental bodies have endeavored to establish a cooperative framework for the formulation of a 2023 Collaborative Government initiative aimed at mitigating peatland degradation while devising food policies that are compatible with the agronomic conditions prevalent in the Sungai Apit Regency. The Collaborative Government has also enhanced the participation of diverse sectors, facilitated by the engagement of the Center for International Forestry Research (CIFOR), with support from the Temasek Foundation (TF), World Agroforestry, and Singapore Cooperation Enterprise (SCE), alongside partnerships with universities in Riau, Sedagho Siak, and Siak Hijau.

The actor representing the agricultural sector posits that there exist two preeminent components within the Collaborative Governance framework concerning the mitigation of peatland degradation and its repercussions on food policy, specifically the collaborative, institutional, and planning dimensions of the process (Emerson et al., 2012). Regarding the collaborative dimension, agricultural producers place heightened importance on institutional elements that are significantly shaped by overarching vision, mission, and methodologies for problem resolution, alongside the identification of shared values in collaboration, thereby enabling stakeholders to discern both the impediments and facilitators present within the collaborative framework being implemented. Subsequently, in relation to institutional design aimed at enhancing the efficacy of the agricultural sector in Siak Regency, a participatory forum was instituted involving governmental entities, private stakeholders, farmers, and agricultural organizations, with the objective of fostering a more systematic approach to institutional design. From the perspective of the various stakeholders engaged in Collaborative Governance for the mitigation of peatland degradation and its influence on food policy, it is apparent that collaborative governance is anticipated to serve as both a solution and a strategic approach to addressing peatland damage and its implications for food policy in Siak Regency. Nevertheless, the collaborative process necessitates a genuine commitment from all stakeholders involved.

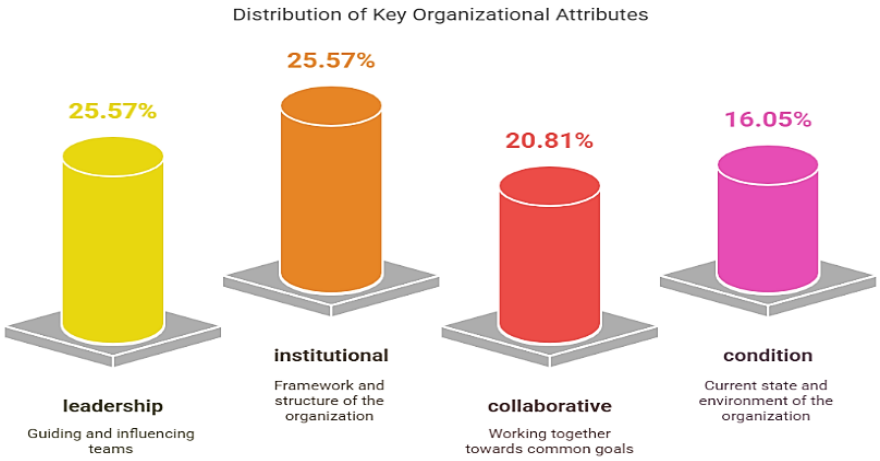

Figure 2. Distribution of key organizational
Source: processed by author

Figure 2 illustrates the collaborative governance framework pertinent to food diversification within the Sungai Apit Subdistrict, characterized by four predominant dimensions: leadership pattern (25.57%), institutional framework (25.57%), collaborative efforts (20.81%), and initial conditions (16.05%). The dimensions pertaining to leadership pattern and institutional framework emerged as the most salient factors, bolstered by the commitment of the Siak Regency Government to mitigate peatland degradation and its ramifications on food policy. Furthermore, the engagement of the private sector enhances these initiatives through the provision of agricultural machinery and crop seeds to support farmers and local communities. Nonetheless, the execution of this collaborative model is confronted with considerable obstacles, particularly within the dimensions regarding the collaborative process and initial conditions. The disparity in roles among the participating actors constitutes a significant impediment, as the government sector exhibits a predominant influence, while other stakeholders, including farmers, the general public, and the private sector, are engaged only to a marginal extent. (Kamath et al., 2019) This imbalance not only engenders social inequities but also complicates the collaborative dynamics and obstructs the realization of sustainable food sovereignty (Dewi, 2023)

While the leadership aspects of pattern and institutional design have made progress, these two areas still need to be strengthened with clearer government objectives. Finding the right balance in roles is crucial for fostering shared commitments that can enhance collaborative governance in peatland damage control and sustainable food policy development. Effective collaboration involves the systematic integration of four main components: initial conditions, institutional design, pattern leadership, and strategic collaboration processes (Suparni, 2024). Successfully combining these components can serve as a basis for adaptive and sustainable management of food diversification, addressing ecological and social challenges.

Factors Supporting and Inhibiting Collaborative Goverment

Collaborative governance in managing peatland damage in Sungai Apit Regency includes multiple stakeholders, such as the government, local communities, self-help groups, academic institutions, and businesses. Several factors affect how well this collaboration works and its influence on regional food policies. Partnerships that include participants from various sectors, like local authorities, farmers, indigenous

groups, and plantation businesses, can enhance the effectiveness of peatland damage management policies. Broader participation can create more effective policies by considering diverse viewpoints. Governments play a crucial role in establishing policies and regulations that promote sustainable management of peatlands. The engagement of both local and national governments significantly shapes the collaboration's approach and effectiveness.

Tabel 2. Factors Supporting and Inhibiting

Supporting Factors	Multiple strategic policies have served as pivotal elements in the mitigation of peatland degradation and the enhancement of food security. The Government of Siak Regency, in collaboration with private entities such as the Center for International Forestry Research (CIFOR) and the Temasek Foundation, has launched an initiative aimed at promoting the cultivation of hybrid coconut as a primary agricultural commodity. Furthermore, the provision of training and mentorship for agricultural collectives further facilitates the implementation of sustainable agricultural practices that are more ecologically sound.
Inhibitory Factors	The preeminence of governmental authority in the decision-making process, while neglecting to comprehensively engage other stakeholders, represents a significant impediment. There exists a marked deficiency in coordination among governmental entities, private sector participants, and the public sphere. Furthermore, the absence of clearly defined roles among stakeholders exacerbates the efficacy of collaborative initiatives. Additionally, local communities exhibit a limited awareness regarding the critical importance of peatland conservation, resulting in diminished support for initiatives aimed at ecosystem preservation.

Source : processed by author, 2025

Table 1 outlines the teamwork elements of strategic governance that enhance production in Sungai Apit Subdistrict, focusing on the coordination between stakeholders. Upon deeper analysis, the coordination among stakeholders appears to be the most important factor because of the participation and support shown by stakeholders for food security growth in Sungai Apit Regency, where the Indonesian National Army in Siak Regency collaborates with the Food Security Service of Siak Regency to boost Food Security and reduce damage to Peatlands in Sungai Apit Regency.

The availability of precise information about peatlands' condition and the level of their damage, along with the resulting effects, is crucial for decision making. This information also forms the foundation for assessing and enhancing future policies. The presence of rules that regulate the use and protection of peatlands, including spatial regulations, land clearing guidelines, and penalties for rule-breakers, influences the collaboration process. If the regulations are too lenient, controlling peatland damage can become challenging. The awareness level of local communities about the significance of peatlands for ecosystems and food security also plays a role in the effectiveness of the collaboration. Educated communities that care about the environment are generally more supportive of conservation initiatives. Using suitable technology, such as tech-driven land monitoring techniques or sustainable farming practices, can aid in the collaboration for managing peatland damage. These advancements can boost land productivity without harming ecosystems. The availability of adequate funding and resources for peatland management programs, from both public and private sectors, will impact the success of this collaboration.

Tabel 3. The role of food policy control actors in Sungai Apit Regency

Actor	Role of the Actor
Governing	Local governmental entities at both the Regency/municipal and provincial tiers, alongside various other governmental components, are instrumental in the formulation of legislative regulations and in overseeing, endorsing, and facilitating the execution of programs aimed at food diversification.
Private	Facilitate and extend aid to agricultural methodologies and the infrastructural framework necessary for land cultivation for the inhabitants of Sungai Apit Regency.
Farmers and Actors Society	Administer agricultural land, enhance the yield of agricultural outputs and the accessibility of food resources, and supervise programs aimed at ensuring food safety.

Source : processed by author

Table 2 presented elucidates the engagement of various stakeholders in the collaborative efforts aimed at mitigating Peatland degradation, which encompasses a multitude of entities, including governmental bodies, private enterprises, local communities, and agricultural producers. Subsequently, each public and private stakeholder engages in collaboration through distinct methodologies and emphasizes varying potential outcomes. In an endeavor to enhance the efficacy of the agricultural sector within Siak Regency, the local government has issued directives to pertinent agencies regarding the critical nature of safeguarding agricultural land to ensure food security and bolster the performance of the agricultural sector; this has been complemented by dialogues with associated agencies. Nevertheless, the factor of coordination among stakeholders remains suboptimal due to the prevailing structural dominance exerted by governmental actors. Furthermore, social inequalities persist, which are exacerbated by the ambiguity and complexity surrounding membership that tends to manifest in an uneven distribution.

In relation to the factors influencing credibility among stakeholders, both the Food Security Service of Siak Regency and the Social Service of Siak Regency, alongside the governmental authorities of Sungai Apit Regency and the Central Business Department of Siak Regency, are actively engaged in enhancing the accessibility of local food resources. Nevertheless, the agricultural challenges within Siak Regency have yet to elicit an adequate response from the local government; nevertheless, viable commodities such as Hybrid Coconut, sweet potato, and corn remain capable of being independently cultivated by farmers and the community at large.

Furthermore, the degradation of peatlands compels alterations in agricultural practices, necessitating food policies to transition towards more sustainable methodologies, such as agroforestry or cultivation strategies that do not entail extensive land clearing. The reduction in food production resulting from land degradation also precipitates an increase in food prices, thereby jeopardizing the food security of individuals. A Collaborative Governance framework ought to be implemented in the management of peatland degradation and the formulation of food policies within the Sungai Apit Regency. This framework can be actualized through the enhancement of food production and the establishment of collaborative initiatives that equally engage local governments, the private sector, agricultural producers, and community members.

A comprehensive analysis of stakeholder perspectives revealed contradictions in the perceived roles of each actor. The private sector reported that its technical and logistical contributions have not been adequately acknowledged by government

authorities. In contrast, farmers and local communities identified insufficient transparency in decision-making processes and inadequate training to enhance capacity for sustainable peatland management. These conflicting perspectives highlight the necessity for a participatory and inclusive framework that ensures stakeholder recognition and facilitates the articulation of concerns.

Conclusion

The empirical findings indicate that Collaborative Governance pertaining to Peatland Damage mitigation and its repercussions on Food Policy within the Sungai Apit Subdistrict can be analyzed through the lenses of leadership dynamics, institutional frameworks, and cultural dimensions. The results elucidate that the degradation of peatland exerts a profound effect on the diminishment of local food productivity, thereby necessitating increased reliance on external food resources. While certain collaborative endeavors have been initiated, exemplified by hybrid coconut cultivation and the active participation of private entities, the efficacy of these collaborations remains constrained due to governmental predominance in decision-making processes, insufficient intersectoral coordination, and a general lack of public cognizance regarding the critical importance of peat ecosystem sustainability. The principal elements of collaborative governance, specifically institutional design and leadership dynamics, emerged as the most influential factors in fostering program efficacy. Nevertheless, the collaboration mechanism necessitates fortification, particularly in establishing trust among stakeholders and advocating for more inclusive engagement. In terms of food security, the diversification of food sources coupled with the advancement of ecologically sustainable agricultural technologies constitutes pivotal strategies aimed at diminishing dependence on specific commodities, such as rice, and enhancing the resilience of local food systems. Consequently, this research substantiates the notion that robust multisectoral collaboration serves as the cornerstone for the implementation of sustainable food policies in regions characterized by vulnerable ecological systems.

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