

Projection of Cooperation Schemes to Address Conflicts Over Spatial Planning Changes in Nusa Dua's Area Management System

Cavin Ornanando Simorangkir*, Givano Ramadhan, Triana Manalu, Muhammad Ali Sukran

School of Architecture, Planning, and Policy Development, Institut Teknologi Bandung, 40132, Indonesia

*Corresponding author: cavinornando@gmail.com

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ABSTRACT

Bali has become Indonesia's leading destination in the global tourism industry, attracting a growing number of investors and privatization efforts. Nusa Dua has been designated as a site for implementing contemporary tourism concepts in Bali, prompting repurposing several areas for new commercial initiatives. The transition has resulted in conflicts among stakeholders over the decades. This study aims to examine methods for addressing conflicts that occur due to Nusa Dua's spatial changes by identifying the key stakeholders of spatial planning with various interests. The analysis of stakeholders uses qualitative methods that include content analysis, stakeholder analysis, and literature review. DANA software version 1.3.3 is a semi-quantitative analysis used to determine the root cause of the conflicts. The result shows that conflicts over land use decisions are the most contentious in Nusa Dua's spatial planning policies. This conflict arises due to misunderstanding and misalignment in spatial planning, leading to policy implementation challenges. This study suggests resolving conflicts and enforcing spatial policies by improving stakeholder understanding and communication. A stronger legislative framework for tourism-related development, enhancing stakeholder cooperation schemes, and encouraging sustainable growth are recommended.

Keywords: Nusa Dua; Conflict; Stakeholder; Spatial Planning

INTRODUCTION

Institutional arrangements that include various stakeholders have a significant impact on the scope of tourism planning [1], [2]. However, it often prioritizes fulfilling the needs of tourists rather than the interests and sustainability of the destination [3], [4]. The institution arrangements should ensure the involvement of local communities in tourism planning due to the principle of sustainability, which is maintaining a balanced relationship between environmental conservation and human activities. [5], [6]. Hence, institutional arrangements are essential for promoting sustainable tourism development.

Indonesia is one of the countries that has made significant steps in integrating institutional frameworks into tourism development [7]. This approach enables collaborative monitoring of tourism impacts, exemplified in Bali Province. The intensity of tourist visits and activities has significantly affected the socio-cultural environment, ecology, and physical carrying capacity of various areas [8]. Bali, renowned as the tourism jewel of Indonesia, also faces numerous controversies in its destination development [9], [10], [11]. Nearly all regions in Bali possess tourism potential, with Badung Regency

standing out for its capacity to attract tourists and generate substantial Local Own-Source Revenue (PAD), particularly through The Nusa Dua, a favorite destination for visitors [12].

A retrospective look at 2010 reveals that Nusa Dua grappled with significant socio-economic challenges, particularly concerning power dynamics among the community, government, and private entities (investors). In his book *Nusa Dua: Model Pengembangan Kawasan Wisata Modern*, Nyoman Madiun discusses the contentious issue of local community participation in developing the Nusa Dua tourist destination, focusing on the expropriation of land for tourism. He writes: "What the community felt at that time was hegemonic pressures, both physically and mentally. Intimidation was the most common action experienced by the community, who were labelled as rebels and consistently displayed a defiant attitude in land negotiations with the authorities at that time [13]."

Another contentious issue is the proposed beach reclamation project in the Nusa Dua area, which has led to prolonged conflicts and raised concerns among local communities and tourists [14]. Academics have urged the Governor of Bali to halt the Benoa Bay reclamation plan, citing substantial opposition and violations of higher regulations [15]. The reclamation plan, which has sparked public rejection, is viewed as an overreach of higher regulations, specifically Presidential Regulation Number 45 of 2011 concerning Spatial Planning of the Urban Areas of Denpasar, Badung, Gianyar, and Tabanan. The absence of the Benoa Bay reclamation map in the regulation was the result of disapproval from the community, who accused the government of unilateral decision-making. The case of power imbalance in Nusa Dua has become a valuable lesson that emphasizes the importance of stakeholders' awareness of tourism development [16].

Zoning regulations and restrictions on public access to coastal areas as beaches blocked by privatization are the main concerns [17]. The existence of the Indonesia Tourism Development Corporation (ITDC) as the manager and developer of the Nusa Dua area has caused a conflict of power [18]. The interests of beach commercialization limit the community and reduce the power of local stakeholders to protect the beach by the rules of tradition and belief. Meanwhile, the long-term prosperity of the Balinese region has become evidence of the consistent respect for indigenous Balinese and traditional rules that have integrated tourism into daily life [19], [20]. Therefore, the dynamics of power and interests that fulfil the local community's needs must be evaluated in future policy changes [21]. Sustainable tourism development has to consider economic growth, environmental conservation, and cultural preservation through local involvement. The shifting focus from conflict to empowerment is an appropriate step in realizing that tourism should improve the Balinese community and its rich cultural heritage [22].

Previous researchers have stated the impacts of stakeholders' involvement in tourism development [23], [24], [25]. The relational complexity approach in spatial planning provides opportunities for various interests to formulate development strategies [26], [27]. All stakeholders must recognize local value as an important asset, which policymakers must consider despite resource limitations; it requires communicative and transparent collaboration [28], [29]. Collaboration must also address governance, funding mechanisms, and power configurations that are essential for effective planning implementation [30], incorporating coercive, legitimizing, inductive, and competency-based forms of management as key elements in enhancing the quality of collaboration [31].

However, few studies have focused on high-pressure tourism areas, like Nusa Dua, which has been plagued by conflict for decades. In improving the understanding of tourism planning, this study presents a reference for similar issues, especially in tourism development. As a destination that tourists and the environment highly influence, the dynamics of conflict and stakeholder interaction in Nusa Dua may expose power gaps. This study identified the function of cultural and institutional elements on stakeholder engagement. The conflict review comprehensively identifies the interconnectedness of governments, private entities, community engagement, and other relevant stakeholders. Through highlighting specific socio-cultural and environmental issues in Nusa Dua, the complex relationship between contemporary tourism planning challenges, local values, and traditional practices becomes essential in tourism planning. This study provides research gaps, recommends

practical implications on stakeholder conflicts in high-level destination development, and applies qualitative and quantitative approaches to understand the complexity of stakeholder interactions and interest dynamics.

This study thoroughly discusses the preparations required to integrate the public and private sectors into the tourism development agenda. Conflict political interests, the loss of community access rights to resources, and the community fighting for the right to control their assets have resulted in conflict escalation, which then hinders the progress of tourism development. Therefore, this study analyzes the projection of cooperation schemes among stakeholders in proposed Nusa Dua's changing spatial planning by examining institutional arrangements to resolve conflicts. It will help improve the working systems, policies, and strategies for managing spatial conflicts.

METHODS

The study of policy networks and collective decision-making is an important step in formulating, implementing, and being accountable for policy consequences [32]. Participating actors in the policymaking process need to be strategic thinkers who can foresee the moves and objectives of their network counterparts. It is more likely that policy measures will be effective in reducing conflict if more information is accessible about how each actor involved sees the situation and prospective adjustments [33]. Collaboration between actors in policy networks is crucial and actors are encouraged to have empathy in understanding the objective situation and reforms [34].

Actors' actions and perceptions influence each other, creating ever-evolving dynamics in the policy network and causing instability [35], [36]. Thus, analyzing policy networks or any form of collaboration or cooperation begins with comprehending these differences [37]. Understanding precedes identifying problems and opportunities, and evaluating the various possible sequences of events that may arise from potential actions. Once the actors' perceptions are explicitly modelled, it is necessary to understand and identify the core elements of these perceptions that are central to a problem and examine them more thoroughly. Constructing a Dynamic Actor Network Analysis (DANA) model, a system or method for managing the various perspectives or views of the involved actors will assist in understanding the decisions and directions of cooperation in public policy [38].

Based on the above explanation and the frequent conflicts of interest occurring in the Nusa Dua area, the concept of frame rationality becomes crucial. Frame rationality describes a rational choice made by an individual based on their subjective understanding and influenced by other actors involved in the situation [39]. The rational choice made by the involved actors will be processed using DANA software version 1.3.3 as a semi-quantitative analysis method. Case studies on projected cooperation in addressing spatial planning changes in the Nusa Dua area that are highlighted in this study include the practice of coastal area privatization, which remains a crucial issue related to spatial planning law; cooperation schemes associated with the existence of government and ITDC authority in managing the Nusa Dua area; and the existence of indigenous people and customary laws in the future.

The initial approach to managing the conflict in Nusa Dua began with mapping the actors or stakeholders involved [40]. This qualitative study uses a literature review to assess stakeholders based on their significance. It analyzes materials such as laws and regulations, local or regional policies, and various references from the mass media and online resources. Key actors in this study include the Nusa Dua Community Association, the Regency and Provincial Governments, the Indonesia Tourism Development Corporation (ITDC), investors, the Ministry of Finance, technical ministries, tourists, local NGOs, universities, and legislative bodies, all of whom are limited by their structural or functional positions and experience in the institutions or organizations they represent.

These key actors play an important role in the Nusa Dua conflict because they are involved in the decision-making process and directly influence policies and local communities. The Nusa Dua Community Association represents the interests of farmers, indigenous peoples, and traders affected by the development project. The Regency and Provincial Governments contribute to local policymaking, while technical ministries manage infrastructure and natural resource management.

ITDC and investors lead tourism development, which affects spatial planning and the local economy, while the Ministry of Finance and legislative bodies (DPR and DPRD) control the project's budget. Tourists serve as consumers, determining the tourism sector's success, and local NGOs and universities evaluate social and environmental impacts, advocating for a balance between development and preservation. These strategic positions make them as key actors who shape the direction and intensity of conflicts related to Nusa Dua's development.

Initial data collection on the target population was conducted based on the primary duties and functions of each institution/organization/actor related to potential conflicts in the projected cooperation addressing changes in the spatial planning of the Nusa Dua area. Subsequently, a literature review was conducted on written documents (regulations, books, websites, newspapers, and so forth), with the primary sources being the legislative regulations that have become sources of conflict in the Nusa Dua, Bali area. The legislative regulations are limited to spatial planning, environmental protection, and cultural or customary heritage preservation.

The analysis is structured into three distinct stages to thoroughly assess the dynamics of stakeholder interactions and potential conflicts in the Nusa Dua tourism area. The first stage is content analysis, which involves a qualitative review of relevant documents covering policies and stakeholder integral to the tourism area's development. This analysis is refined using Dynamic Actor Network Analysis (DANA) software, which identifies potential conflicts through observational results. The second stage focuses on stakeholder analysis, investigating the complexity of environmental conflicts [41]. It incorporated data obtained from the content review, including relevant legislation and the roles of actors directly involved in policymaking and zoning decisions for Nusa Dua. These findings are systematically categorized based on DANA's criteria and refined by examining regulations and secondary data sources. The final stage employs DANA software for stakeholder interest mapping, illuminating the influence, roles, and power dynamics among stakeholders in implementing or obstructing spatial planning policies.

DANA evaluates discrepancies in utility, expectations, and actions among the involved actors to ascertain the nature of conflicts within the projection of cooperation. Each stakeholder's insights on critical factors, such as land-use changes, development objectives, and policy impacts, are gathered and represented in perception graphs [42]. Goal conflict is analyzed by comparing utility differences, highlighting contradictions in desired outcomes across stakeholders. Prospect conflict measures the variability in expectations regarding future developments, where significant divergence signifies heightened disagreement. Influence conflict emerges from competitive efforts to shape decision-making processes, assessed through utility differences related to policy influence. Finally, action conflict quantifies the differences in strategies adopted by stakeholders, where substantial tactical variations lead to higher conflict ratings. These quantified metrics (e.g., μ) reflect the intensity of conflicts across various dimensions, facilitating the identification of critical areas for negotiation and potential compromise among stakeholders.

The term tactic in DANA represents the changes that can be made through the actions of individual actors. Quantified indicators aid decision-making: a positive (+) value indicates a recommended action to gain stakeholders' attention, a negative (-) value suggests an action to avoid, and a value of zero (0) signifies that the action should not be taken. This structured guidance supports identifying key negotiation areas, providing information for potential compromises among stakeholders. The inferred strategy from DANA indicates a compromise acceptable to all stakeholders. To design a cooperative strategy, DANA evaluates each action's utility, satisfaction, and frustration levels. The "ideal" scenario maximizes utility and satisfaction while minimizing frustration as a basis for negotiation. Through scenario analysis, the base scenario as the current status, the ideal scenario with the highest satisfaction, the worst scenario with the lowest satisfaction, and the chosen scenario as a negotiated compromise balancing stakeholder need. DANA provides a structured framework for understanding and navigating conflict, ultimately helps in developing consensus-based strategies [39].

The study's results are more credible and reliable because they integrate multiple sources, such as legislation, regional or local regulations, the media, and other references. This method

provides a more thorough explanation of the dynamics among Nusa Dua stakeholders while strengthening the evidence and reducing prejudice. To identify patterns, conflicts, and areas of consensus, data are double-checked from several sources, including the Nusa Dua Community Association, local NGOs, and government bodies. This ensures that the results are solid and represent the complicated reality encountered by all stakeholders concerned about spatial change in Nusa Dua by bringing attention to the fact that stakeholders have different perspectives.

RESULTS

Conflict and struggle over land, people, and resources have always surrounded the growth of Nusa Dua [18], [21], [43]. From the colonial period forward, and particularly in the wake of globalization's tourist industry-enabled dynamics, these conflicts have molded Bali's politics of development. The New Order government's policies directed the tourism industry away from the "enclave" scenario envisioned by SCETO (a foreign tourism consultancy) planners. This was done by expanding mass tourism beyond Nusa Dua through the designation of 15 "tourism areas" in 1988, which was further expanded to 21 areas across Bali in 1993, encompassing 24.7% of Bali Province's total area [44]. However, the reality of uncontrolled development, crime, traffic congestion, and environmental degradation starkly contrasts with Bali's image as a "paradise."

Spatial governance in contemporary Bali results from a complex interaction between socio-economic and political tourism, the persistence of rent-seeking entrenched in democratic institutions and decentralization post-New Order, and the significance of traditional institutions rooted in local culture [45]. The contemporary era of Bali began with the exclusive development of Bali's tourism by the Indonesia Tourism Development Corporation (ITDC), established in 1973. Development has been carried out extensively since then, leading to various polemics and potential issues up to the present day.

Spatial Planning Policy Issues in the Nusa Dua, Bali

Policy analysis is conducted before stakeholder interest analysis to understand the spatial planning of Nusa Dua. As outlined in Government Regulation Number 13 of 2017 and Bali Province Regional Regulation Number 2 of 2023, the Sarbagita Metropolitan Area (Denpasar, Badung, Gianyar, and Tabanan) is designated as a National Activity Center (PKN) and a National Strategic Area (KSN), aligned with Presidential Regulation Number 51 of 2014. Badung Regency Regional Regulation Number 26 of 2013, which addresses the development of tourism in South Badung, provides regulations regarding the spatial planning of Nusa Dua. By constructing infrastructure that satisfies worldwide standards, often highlighting global norms for accessibility, safety, sustainability, and quality, the plan or strategy seeks to optimize space in Nusa Dua, Tuban, and Kuta. Nevertheless, there is a contradiction between economic expansion and the preservation of local resources and customs due to the prevalence of conflicts of interest, the neglect of local traditions, environmental conservation, and cultural legacy caused by an obsession with international standards.

Economic and political factors significantly shaped the issuing of Presidential Regulation Number 51 of 2014 regarding the Spatial Planning for the Urban Areas of Denpasar, Badung, Gianyar, and Tabanan, which amends Presidential Regulation Number 45 of 2011. Prior to its establishment, this rule was drafted without consulting local and indigenous people or taking into account the laws that already regulate the Benoa Bay region. The outcome is that it is at odds with a number of other regulations. In particular, the designation of Benoa Bay as a conservation area by Badung Regency Regulation Number 26 of 2013 is at odds with Presidential Regulation Number 51 of 2014, which conflicts with Law of the Republic of Indonesia Number 1 of 2014. The law recognizes Benoa Bay as a holy site for Hindu rituals. Neither commercial development nor reclamation operations should make use of it.

Decree of the Minister of Marine Affairs and Fisheries Number 46/KEPMEN-KP/2019 Concerning the Maritime Conservation Area of Benoa Bay in the Waters of Bali in 2019 establishes the marine area of Benoa Bay as an economic and conservation area, and Nusa Dua is part of the program.

However, there is an overlap indicated by Presidential Regulation Number 51 of 2014 between conservation objectives and tourism expansion for economic growth. Protected places and ecology tend to be objects of exploitation that are not in line with conservation objectives and give rise to conflicts of interest. Considering this, environmental preservation, support for the community, and a legal framework that supports common interests need to be given further attention in an effort to resolve the problem.

Our review highlights the inherent tension between development goals and conservation efforts. Legal provisions designed to protect environmental elements and cultural heritage in Benoa Bay often conflict with the drive to increase economic activity and tourism in Nusa Dua, as Presidential Regulation Number 51 of 2014 stipulated. The pursuit of economic growth at the expense of environmental and cultural preservation is particularly evident in these conflicts, reflecting differing visions between governments. The lack of community involvement in decision-making puts them at a disadvantage; stakeholders, especially those directly affected by the policy, need to be involved in participatory approaches for spatial planning to be effective [46].

Stakeholder Analysis

The purpose of a stakeholder analysis is to evaluate perceptions based on information from different viewpoints and to identify the roles of individuals or groups that may have an impact on policymaking, either favorably or adversely [47]. This study examines the pros and cons of a policy or program from the stakeholders' interests, taking into account their positions within the policy and the resources they can mobilize. It then determines how much influence each stakeholder has on the policy or program [48]. The stakeholders identified in the case study are detailed in the following matrix (see Table 1), which provides information about their roles, interests, influences, and networks within an institution. Because it describes the complicated relationships between different stakeholders and their varied degrees of power, this matrix is especially useful for comprehending collaboration in tackling Nusa Dua's issue of land use policy.

Table 1. Stakeholder Identification Matrix

Actor	Role	Interest	Influence	Network
Nusa Dua Community Association (Farmers, Indigenous People, Merchants, etc.)	Representation of local interests, preservation of traditional customs, and the welfare of farmers and local entrepreneurs	Ensuring the sustainability of culture and traditions, economic welfare, and protection of land rights and local wisdom	Having a direct impact on daily life in Nusa Dua and influencing development decisions to protect their interests	Connected with the local community, traditional organizations and groups of merchants and farmers
Regency Government	Responsible for governance at the regency level, management of public services, and regional development	Enhancing the welfare of the regency community, developing local infrastructure and improving public services at the local level	Determining local policies, regulations, and resource management within the regency, including the development of Nusa Dua if it falls within the regency area	Connected with other governmental institutions, community organizations and the local private sector
Provincial Government	Responsible for governance at the provincial level, regional policy setting, and provincial development	Ensuring economic growth and community welfare at the provincial level, regional management, and large-scale	Determining policies that regulate provincial development, including developing destinations like Nusa	Connected with other governmental institutions, regional organizations and the private sector operating at the provincial level

Actor	Role	Interest	Influence	Network
		infrastructure development	Dua if located within the province	
ITDC	Developing tourist area, property management, and infrastructure in Nusa Dua	Ensuring sustainable business growth, increased tourist visits and environmental sustainability	Plays a crucial role in the planning and implementing Nusa Dua's development	Connected with investors, the government, financial institutions, and other stakeholders in the tourism industry
Investor	Provides capital for development projects and has a financial interest in their investments	Gaining financial profit, secure long-term investments	Influencing development decisions through investments and financial support	Connected with financial entities, developers, and the government
Ministry of Finance	Responsible for financial policies, budget management, and national fiscal matters	Ensuring national economic stability, efficiency in public financial management, and oversight of finance and taxes	Determining budget allocation for various sectors, including development projects in Nusa Dua, and regulates fiscal policies affecting investments	Connected with international financial institutions, government agencies, and the private sector
Technical Ministries (Public Works and Housing, Marine and Fisheries)	Responsible for infrastructure development, natural resource management, and specific technical sectors	Ensuring sustainable infrastructure development, responsible natural resource management, and fulfilling technical needs in regional development	Determines direction and policies related to the region's infrastructure development and natural resource management in Nusa Dua	Connected with other technical institutions, stakeholders in related sectors, and environmental organizations
Tourists	Becoming consumers of tourism services are a source of income for the local tourism industry	Enjoying satisfying travel experiences, accessibility, and safety	Being a key factor in the success of a tourism destination, influencing the tourism industry and local economy	Connected with travel agencies, tourist communities, and other related parties
Local NGOs	Advocating for local community interests, environmental monitoring, education, and community welfare	Encouraging environmental protection, social justice, and the enhancement of community welfare	Influencing public opinion and advocate for environmental and community interests	Connected with local communities, government agencies, and international organizations
Universities	Becoming a center for education, research, and innovation	Developing knowledge, quality human resources, and contributing to sustainable development	Generating knowledge and human resources that can be used for the development of Nusa Dua	Connected with the academic world, industry, and government
Parliament and Regional Representative Council (DPR, DPRD)	Becoming lawmakers (DPR) and local decision-makers (DPRD)	Representing public interests and policy-making impacting regional and national levels	Determining policies through the legislative process and budget allocation	Connected with the community, government, and other institutions in the legislative process

Based on the identification results, 11 stakeholders are involved in this case. The "importance" analysis method categorizes these stakeholders into 3 categories according to their degree of interest, namely: I = Directly affected groups, II = Indirectly affected groups, and III = Groups with interest in the main issue. As the host, the community of Nusa Dua has the highest level of interest because policy changes will directly impact their livelihoods. This group faces immediate consequences as their economic and social conditions are closely tied to the outcomes of the policy changes. Additionally, three agencies, namely the regency government, the provincial government, and ITDC, hold similar levels of importance in the planning regulatory framework. ITDC wields greater influence due to its direct role in implementing and overseeing tourism-related projects. Tourists, while not directly involved in the decision-making process, are stakeholders with a high potential impact. Their experiences and satisfaction levels will be significantly influenced by the changes, as these adjustments will alter their visiting experience in Nusa Dua. Their feedback and preferences could play a crucial role in shaping policy decisions.

Table 2. Stakeholder Importance Analysis

Stakeholder	Nature of Interest	Potential Impact	Degree of Importance	Relative Position	Level of Influence
STAKEHOLDER I					
Nusa Dua Community Association (Farmers, Indigenous People, Merchants, etc.)	Host of the area	High	High	High	Low
Regency Government	Program administrator at the regency level	Medium	High	High	Medium
Provincial Government	Program administrator at the provincial level	Medium	High	High	Medium
ITDC	Development implementer	Medium	High	Medium	High
Investors	Capital injectors	High	Medium	Medium	High
Tourists	Beneficiaries	High	Low	Medium	Low
STAKEHOLDER II					
Ministry of Finance	Program fund allocator	Medium	Medium	Medium	High
Technical Ministries (Public Works and Housing, Marine and Fisheries)	Technical implementers of regulations	Medium	Medium	Medium	High
STAKEHOLDER III					
Local NGOs	Monitors	Medium	Medium	Medium	Medium
Universities	Advisors, Designers	Low	Medium	Medium	Low
Parliament and Regional Representative Council (DPR, DPRD)	Constituent representatives	Low	Low	Medium	Medium

Furthermore, Figure 1 illustrates the interconnections among stakeholders based on their interactions. There are 11 (eleven) stakeholders with varying levels of importance. All edges are depicted as having mutual relationships (each arrow is bidirectional). The larger the node (depicted here as blue boxes), the greater its interconnectedness. Based on this statement, it can be inferred that the Regency Government is the node with the most connections (10 edges). Linearly, the Regency Government also holds the highest degree of centrality status. Meanwhile, the Nusa Dua Community Association and ITDC hold the second position with 8 (eight) edges, indicating that this node is

significant in the stakeholder interaction structure. The university becomes the node with the fewest edges, as its interactions are limited to only 2 (two) stakeholders, namely, the regency government and the community. Additionally, the type of interactions that the university engages in, primarily providing input based on research results, sometimes makes its position relatively weak in the above scheme.

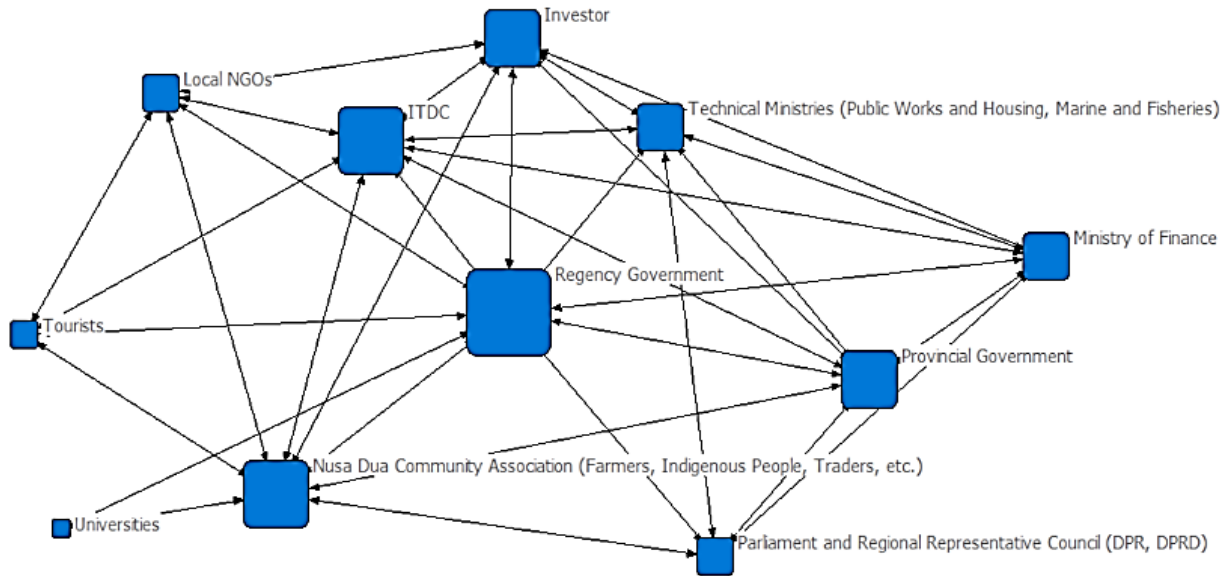


Figure 1. Stakeholder Interest Mapping

The parties that have been identified will be analyzed within the constraints of the DANA definition to classify only those genuinely involved in the conflict [42]. The aim is to simplify the management of each party's perceptions. Prioritizing stakeholders is necessary for policymakers as a filter to manage the identification results when there are too many parties involved. The stakeholder analysis can help identify the main actors involved in environmental policies, potential conflicts, and the positions and interests of the actors involved. For example, the ITDC, as the area manager, determines the development location points; on the other hand, the ITDC is also affected by the policies enacted by the government. Thus, ITDC is categorized as a stakeholder. A literature review explored the classification of perceptions to categorize whether an actor is a stakeholder or an agent [9], [10], [11], [13], [14], [15], [16], [18]. It specifically focused on the actions that each institution or organization can undertake in the context of the Nusa Dua conflict. If an actor can act and is affected by changes, they are classified as a stakeholder. If not, they are classified as agents according to the DANA definition.

Table 3. Stakeholder Interrelationship

Party	Actor		Non-Actor
	Stakeholder	Agent	
Nusa Dua Community Association (Farmers, Indigenous People, Merchants, etc.)	x		
Regency Government	x		
Provincial Government	x		
ITDC	x		
Investor		x	
Ministry of Finance		x	
Technical Ministries (Public Works and Housing, Marine and Fisheries)		x	
Tourists			x

Party	Actor		Non-Actor
	Stakeholder	Agent	
Local NGOs		x	
Universities		x	
Parliament and Regional Representative Council (DPR, DPRD)			x

Conflict

Conflict indicates differences in perspective and strategy among stakeholders [39]. It relates to situations where two or more actors seek to change a factor in opposing directions [49]. The arena of conflict in Nusa Dua is centered around the issue of privatizing coastal areas about spatial planning laws, the power of the government and the ITDC in managing The Nusa Dua area, and the existence of indigenous people or communities and their customary laws in the future, particularly regarding changes in the spatial planning of The Nusa Dua area. The perceptions of all stakeholders in each case of interest were then confronted among actors with conflicting interests [50], and the results are:

1. Goal conflict explains that actors in the network have goals or targets that may not be fully aligned. In the context of land-use changes in Nusa Dua, this could include differing views on tourism development, environmental conservation, or economic progress among actors. A value of μ of 0.07 indicates some differences in goals, although the conflict is not considered very high.
2. Prospect conflict explains when actors in the network have different views on the outcomes or future of land-use changes. A value of μ of 0.05 indicates that the expectations or views regarding the land-use change plans do not differ significantly, so the Prospect Conflict is not very high.
3. Influence conflict occurs when competition or disagreement exists in efforts to influence decisions or actions within the network. In the context of land-use changes in Nusa Dua, the highest value of μ , 0.13, indicates a significant level of competition in efforts to influence land-use decisions.
4. Action conflict relates to different approaches or actions actors take to achieve their goals. Regarding land-use changes in Nusa Dua, a value of μ of 0.04 indicates that the differences in concrete actions taken by the interested actors may be a source of conflict, although not very significant.

Table 4. Conflict in the Projection of Cooperation

Arena I → Cooperation to Address Spatial Planning Changes in Nusa Dua Area					
Actor A →		*all actors			
Arena I	Actor B ↓	μ Goal Conflict	μ Prospect Conflict	μ Influence Conflict	μ Action Conflict
Cooperation to Address Spatial Planning Changes in Nusa Dua Area	*all actors	0.07	0.05	0.13	0.04

Inferred Strategy

The DANA method uses 3 (three) indicators to evaluate potential changes: utility, satisfaction, and frustration. Utility reflects the extent to which a decision or action taken by an actor in the network provides value or benefit to that actor. Satisfaction measures the actor's level of contentment with the outcomes of the changes, decisions, or actions taken. Frustration, however, reflects the actor's dissatisfaction with possible outcomes that do not meet their expectations or desires. Each indicator is a function of a goal and a change [39]. The inferred strategy indicates a compromise acceptable to all stakeholders. A positive (+) value is preferable to gain stakeholders' attention. DANA suggests limiting actions with a negative (-) value. A value of 0 (zero) means the listed action should not be taken, while No Tactic indicates that DANA has no recommendation for that action.

The analysis reveals that Influence Conflict is the most prominent issue among stakeholders, highlighting significant disagreements over power and decision-making authority. This type of conflict

overshadows goal conflict and action conflict, which, although present, are less intense in comparison. The relatively low scores for goal and action conflicts indicate that while there are differences in objectives and methods, these are not as critical as the struggles over influence. Addressing influence conflict effectively requires a focus on power dynamics and the distribution of decision-making authority among stakeholders to ensure equitable and collaborative outcomes.

Regarding utility and satisfaction, the negative utility scores across all scenarios suggest that the effectiveness of the cooperation and planning processes is generally perceived as poor. Even the "ideal" scenario, with the highest utility score of -4.2, still falls short of being satisfactory. Satisfaction levels are similarly low, though there is a slight improvement in the "chosen" scenario compared to the baseline, indicating some progress. However, this improvement is modest, and actors continue to experience significant dissatisfaction with the outcomes. In terms of frustration levels, dissatisfaction is notably high across all scenarios. This persistent frustration underscores ongoing challenges and inefficiencies in the planning processes. Although there is a decrease in frustration from the "worst" to the "chosen" scenario, suggesting some progress has been made, frustration remains a considerable issue, indicating that more comprehensive improvements are necessary to achieve better cooperation and planning outcomes. All these analysis results can be seen in Table 5.

Table 5. Conflict Resolution Strategies

Arena I →	Cooperation to Address Spatial Planning Changes in Nusa Dua Area	Goal Conflict	Prospect Conflict	Influence Conflict	Action Conflict
Actor A →	*all actors	0,07	0,05	0,13	0,04
Factors		Base	Ideal	Worst	Chosen
Advocating and protecting the rights of local communities	Nusa Dua Community Association	0	+	+	+
Providing local perspectives and needs for development	Nusa Dua Community Association	0	+	+	+
Establishing local spatial planning regulations to guide land use, including beaches	Regency Government	0	+	+	+
Monitoring implementation and compliance of privatization practices according to applicable spatial planning laws	Regency Government	0	+	-	0
Supervising policies and privatization practices at the provincial level	Provincial Government	0	+	-	0
Providing guidance in accordance with national policies	Provincial Government	0	0	0	0
Ensuring coordination between districts in coastal area management	Provincial Government	0	0	0	0
Developing collaboration schemes	ITDC	0	-	+	+

Arena I →	Cooperation to Address Spatial Planning Changes in Nusa Dua Area	Goal Conflict	Prospect Conflict	Influence Conflict	Action Conflict
Actor A →	*all actors	0,07	0,05	0,13	0,04
Factors		Base	Ideal	Worst	Chosen
with various parties, including investors for planning, building, and managing tourism infrastructure					
Responsible for the management of the Nusa Dua area	ITDC	0	-	+	+
Providing financial and technical resources to support coastal area development	Investor	0	-	-	0
Assessing and managing financial aspects related to investment and privatization	Ministry of Finance	0	-	-	0
Providing technical guidance on infrastructure development, including coastal development	Technical Ministries (Public Works and Housing, Marine and Fisheries)	0	+	+	0
Supporting ecological sustainability	Technical Ministries (Public Works and Housing, Marine and Fisheries)	0	+	+	+
Providing feedback and supporting sustainable practices in tourism management	Tourists	0	No tactic	No tactic	No tactic
Monitoring the implementation of privatization and development practices	Local NGOs	0	-	-	0
Advocating for community and environmental interests	Local NGOs	0	+	+	+
Providing knowledge and research related to the impacts of development and privatization	Universities	0	0	-	0
Providing scientific insights to guide sustainable policies and practices	Universities	0	0	-	0
Overseeing and providing support for policies related to privatization	Parliament and Regional Councils	0	+	-	0

Arena I →	Cooperation to Address Spatial Planning Changes in Nusa Dua Area	Goal Conflict	Prospect Conflict	Influence Conflict	Action Conflict
Actor A →	*all actors	0,07	0,05	0,13	0,04
Factors		Base	Ideal	Worst	Chosen
Ensuring that policies reflect community interests and comply with applicable regulations	Parliament and Regional Councils	0	+	-	0
	Utility	-4.7	-4.2	-5.7	-4.5
	Satisfaction	34%	38%	27%	36%
	Frustration	46%	42%	53%	44%

Relevance and Centrality

Relevance is determined by observing how frequently various actors mention a particular factor, indicating its perceived importance among stakeholders [42]. To describe the centrality of a factor, one examines the number of connections or links it has with other factors, represented by lines connecting the factors. A factor that receives many connections becomes a primary factor and is considered a central problem, reflecting its significance in the overall issue. Conversely, a factor that sends out many connections becomes the primary cause of the identified problem, indicating its role in influencing other issues. By evaluating components' relevance and centrality in tandem, we may better grasp their relative significance and how they relate to one another. To effectively manage conflicts and enhance services, stakeholders must first understand the dynamics at play, which may be achieved by isolating the key concerns and the factors contributing to them [51].

Table 6 shows relatively high ratings for government policies or products (88%), conflict of interest or power relations (88%), and Nusa Dua's spatial planning policy (100%). Since Nusa Dua's spatial planning policy is at the center of the study and a major element in conflicts among stakeholders, it deserves the highest ranking. It stresses how important it is in determining local conflicts and relationships. Government policies or products, as well as conflicts of interest or power relations, also rank highly, suggesting that they significantly affect stakeholder dynamics. Community socio-economic situations, conflicts of interest or power connections, and communities' use of coastal areas are significant factors. Land use, development priorities, and regulatory frameworks are all impacted by government policies, especially those pertaining to spatial planning regulations. This highlights the importance of better understanding these policies and communicating with stakeholders in order to resolve these conflicts.

Table 6. Relevance and Centrality in the Projection of Cooperation

Type	Factor	Actor	Relevance		Connectivity and centrality	
			Event	% Event per actor	Links In	Links Out
Factor	The Nusa Dua Bali tourist area		6	75	7	3
	Government policies or products		7	88	6	13
	Socio-economic conditions of the community		5	63	9	6
	Conflict of interest or power relations		7	88	9	10
	Environmental conservation		5	63	7	4
	Spatial Planning Policy Determination in Nusa Dua		8	100	6	13
	Utilization of coastal areas by the community		6	75	9	6
	No conflicts or issues		4	50	6	0
	Win-win solution		3	38	5	0

Type	Factor	Actor	Relevance		Connectivity and centrality		
			Event	% Event per actor	Links In	Links Out	
Attribute	Protection of local community rights	Nusa Dua Community Association	2	25	4	3	
	Spatial planning policy of Badung Regency (Nusa Dua) and privatization regulation	Regency Government	1	13	5	3	
	Policies regulating privatization and intercounty coordination in coastal area management	Provincial Government	2	25	3	2	
	Management of the Nusa Dua area and stakeholder cooperation	ITDC	2	25	3	2	
	Sources of income and provision of financial and technical resources	Investor	3	38	3	2	
	Financial management and privatization	Ministry of Finance	1	13	2	1	
	Technical guidelines for tourism infrastructure development and environmental sustainability	Technical Ministries	1	13	2	1	
	Feedback on sustainable tourism practices	Tourists	1	13	0	1	
	Implementation of privatization practices and support for communities	Local NGOs	1	13	1	1	
	Research results related to the impact of privatization and sustainable tourism	Universities	1	13	1	1	
	Policy support that aligns with community interests and directed privatization	Parliament and Regional Councils	1	13	1	1	
	Action	Advocating and protecting the rights of local communities	Nusa Dua Community Association	4	50	2	2
		Providing local perspectives and needs for development	Nusa Dua Community Association	4	50	2	3
Establishing local spatial planning regulations to guide land use, including beaches		Regency Government	4	50	4	4	
Monitoring the implementation and compliance of privatization practices according to applicable spatial planning laws		Regency Government	4	50	2	3	
Supervising policies and privatization practices at the provincial level		Provincial Government	3	38	1	1	
Providing guidance in accordance with national policies		Provincial Government	3	38	1	1	
Ensuring coordination between districts in coastal area management		Provincial Government	3	38	1	1	
Developing collaboration schemes with various parties, including		ITDC	3	38	1	3	

Type	Factor	Actor	Relevance		Connectivity and centrality	
			Event	% Event per actor	Links In	Links Out
	investors for planning, building, and managing tourism infrastructure					
	Responsible for the management of the Nusa Dua area	ITDC	3	38	2	4
	Providing financial and technical resources to support the development of coastal areas	Investor	3	38	3	4
	Assessing and managing financial aspects related to investment and privatization	Ministry of Finance	2	25	2	3
	Providing technical guidance on infrastructure development, including coastal development	Technical Ministries	2	25	1	1
	Supporting ecological sustainability	Technical Ministries	2	25	1	1
	Providing feedback and supporting sustainable practices in tourism management	Tourists	1	13	1	1
	Monitoring the implementation of privatization and development practices	Local NGOs	2	25	2	1
	Advocating for community and environmental interests	Local NGOs	2	25	2	1
	Providing knowledge and research related to the impacts of development and privatization	Universities	1	13	0	1
	Providing scientific insights to guide sustainable policies and practices	Universities	1	13	0	1
	Overseeing and providing support for policies related to privatization	Parliament and Regional Councils	1	13	1	4
	Ensuring that policies reflect community interests and comply with applicable regulations	Parliament and Regional Councils	1	13	1	1

DISCUSSION

Centrality and connectivity analysis shows where the problems lie in the Nusa Dua cooperation scheme in dealing with spatial policy changes. Because they show restrictions stemming from conflicts of local or regional policy challenges and often disclose substantial hurdles in stakeholder perspectives, identifying these underlying reasons is critical for successful conflict management [52]. This analysis helps to identify the root causes of conflicts, which is important for resolving them [53]. The results provide a foundation for directing future studies, addressing contentious topics, and identifying important actors with whom to collaborate [54]. To further monitor changes in perception, content analysis is crucial and should preferably be done before and after the procedure [40].

The main issue in Nusa Dua is that stakeholders there do not comprehend enough about the rules or regulations that govern spatial planning, which causes them to make mistakes while putting policies into action. The lack of substantial restrictions regarding the privatization of public spaces has only made the problem worse. A number of existing regulations prohibit the privatization of public

areas. These include the Bali Provincial Regulation Number 2 of 2023 on the Provincial Spatial Plan of Bali 2023–2043, and the Badung Regency Regulation Number 26 of 2013 on the Badung Regency Spatial Plan 2013–2033. However, commercial interests have been able to acquire public spaces due to unclear legal enforcement, which has affected Nusa Dua's cultural and natural integrity. Improving stakeholder communication, clarifying and enforcing legislation, and increasing comprehension of spatial planning strategies are all critical in the fight against illegal privatization [55].

Considering the benefits for local communities, the planning and development process needs to involve wider community participation, transparency, and consideration of cultural and environmental values [56]. The development of spatial planning must be linear with the goal of preserving resources; stakeholders should prioritize consensus on shared interests. Some of these steps play a role in transforming uncertainty into productive and constructive discussions to build more adaptive spatial planning and highlight the urgency of shared participation in policymaking [57].

The involvement of various stakeholders in Nusa Dua affects the spatial pattern in the area. As a result, privatization and management of tourist destinations have caused horizontal conflicts between management bodies, the government, and capital providers. In practice, spatial planning and privatization are controlled by the district government, while coordination and synergy of national programs are carried out by the provincial government. ITDC, as the management body, has the authority to attract investment and supervise implementation in accordance with established regulations. Along with power dynamics in related areas, community institutions act as advocates to prioritize the environment, culture, and customs. These field conditions demand a re-evaluation of policies and an indication of the urgency of more measurable regulations to manage private development in public spaces.

Environmental and economic issues arising from tourism development cannot be separated from spatial planning. Land use policies are important in reviewing the long-term impacts on sustainable use and development [58]. In relation to land use policies and conflicts of interest, involvement and collaboration between interests are effective steps to answer challenges and problems appropriately. Implementing policies and comprehensive collaboration in tourism development must be a core step to create economic circulation without neglecting the sustainability of other important aspects [59], [60].

CONCLUSION

This study demonstrates the significance of institutional arrangements in destinations like Nusa Dua, where stakeholder interests, power dynamics, and policy frameworks intersect to create a source of conflict and an opportunity for cooperation in spatial planning. Indigenous people or local communities' perspectives must be included to ensure that cultural and environmental conservation demands are respected. It highlights a lack of thorough comprehension and communication of spatial planning policies as a major contributing element to the conflicts. This study presents a "projection cooperation" analysis as a method for identifying conflicts. It accomplishes this by anticipating potential issues and assisting in the creation of solutions that can address them, all while promoting economic growth and preserving environmental and cultural values in Nusa Dua. The results highlight the significance of fostering cooperation among government bodies, private entities, and local communities to develop adaptive policies that take into account the specific socio-cultural and environmental factors affecting Nusa Dua. Future studies should refine this approach and explore innovative governance models to manage multiple stakeholder interests, ensuring sustainable tourism development in Nusa Dua.

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DECLARATIONS

Conflict of Interest

We declare no conflict of interest, financial or otherwise.

Ethical Approval

The research has been approved by the Institut Teknologi Bandung. All research was carried out in accordance with Institut Teknologi Bandung research ethics guidelines applicable when human participants are involved.

Informed Consent

On behalf of all authors, the corresponding author states that all participants have been given informed consent and agreed to take part in this study.

DATA AVAILABILITY

Data used to support the findings of this study are available from the corresponding author upon request.

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