







## **Innovation and Creativity of Stakeholders Toward Sustainable Tourism Development in the Time of Crisis: A Case of Special Economic Zone, Indonesia**



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### **ABSTRACT**

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Crises have become essential issues for sustainable tourism development. Stakeholders have an essential role in maintaining the tourism sector in times of crisis. This study aims to explore the role of stakeholders in the tourism sector based on their innovation and creativity in times of crisis (earthquake and COVID-19 pandemic) in the Special Economic Zone (SEZ), Mandalika, Indonesia, toward sustainable tourism development. This study uses in-depth interviews with the stakeholders and their role toward innovation and creativity during the crisis and post-crisis. We analyze 22 informants representing several stakeholders of SEZ with a purposive snowball sampling technique. The results find that the stakeholders have a preposition for innovation and creativity in times of crisis to build sustainable tourism development. Therefore, the study contributes to a deeper understanding of the role of stakeholders' involvement toward innovation and creativity in sustainable tourism development in times of crisis.

## **1. INTRODUCTION**

Nowadays, the tourism industry is one of the industries that was affected by the health crisis, especially the COVID-19 pandemic, and changed the tourism paradigm [1]. The COVID-19 that happened worldwide impacted all agendas of sustainable development goals [2, 3]. Several years ago, Indonesia was one of the countries affected by crises, including the COVID-19 pandemic. The COVID-19 pandemic has impacted the decline of income from the tourism sector in Indonesia, which included all the government's border activities. Based on the data revealed that Indonesia lost the income from the tourism sector by around IDR 57 trillion [4]. Thus, it can be concluded that the pandemic disrupted the tourism sector.

The crisis provided insight for the stakeholders in the tourism sector to create innovation and creativity in times of crisis [5]. The COVID-19 pandemic has devastated the tourism sector, and stakeholders should think of innovations and strategies to "survive and shine" in the middle of crises and post-crisis [6]. Notably, during the pandemic, COVID-19 continues to impact the tourism sector, and stakeholders suggested learning from the pandemic to create innovation and creativity in the tourism sector that will disappear soon [7]. Tourism stakeholders must develop strategies and innovate to survive in tourism communities.

Sustainable tourism is one of the main issues in the tourism sector [8], especially in times of crisis (i.e., earthquake or COVID-19) [9]. Sustainable tourism refers to the concept of

sustainability and tourism theory. Butler [10] stated that sustainable tourism focuses on the integrated environment component, social and economic aspects, or triple bottom of sustainable tourism. Sustainable tourism development addresses economic, social, and environmental components through policies and strategies [11]. Thus, stakeholders' engagement in the tourism sector is needed to communicate with the local community, visitors, government, and non-government organizations (NGOs) [12].

Furthermore, the role of stakeholders is vital to encourage sustainable tourism development. The role of stakeholders is urgent for the recovery process to create innovation and creativity to reach sustainable development goals [13]. Developing a strategic partnership among the stakeholders is very helpful in increasing tourism resilience through innovation and creativity in times of crisis. The stakeholders can provide policies and strategies in times of crisis and post-crises to achieve sustainable development goals (SDGs) [13]. A strong partnership among the stakeholders is essential for the recovery process in times of crisis [13]. The partnership of stakeholders is one of the aspects of sustainable development goals (SDGs). Some studies have identified the stakeholders' role in the tourism industry as actors that contribute to it [14]. Furthermore, the stakeholders collaborate in creating innovation and creativity to reach the tourism sector's resilience in times of crisis [15]. The stakeholders in the tourism sector must arrange innovation, creativity, management strategies, and collaboration to reach sustainable tourism for the long term [16, 17], including in crisis and post-

disaster [15]. Thus, it is necessary to explore the innovation and creativity of the stakeholders in tourism destinations to reach sustainable tourism in the context of a special economic zone, Mandalika, Indonesia.

The Mandalika Special Economic Zone (SEZ) is a special zone for tourism development in Lombok Island and has faced challenges during times of crisis. In terms of the tourism sector's resilience, stakeholders' involvement is needed to build tourism resilience and ensure sustainable tourism development. Therefore, this study delves into the stakeholders' role in the crisis of SEZ Mandalika, where the tourism industry plays a crucial role in the local economy. Various studies have noted that the disasters have had a profound impact on the Special Economic Zone, Lombok, causing significant socioeconomic challenges and affecting tourism destinations and the economy [18, 19]. However, limited studies explain how the stakeholders within a Special Economic Zone (SEZ) innovate and collaborate in times of crisis to achieve sustainable tourism development. Thus, this study offers insight into emerging innovation and creativity in SEZ in the time of crisis and post-crisis toward sustainable tourism development, and it is essential to understand the stakeholders' response to innovation and creativity for tourism resilience.

This study is concerned with stakeholders' role in crisis and post-crisis and their innovation and creativity toward sustainable tourism development in SEZ, Mandalika, Indonesia. Thus, this research addresses some questions below:

1. What is the role of stakeholders during a crisis in realizing sustainable tourism?
2. What is the innovation and creativity of stakeholders in times of crisis to realize sustainable tourism?

To answer these questions, the authors designed this study using a qualitative approach to explore the role of stakeholders and their innovation and creativity in promoting sustainable tourism development during crises.

Furthermore, this study has some contributions. From the knowledge perspective, this study extends the tourism literature in times of crisis or disaster by exploring the stakeholders' roles toward tourism destination development. It is in line with the role of the stakeholder's collaboration among the interaction and synergy process by which interactions are effective or ineffective [20, 21]. We understand that collaboration among the stakeholders could facilitate the SDGs17 (i.e., partnership for the goals). In the policy field, our study can assist the stakeholders in implementing innovation and creativity and their roles in pursuing the sustainable tourism of the Special Economic Zone in times of crisis and post-disaster. Therefore, the contribution of this study is an inclusive and holistic understanding of the role of the stakeholders in innovation and creativity to reach sustainable tourism development in times of crisis.

## 2. METHODOLOGY

### 2.1 Study location

Lombok is one of Indonesia's super-priority destinations (see Figure 1). Lombok, Mandalika is one of Special Economic Zones (SEZ) in Indonesia [22]. This status encourages tourists and tourism enterprises on this island. Furthermore, Lombok's destination would become one of the prominent destinations in Indonesia before the disaster. The

data revealed that international visitors increased from 0.6 million in 2009 to 1,6 million in 2014 [22].

COVID-19 influenced the tourism sector in SEZ, Lombok. Due to this crisis, international flights were canceled, and only domestic flights were allowed to visit Lombok, which had an impact on the number of local tourism enterprises. There are some impacts on the local tourism enterprises, and tourists declined from 4000 in 2020 to 3500 in 2021 for tourism business [23]. However, during the "New Normal," the tourists and tourism enterprises had raised to running their business operation. It was to ensure that the business practice and tourist visits to the destination in Lombok could fit the reopening of their activities (business).

Furthermore, not only did COVID-19 impact the tourism sector in Lombok's destination, but also, in 2018, Lombok's destination suffered from the earthquake disaster. The disaster in the tourism destination damaged the stakeholders' strategy for innovation and creativity to develop sustainable tourism.



Figure 1. Location of the study in Special Economic Zone, Mandalika, Central Lombok, Indonesia

### 2.2 Research design

This study used a qualitative approach for primary data analysis and collection. A qualitative approach was applied to a more in-depth and rich(er) explanation of the respondents, such as how and why [24]. Answering some questions is essential for the researchers regarding the research topic interest as the roles of stakeholders in innovation and strategy on sustainable tourism development in the light of the crisis at the Special Economic Zone, Mandalika, Lombok. Qualitative research is appropriate for a deeper understanding of the topic's interest or comprehension [25], such as among the stakeholders. The qualitative method was appropriate to reach a small number of participants, such as tourism enterprises and visitors, to collaborate with the researcher during the interview processes [26], especially in times of disaster. In addition, this study used semi-structured interviews to explore the roles of stakeholders in innovation and creativity toward sustainable tourism development [27].

Furthermore, this study used some literature to develop the questions of the study regarding the role of stakeholders, challenges of tourism in the time of crisis, and visitors during or after crises [5, 7, 28, 29]. The question was designed in Indonesian and back-translated into English. Independent academics were invited to evaluate the questions to check the validity of the study questions' content.

### 2.3 Sampling and interview process

This study used purposive sampling to select the respondents among the stakeholders. Purposive sampling is one of the most popular sampling methods in the study of crisis management in the tourism sector [30]. The participants of this study are the stakeholders responsible for tourism development in SEZ, Mandalika, Indonesia, during crisis and post-crisis, such as government, private sector, local government, academia/university, NGO, and local community. These stakeholders are informants of this study because they have the potential to explain the innovation and creativity needed to face the crisis in the SEZ. These stakeholders have the ability and knowledge of their roles to assess the tourism industry's potential, progress, and roles. As stated in the literature, the stakeholders have essential roles in collaborating with relevant stakeholders [31, 32].

Furthermore, In-depth semi-structured interviews were used to collect the data from the stakeholders. The questions were designed to determine the role of stakeholders in their innovation and creativity in times of crisis. In particular, the interview questions asked about their roles, contributions, and responsibilities toward tourism development in SEZ and reaching sustainable tourism development. Therefore, purposive snowball sampling was applied to this study's

participants [33]. This purposive sampling technique selects informants based on those who are considered to have sufficient knowledge and information to answer the questions that the researcher will ask. In this study, the target interviewees were the stakeholders with authority toward tourism development during a crisis at SEZ Mandalika. Thus, the stakeholders were sampled in the study because they can understand their roles and the innovation and creativity to reach sustainable tourism after the disaster in SEZ Mandalika. Thus, the main stakeholders, tourism experts, and other participants were contacted and informed of the interview process to reach the study's aims. They were interviewed and provided with some questions regarding their roles. Because this study used humans as informants, all informants' information is disclosed based on ethical clearance.

The study's total sample was 22 tourism stakeholders. The interview process was conducted face-to-face with the informants from July to September 2024, with 23 Hours of recording and coding structure that emerged from the data collected. The interviews lasted 1 to 3 Hours in Indonesian to answer the questions (see Table 1). All interview processes for the information were conducted in Lombok, West Nusa Tenggara, Indonesia. Therefore, the interviews were recorded digitally to translate the study's results. There is no financial incentive for the respondents.

**Table 1.** Informants of the study, duration and questions (n=22)

R	Institution Type	People Interviewed and Role	Total	Duration (hour)	Questions
1	Regional Planning & Development Agency of Nusa Tenggara Barat Province	Head of Regional Development Planning, Control and Evaluation Division	1	1	1. What are the main challenges when collaborating with other Mandalika Special Economic Zone stakeholders? 2. Is there a need to form a special committee or working group between stakeholders? Why? 3. How should the decision-making mechanism be implemented in this collaboration? 4. How do you see the role of technology, such as digital platforms, in facilitating this collaboration? 5. What are your hopes for the collaboration to ensure the project's sustainability? 6. How important is local community involvement in this collaboration, and how should they be involved? 7. Is there any training or capacity building that is needed to support collaboration? 8. How should the success of this collaboration be measured and reported to all stakeholders? 9. What are the recommendations for overcoming possible barriers in this collaboration? 10. What is the role of stakeholders in realizing sustainable tourism and economic development after the disaster in the Mandalika Special Economic Zone? Especially in terms of collaboration among stakeholders.
		Head of Economic and Natural Resources Division General Sub-section	1	1	
2	Investment and One-Stop Integrated Service Department of West Nusa Tenggara Province	Sub Coordinator and Functional Position Groups	1	1.5	
		Division of Tourism Marketing	1	1	
3	Department of Tourism of Central Lombok	Division of Tourism Destination Development	1	0.5	
		Economics Division	1	1	
4	Regional Development Planning Board and Regional Research and Innovation Agency of Central Lombok	Division of Infrastructure and Regional Development	1	1	
		Head of Regional disaster management agency of Central Lombok	1	1	
5	Regional Disaster Management Agency Of region Central Lombok	Division of Rehabilitation and reconstruction.	1	2	
		Director of Development	1	1.5	
6	Indonesia Tourism Development Corporation (ITDC) Mandalika	Division of Project Development	1	1	
		Public Relations Manager	1	1.5	
7	Mandalika Grand Prix Association	General Manager	1	1	
		Head of unit public service and Cooperation.	1	1	
8	Pullman Lombok Mandalika Beach Resort	Vice Rector	1	1	
		Tourism Awareness Groups (Special Economic Zone)	3	2	
9	Lombok Tourism polytechnic (University)	Head of Village Government around SEZ, Mandalika	3	3	
		Mataram University	1	1	
11	Local community				
12	Village Government				

Note: R= Respondent

Lastly, the data is analyzed using the thematic approach that is divided into several parts, such as familiarization of the data, generating the code, a search of a topic, a review of the topic, and defining and reporting of data [34, 35]. This thematic analysis tried to explore the main ideas of each interviewee about each question, as well as their perspective toward the innovation and creativity of the stakeholders and the stakeholders' role in the crisis. Some thematic questions were about the roles and responsibilities of stakeholders, the impact of the crisis, policies and regulations, and innovation and creativity to achieve sustainable tourism development during and post-crisis. Lastly, the team recorded and combined the data results based on questions and thematized them to capture the theme of each answer. The theme can be seen in Table 1 (Questions section).

### 3. FINDINGS

#### 3.1 Stakeholders' collaboration toward sustainable tourism development

Many stakeholders are taking action toward sustainable tourism development in this crisis, especially at SEZ, Mandalika, Indonesia. First, the stakeholders, like governments (local government and central government), are responsible for implementing regulations and policies toward sustainable tourism and the community in the area. The study by Gall et al. [36] stated that strong leadership and communication among the actors in the tourism sector are essential to bridging transformative change in crisis or post-disaster. The study's findings revealed that the government has a role in designing the regulations and policies, reconstructing the tourism infrastructure, and coordinating and evaluating the program during the crisis. These programs are essential as a central pillar to ensure the recovery process runs smoothly. Therefore, the interviewee also mentioned that to reach tourism sustainability post-disaster, the regional government stated the transformation of the tourism sector in SEZ for applying green technology to support sustainable tourism, such as sustainability tourism based on environmental and local culture. The government's important role in every step of the input recovery process in times of disaster is to collaborate with all the stakeholders and local tourism actors. Therefore, governments design some policies and regulations to reach sustainable tourism in the recovery process. In addition, the government is responsible for mandating international marketing, developing tourism destinations, promoting the local culture, developing tourism infrastructure and recovery process, and developing the local economy.

The study by Nunns [22] revealed that regulations are created to cover the economic, environmental, and political aspects. These regulations were designed to force some institutions such as local government, the private sector, the community, and organizations. The government provides all of these agendas. However, the policy and regulations are intended to regulate the tourism destination under the national and local government programs [37]. Therefore, the role of the

government in managing the tourism sector is an essential dimension, as well as the partnership and intervention [38].

Second, the business sector in tourism has the role of sustainable tourism in times of crisis. Some roles of the business sector are to create local products and provide homestay, accommodation, and souvenirs. Based on the result of the study, the interviewee stated that the SMEs in SEZ have an essential role in creating employment and creating tourist products and services in the time post-crisis. Therefore, SMEs in the tourism sector are responsive to economic growth in the tourism sector [39]. SMEs in tourism increase society's income society [40].

Third, the communities have contributed toward sustainable tourism development. Communities are groups of people who are living in the area. These people have an interest in creating resources for tourist destinations. Based on the result of the study, communities living in SEZ, such as tourism awareness groups that contribute toward the tourism sector, such as participating in creating local law "Awik-Awik," promoting the local culture in developing sustainable tourism, etc. Thus, the communities are essential for the recovery process regarding business innovations [41].

Fourth, the visitors who have contributed to the tourism sector and purpose for specific journeys such as recreation, meetings, holidays, sports, family, and business [42]. They contribute to the tourism sector as an essential ecosystem and source of income. Tourists are users of tourism products and services. Therefore, tourists also have roles in their actions toward conservation initiatives and are agents of promoting the destination.

Lastly, the university plays a vital, collaborative role in supporting sustainable tourism development. As the leading partner for all stakeholders, the university is instrumental in conducting research and development and human resource development. The university's essential roles in the tourism sector include research and development towards sustainable tourism and economic development, identification of sustainable tourism potential, education and training for local communities in tourism areas, assistance and management for tourism SMEs, and partnership with stakeholders in the tourism sector.

Table 2 explains the stakeholders' role in SEZ based on the interview results regarding their innovation and creativity during the crisis in sustainable tourism development.

In addition, the authors also designed Figure 2, which explains the relationship among stakeholders based on the interview results regarding their response to innovation and creativity in times of crisis.

Based on Figure 2 explains that the role of stakeholders in the tourism sector in reaching sustainable tourism development is close collaboration among the stakeholders such as governments, academic institutions, NGOs, and tourists. This was in line with a study in Italy, which stated that collaboration between tourism companies and the government could significantly impact infrastructure and service quality in the tourism sector [43]. It can be concluded that the collaboration among the stakeholders led the tourism sector to achieve sustainability, including in the tourist area [44].

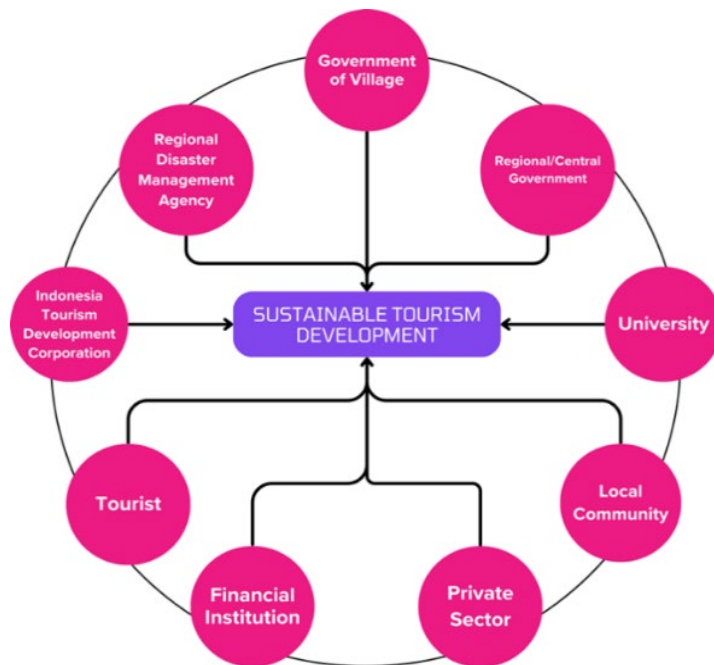


Figure 2. Stakeholders in sustainable tourism development

Table 2. Roles and responsibilities of stakeholders

No.	Stakeholder	Role and Responsibility
1	Governments (National/regional)	<ul style="list-style-type: none"> <li>- Design and implementation of the policy</li> <li>- Giving incentive for SMEs</li> <li>- Applying the sustainable tourism program such as apply green technology</li> <li>- Develop and reconstruction of tourism infrastructure</li> <li>- Collaboration with the tourism stakeholders to reach benefit from its activities</li> <li>- Strategic partnership with international institution to promote tourism sector of SEZ</li> <li>- Giving funding for tourism development</li> <li>- Share of Corporate Social Responsibility program for local tourism community and environment</li> </ul>
2	Private Sector	<ul style="list-style-type: none"> <li>- Support funding for tourism SMEs</li> <li>- Developing tourism destination</li> <li>- Training and empowerment for local youth</li> <li>- assistance to indigenous/local communities</li> </ul>
3	Regional Disaster Management Agency	<ul style="list-style-type: none"> <li>- promotion of disaster mitigation strategies in SEZ</li> <li>- recovery toward infrastructure</li> <li>- collaboration to all of the stakeholders</li> </ul>
4	Government Village	<ul style="list-style-type: none"> <li>- training of local community</li> <li>- collaboration with the regional government or stakeholders</li> <li>- Tourism Awareness Groups</li> </ul>
5	Indonesia Tourism Development Corporation	<ul style="list-style-type: none"> <li>- Development of SEZ</li> <li>- Stakeholders' coordination in partnership</li> <li>- Evaluation toward infrastructure</li> <li>- Research and development toward sustainable tourism development and sustainable economic development including identification of sustainable tourism potential</li> </ul>
6	University	<ul style="list-style-type: none"> <li>- Education and training toward local community in tourism area</li> <li>- Assistance and managerial toward tourism SMEs</li> <li>- Partnership toward stakeholders in tourism area</li> </ul>
7	Local Community	<ul style="list-style-type: none"> <li>- Participate in creating local law "Awik-Awik"</li> <li>- Ownership of the products and services (Business)</li> <li>- Training and improving skills of local community</li> <li>- Promote the local culture in developing sustainable tourism</li> </ul>
8	Financial Institution	<ul style="list-style-type: none"> <li>- Project funding for SEZ tourism Infrastructure, hotel, accommodation, etc.</li> <li>- Funding for tourism SMEs</li> <li>- Corporate Social responsibility</li> </ul>
9	Tourist	<ul style="list-style-type: none"> <li>- Involving toward conservation</li> <li>- As agent of promotion toward tourism destination</li> <li>- As a market of sustainable tourism based on the environmentally friendly</li> <li>- The produce of products and services</li> </ul>

Source: Informants.

### 3.2 Innovation and creativity during crisis

This part explored stakeholders' role in innovation and creativity during and post-disaster context post-disaster (earthquake and COVID-19) in the Special Economic Zone, Mandalika, Indonesia. The study informants commonly referred to the disaster in the August 2018 earthquake and the crises of the pandemic COVID-19 in 2019 as a model of business models and practices.

First, in the special economic zone (SEZ), Mandalika is commonly in Lombok; unlike the disaster of the earthquake in 2018, the pandemic covid-19 forced the local businesses of the community to seek alternative ways to their income [45]. This situation encourages local tourism entrepreneurs to find various innovations that can be a solution in times of crisis. Some informants stated that it involves market innovation in times of crisis. For example, the informants from local tourism entrepreneurs (SMEs) or local tourism entrepreneurs engaged in products and services to find a new market during the COVID-19 pandemic. The model of innovation and creativity can reach a broad market over time. Local entrepreneurs and developers also play a role in creating business innovations relevant to the dynamics of the modern tourism industry. Developing attractive products and services for tourists is critical in maintaining the Mandalika SEZ as a leading destination. For example, developing tourism packages that combine local culture, ecotourism, and halal tourism provides unique experiences for tourists while supporting regional economic diversification. Informants claimed that the new model of innovation and creativity proved successful and they would maintain after the pandemic:

*“In the aftermath of disasters such as the earthquake and COVID-19, local tourism entrepreneurs have demonstrated remarkable resilience and adaptability. They have resisted supporting economic recovery at the special economic zone, Mandalika, Lombok. Moreover, they have initiated innovative strategies such as managing local resources like craft and culinary products based on local raw materials. These initiatives are a testament to their creative adaptation to changes in market demand. The entrepreneurs have also swiftly adapted to the changing business landscape, moving to an online business model using digital platforms in the tourism sector to reach new markets during border closures.”*

Furthermore, the informant also stated that:

*“Local tourism entrepreneurs adapted and moved to create a new creativity for business adaptability in the time of disaster, such as developing sustainable agriculture to support the local food security as a source of income. These activities showed that local entrepreneurs are agents of change to create an economic system that is more resilient and adaptive toward crises.”*

These findings align with those researchers [46] who revealed that natural disasters can quickly adapt SMEs to find business model creativity. Furthermore, business adaptability is an urgent part of business recovery, as it allows for faster adaptation to changing circumstances and recovery [47]. Business adaptability is urgent in times of crisis in changing the circumstances in its recovery process from disruptive events such as crises, disasters, or pandemics [46, 47]. Thus, the business creativity, including business adaptability of SMEs in times of disaster, can help and facilitate the mitigation toward faster economic recovery.

Second, the government stakeholders have played a pivotal role in fostering innovation and creativity during the COVID-

19 pandemic. Their efforts have been instrumental in developing new business models and initiatives. As one government informant put it:

*"This innovation is aimed at business actors and local government initiatives, such as developing digital tourism applications that provide information about halal destinations, local product shopping centers, and hotel services in Lombok. An environmentally friendly tourism campaign supports this, making the Mandalika SEZ a world-class tourist destination that maintains local wisdom".*

Moreover, from an accommodation perspective, the global trend towards sustainable and environmentally friendly tourism is increasingly shaping tourist preferences. This trend has not gone unnoticed in the Mandalika SEZ, where business actors innovate to align their services and products with these global standards. For instance, many accommodation providers are now adopting environmentally friendly practices, such as reducing single-use plastics and improving waste management. It enhances the destination's image and ensures the long-term sustainability of the tourism industry in Mandalika, making it a point of pride on the global tourism map.

Furthermore, Figure 3 explains the innovation and creativity in the crisis in SEZ to achieve sustainable tourism development. It is indicated that risk management toward crisis creates high innovation and creativity with the result of achieving a competitive advantage. Therefore, gaining a competitive advantage in the tourism sector, such as creating high innovation and creating products from local and tourism packages that combine local culture, can impact sustainable tourism development.



**Figure 3.** Innovation and creativity in the time of crisis in SEZ

Adopting sustainable practices in times of crisis is one of the requirements for continuing innovation. Using technology in the tourism sector can foster the tourism sector to reach sustainability development in the long term. It is supported by the state of the importance of technology to support innovation in the tourism sector [48]. Furthermore, sustainability in the tourism sector refers to maintaining the culture (social, economic, and environmental) through innovation and collaboration among the stakeholders. To reach this agenda of sustainability, the collaboration of the stakeholders is a must, and open innovation is the key to reaching the goal by integrating the stakeholders and technological innovation to balance the economic aspect, social responsibility, and environmental aspects [49].

Based on Figure 3 above, the innovation and creativity of the stakeholders in the tourism sector play an essential factor

in promoting sustainable tourism in times of crisis. Therefore, it is vital to encourage stakeholders in the tourism sector to create innovation and creativity as a solution and adapt to market change in times of crisis. Promoting co-creation in the tourism sector is one of the factors in encouraging the sharing of ideas and collaboration among the stakeholders to create innovation in the tourism sector [50-52], especially in time of crisis.

Stakeholders, including the government, Indonesia Tourism Development Center (ITDC), local communities, and businesses, have taken significant actions to achieve sustainable tourism in SEZ. These actions, as revealed by the ITDC representative, are a testament to their commitment to sustainability:

*“ITDC implements green building practices using renewable energy and building infrastructure that supports sustainability, such as efficient water and waste management facilities.”*

Adopting sustainable practices in times of crisis is one of the requirements for continuing innovation. Using technology in the tourism sector can foster the tourism sector to reach sustainability development in the long term. It was supported by the importance of innovation [48]. Furthermore, sustainability in the tourism sector refers to maintaining the culture (social, economic, and environmental) through innovation and collaboration among the stakeholders. To reach this agenda of sustainability, the collaboration of the stakeholders is a must, and open innovation is the key to reaching the goal by integrating the stakeholders and technological innovation to balance the economic aspect, social responsibility, and environmental aspects [49].

#### 4. DISCUSSION

This study tried to explore the role of stakeholders in supporting sustainable tourism development through innovation and creativity in the context of SEZ, Mandalika, during times of crisis or post-crisis.

The role of government is the leading actor in developing sustainable tourism post-crisis. The government has the role of rebuilding the tourism sector with some policies and regulations to support sustainable tourism development. Based on the study's findings, governments such as province and city/region governments have the role of supporting tourism development in SEZ, Mandalika post-crisis by providing regulations and policies. To support the tourism sector in SEZ, the governments implemented policies toward economic recovery post-crisis to ensure the sustainability of development. Some government policies support tourism development at SEZ post-crisis, such as giving incentives for SMEs, applying sustainable tourism programs such as green technology, developing and reconstructing tourism infrastructure, and collaborating with the tourism stakeholders to benefit from its activities. The result was in line with a study by Liu et al. [9], which revealed that the governments contributed toward the reconstruction of the physical aspect (infrastructure), funding, and marketing toward tourism. In addition, Robina-Ramírez et al. [53] stated that stakeholders need to strengthen in facing the crisis to reach tourism sustainability.

Second, human resources and financial aid are the factors that can support sustainable tourism development in times of crisis or post-crisis. The key is the involvement of human

resources to support sustainable tourism in times of crisis. Human resources support tourism development in some ways, such as training the local community, workshops, and research and development toward sustainable tourism development in times of crisis and post-crisis. Furthermore, financial institutions have a role in supporting the community financially, such as with some kinds of aid such as project funding for SEZ tourism infrastructure, hotels, accommodation, funding for tourism SMEs, and corporate social responsibility.

Third, the private sector (investors, developers, and SMEs) contributed to sustainable tourism development, especially at SEZ, Mandalika, Indonesia, during or post-crisis. Based on the result of the study, the business sector contributed toward the community at SEZ, Mandalika, some roles such as giving funding for tourism development, sharing CSR programs toward the tourism community, funding SMEs in the community, and training and empowering the youth community. It was supported by the study from Sharma et al. [54], which revealed that the private sector, like SMEs, can take advantage of supporting sustainable tourism post-crisis.

Fourth is the involvement of the local community in the tourism sector in a crisis. The results found that the local community has many roles in supporting sustainable tourism development, such as participating in creating the local law “Awik-Awik” and promoting the local culture in developing sustainable tourism. The local community made local laws based on local wisdom regarding “Awik-Awik.” Local wisdom symbolizes the value of culture, norms, ideas, and local knowledge [55]. Therefore, local communities are not only the main actors in promoting sustainable tourism development but also as catalyzers of sustainable tourism. Based on a study by Sharma et al. [54], local communities are the main central toward sustainable tourism in times of crisis.

Lastly, there is innovation and creativity toward sustainable tourism development during a crisis. The findings indicated some innovations and creativity that the tourism stakeholders have done to support sustainable tourism, such as business innovations and creativity through online business models using digital platforms in the tourism sector and developing sustainable agriculture to support local food security as a source of income. In addition, some innovation and creativity to support tourism development during crisis and post-crisis, such as developing digital tourism applications that provide information and accommodation based on environmentally friendly practices, such as reducing single-use plastics and improving waste management. Innovation and technology in times of crisis can reduce the cost and flexibility toward sustainable tourism [54]. Innovation and creativity have changed the community's behavior toward the tourism sector to face the crisis, especially during the COVID-19 pandemic [54].

#### 5. THEORETICAL AND PRACTICAL IMPLICATION

##### 5.1 Theoretical implication

From the theoretical implication, the results can contribute to understanding the role of stakeholders toward their innovation and creativity to reach sustainable tourism development. The results also provide opportunities for the government, stakeholders, regional disaster management agencies, local communities, and the tourism sector to

collaborate for the effectiveness of sustainable tourism development in times of crisis. The study of Ritchie [56] highlights the importance of stakeholder collaboration toward disaster management in reaching tourism development. Therefore, the findings of the study highlight some roles of the stakeholders toward sustainable tourism destinations in times of crisis, such as 1) improvement of the collaboration among stakeholders in facing the crisis, 2) the success of the stakeholders in designing the innovation and creativity of the agenda in the time of crisis. Thus, these stakeholders contribute to destination resilience from the perspective of management crisis in achieving sustainable tourism [30].

Furthermore, this study contributed to tourism knowledge by presenting a framework that proposes the role of stakeholders and collaboration among them to reach sustainable tourism development in times of crisis. Through our framework of collaboration among the stakeholders, we provided information on how sustainable tourism can be reached by the stakeholders' governance and multiple ways to achieve sustainability. It was in line with the study of Pahrudin et al. [8], stating that the tourism sector stakeholders, such as governments, destination management organizations, communities, and policymakers, can create policies and innovations to reach sustainability.

Therefore, studying stakeholders' role in the crisis extends stakeholder theory, tourism sector resilience, and sustainable tourism development. From the perspective of the stakeholders, collaboration among the stakeholders how crisis to adapt and adjust the environment from the traditional roles (e.g., government as regulators and business community as profit receivers) to collaborative crisis management toward the response of crisis and sustainable recovery strategies [56]. In addition, in times of crisis, the stakeholders have a responsibility toward the recovery process to reach long-term sustainability [57].

From the perspective of Sustainable Development Goals (SDGs), the SDGs can be achieved through tourism needs collaboration from different stakeholders at national, regional, and local as well as international NGOs (SDGs point 17). The stakeholders can provide policies and strategies in times of crisis and post-crises to achieve sustainable development goals (SDGs) [13]. A strong partnership among the stakeholders is essential for the recovery process in times of crisis [13]. The partnership of stakeholders is one of the aspects of sustainable development goals (SDGs). Some studies have identified the stakeholders' role in the tourism industry as actors that contribute to the tourism industry [14]. We understand that collaboration among the stakeholders could facilitate the SDGs17 (i.e., partnership for the goals).

The findings emphasize the importance of the stakeholders collaborating during and after the crisis to create innovation and creativity for sustainable tourism development. It is implied that the stakeholders have coordination from top-down governance for all stakeholders. Thus, from the perspective of creating innovation and creativity in a crisis, the stakeholders can support the co-creation model, where the stakeholders can develop recovery strategies that increase tourism resilience and sustainability [58].

Furthermore, in the context of the innovation and creativity of local communities in the time of crisis to support sustainable tourism development, local entrepreneurs in tourism create business innovation and products and services for tourists, such as creating tourism packages in ecotourism, halal tourism, and online business model to support regional

economic and economic recovery. This agenda supports tourism development connected to decent work and economic growth (SDGs 8) and (SDGs 1) to reduce poverty. Therefore, the government also implemented green building practices using renewable energy to support tourism sustainability. It refers to the growth and innovation agenda (SDGs 9) and promoting sustainable cities and communities (SDGs 11).

Thus, this study contributes to understanding the role of stakeholders in times of crisis to achieve sustainable tourism development. Integrating all stakeholders who create innovation and creativity in times of crisis can provide tourism resilience and sustainability in the tourism sector, especially in SEZ, Mandalika, Indonesia.

## 5.2 Practical implication

In this study, the practical implications of the stakeholders' involvement in crises implied the integration of all stakeholders to reach sustainable tourism. The stakeholders in the tourism sector should have strong leadership in the coordination and recovery process regarding the responses to the crisis and policies. The stakeholders, such as governments, the private sector, local communities, NGOs, and academic institutions, must collaborate to create innovation and creative practices that impact the long-term inability. During the crisis in SEZ Mandalika Lombok, Indonesia, there were some innovations and creativity, such as the government establishing funding and facilitating partnerships between industry and the local community to rebuild tourism infrastructure.

Some practical implications can be applied based on the findings of the study. The findings contribute to a deeper understanding of the collaboration among the stakeholders to support sustainable tourism at SEZ Mandalika during and after crises.

1. The governments and ITDC focus on providing strategies and policies to support the development of SEZ Mandalika post-crisis, such as infrastructure development, social and economic post-crisis, and promotion of SEZ Mandalika as a tourism destination.

2. Governments and financial institutions may provide some programs to build strategies for SMEs' resilience and recovery post-crisis, such as access to financial resources and digital marketing training for their products and services.

3. The university has a role in tourism development during and after crises. Some agendas universities and education institutions can contribute to sustainable tourism include research and development toward tourism development and risk mitigation, education and training programs for local communities in SEZs post-crisis, and local community empowering programs for their businesses.

This agenda is an approach to ensure the sustainability principle in the recovery process of the tourism sector after the crisis and environmental responsibility. In addition, in SEZ Mandalika, to respond to the COVID-19 pandemic, the stakeholders focus on creating innovation and creativity to empower the local community in the tourism sector at SEZ Mandalika. The practical implications provide some actions for stakeholders such as the government, private sector, local community, tourists, university and education institutions, financial institutions, and relevant stakeholders to emphasize the importance of stakeholder collaboration to support sustainable tourism development in SEZ Mandalika, Indonesia.



## 6. CONCLUSIONS

This study explains the stakeholders' role in the crisis: to create innovation and creativity to support sustainable tourism in SEZ, Mandalika, Indonesia. The study shows that the stakeholder has contributed to creating innovation and creativity with some ideas that can support the development of the tourism sector, such as innovation in managing local resources, such as craft and culinary products based on local raw materials, and developing sustainable agriculture and an environmentally friendly tourism campaign. Accommodation provides environmentally friendly practices such as reducing single-use plastics and better waste management. Therefore, this study also identifies each stakeholder's roles based on their role in creating innovation and creativity toward sustainable tourism development in times of crisis.

Furthermore, this study underscores stakeholders' pivotal role in the crisis, fostering innovation and creativity to bolster tourism development in SEZ. The cultural phenomena in the local culture, such as the 'Gotong Royong' spirit, play a crucial role in accelerating recovery. This underlines the importance of preserving and promoting local culture for sustainable tourism. The successful collaboration of stakeholders, achieved through coordinated efforts based on their respective roles, is a testament to the power of cultural appreciation in sustainable tourism. We identified the roles, interests, and motivations that drive them to support sustainable tourism.

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