

Post-disaster tourism governance; public perceptions of disaster mitigation and tourism safety post-tsunami in Tanjung Lesung, Indonesia

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Abstract

Tanjung Lesung, as a tourism Special Economic Zone (SEZ), faces significant challenges in restoring its tourism image after the disaster. Therefore, understanding public perceptions of mitigation efforts and traveller safety is critical in determining the effectiveness of destination recovery strategies. This study aims to analyse the influence of disaster mitigation, tourism security, satisfaction with sustainable tourism policies, and post-disaster psychological conditions on public perceptions of Tanjung Lesung after the tsunami. This study uses a quantitative approach with a survey method. Data was collected from 97 valid respondents and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with Smart PLS4 software. The results show that disaster mitigation and tourism security have a significant influence on community perceptions of tourist destinations. In addition, satisfaction with sustainable tourism policies acts as a mediator in the relationship between disaster mitigation and community perceptions. Other findings revealed that post-disaster psychological conditions have a significant impact on community satisfaction with tourism policies and their perceptions of tourist destination security. Based on the results of this study, an integrated approach that includes comprehensive disaster mitigation policies, improved tourism security, and attention to the psychological state of the community is needed to rebuild community trust in post-disaster tourist destinations. This study provides important insights for policy makers and destination managers in designing more effective recovery strategies to ensure the sustainability of the tourism sector in disaster-affected areas.

Keywords: disaster mitigation, public perception, tourism policies, tourism recovery, governance

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Introduction

Indonesia, as an archipelagic country located along the Pacific Ring of Fire, has a very high risk of disaster (Goda et al., 2019; Heriani, Pande Made Kutaneegara, 2019). One recent disaster that has had a strong effect is the Sunda Strait tsunami that occurred on December 22, 2018. Data from the National Disaster Management Agency shows that during 2018, there were more than 2,500 disasters recorded throughout Indonesia, with more than 4,000 fatalities and economic losses reaching trillions of rupiah. One of the major disasters was the Sunda Strait tsunami. This disaster hit the Tanjung Lesung tourist area, one of the leading destinations in Banten Province, and caused significant physical damage and loss of life. This incident caused deep trauma, not only to the daily lives of the locals but also to the tourism industry, which is an essential sector in the regional economy. The main post-disaster challenge is to restore

the destination's image and rebuild the perception of the community and tourists regarding disaster mitigation and tourism safety in the area.

Tanjung Lesung, as a tourism Economic Zone, faces additional challenges in restoring its tourism image after a disaster. Economic Zone affected by disasters require intensive efforts in communicating the mitigation measures taken, as well as increasing the capacity of local communities to adapt to disaster risks in the future (Rumambi et al., 2023; Suldani et al., 2023). In addition, community participation in the mitigation and vigilance process is key to building tourist destination resilience (Nugraheni et al., 2022; Situmorang, 2021; E. Yang & Kim, 2023). In this context, public perception of disaster mitigation efforts and tourism safety becomes very important in measuring the extent to which the public can feel safe again and have confidence in the sustainability of tourism in areas that disasters have hit.

Public perception of disaster mitigation is one of the main factors in rebuilding a sense of security in tourist destinations post-disaster. Disaster mitigation includes a series of actions taken before, during, and after a disaster to reduce the negative impacts (Alexander, 2019). According to (Que et al., 2022), the success of disaster mitigation is highly dependent on the involvement of local communities in the planning and implementation process, as well as the effectiveness of socialisation carried out by the government and related authorities. In the context of disaster mitigation, it is paramount to understand the local communities' perception because they are the primary stakeholders most affected by the disaster and have direct knowledge of local conditions. Disaster mitigation and safety perceptions are crucial aspects of the tourism sector's sustainability. Recent studies have shown that perceptions of disaster risk and community preparedness play an essential role in determining the effectiveness of disaster mitigation strategies (Q. Li et al., 2024; Sales & Rescia, 2024; Yuniarti et al., 2024). In addition, this perception also influences how quickly a tourist destination recovers after a disaster (Borbon & Pulhin, 2023; Burlea-Şchiopoiu et al., 2023; Lynch et al., 2024).

Since the tsunami, various mitigation measures have been implemented by the government and related parties to improve the safety of tourist destinations, including the construction of resilient infrastructure and improving early warning systems (BPPD Banten, 2024). Still, even though physical infrastructure has been repaired, non-physical aspects such as community perception of disaster risk and tourism safety are significant challenges (Hao et al., 2022; Muntasib et al., 2020; Raharjana et al., 2020). Several studies state that building community and tourist trust in the safety of a destination post-disaster requires time and a holistic approach (Seeger-Guttmann & Gilboa, 2023; Situmorang, 2021; Tang et al., 2022).

Disaster mitigation in the context of tourism refers to the measures taken by governments, businesses, and communities to reduce the risks caused by natural disasters to tourist destinations. Disaster mitigation includes a series of preventive, rapid response, and recovery policies to minimize negative impacts on tourism. The importance of collaboration between the government, the private sector, and tourists in improving disaster vigilance involves planning, marketing, and cooperation to manage the impact of disasters on tourist destinations (Shao et al., 2023). Rapid response and recovery policies are essential to minimize negative effects on tourism attractions (Estevão & Costa, 2020). In the case of Tanjung Lesung, which was hit by the tsunami, disaster mitigation is essential to ensure the safety and sustainability of the tourist destination and rebuild tourism confidence.

Disaster mitigation in tourist areas requires the active involvement of local communities, local governments, and destination managers. The importance of mapping evacuation routes and mitigation education directly in tourist areas is a crucial step in community preparedness. (Wardani et al., 2023). Meanwhile, (Raharjana et al., 2020) show that strengthening the capacity of tourism awareness groups (*Pokdarwis*) through community-based training plays a significant role in building the resilience of destinations. Similar research by (Nugraheni et al., 2022) shows that participatory models in community-based disaster mitigation can increase the effectiveness of risk reduction, including in the tourism sector which is vulnerable to the impact of natural disasters. Another is development strategies that involve disaster-aware tourists who play an active role in reducing the effects of disasters (Dyahati et al., 2020). In addition (E. Yang & Kim, 2023) emphasized that community resilience is a critical factor in sustainable tourism development, thus focusing on collaboration between the government, the private sector, and local communities to improve disaster preparedness in the tourism sector (Dyahati et al., 2020).

Furthermore, tourism safety is an essential element in restoring tourism in disaster-prone areas. Tourism safety includes aspects related to protecting tourists from disaster risks and other threats during their visit to a tourist destination (Ritchie, 2014). Tourism safety is an essential factor in tourists' decisions to visit a destination, and safety and security are important components that influence tourists' decisions when choosing a holiday destination (Okičić et al., 2023). (Yu et al., 2024) Also found that tourists who gather information through social channels are more likely to make safer travel decisions. The safety factor is an important element in the tourist decision-making process (Tukhliev, 2023), emphasizing that tourists' perception of safety directly influences their decision to visit a destination. In the tourism sector, safety is a major factor influencing tourists' interest in visiting a location, especially in destinations that natural disasters have hit. (Hao et al., 2022) highlighted that risk perception negatively affects tourists' desire to visit disaster-affected destinations; therefore, disaster-affected tourist destinations face significant challenges in attracting tourists (Estevão & Costa, 2020). The study conducted by (Rosselló et al., 2020) confirmed that natural disasters significantly reduce the number of tourists, indicating that safety is a major factor in tourist interest in affected destinations.

Public perception of tourist destination safety has a significant effect on the desire to revisit and tourist satisfaction. (Amalia et al., 2023) Stated that the perception of security and safety is critical in building tourist satisfaction and increasing the urge to revisit. Improving the image of a destination through improving aspects of safety, accommodation, and attractions has proven to be essential in enticing tourists to return; thus, the perception of safety greatly influences tourist satisfaction and desire to revisit, especially in destinations challenged by over-tourism (Papadopoulou et al., 2023). The study by (Lai et al., 2018) showed that travellers' perceptions of safety have a direct impact on their travel satisfaction and their desire to share positive reviews and to visit again.

In the context of post-disaster tourism sustainability, satisfaction with sustainable tourism policies also plays an important role. Sustainable tourism policies aim to ensure that tourism activities can continue without damaging the environment or causing local disparities. According to (Dalla Vecchia et al., 2024; Gössling et al., 2021) sustainability does not only focus on economic recovery but also conservation. This policy will have a direct impact on public perception of the safety and sustainability of tourism in sites affected by disasters.

The community's psychological condition post-disaster is also an important factor in understanding their perception of disaster mitigation and tourism safety. The community's psychological trauma due to a disaster can influence the way they view safety and risk in the future (Burnett Jr et al., 2016). According to (Becken & Loehr, 2022; Le et al., 2019) post-disaster psychological conditions such as anxiety, fear, and trauma can weaken positive perceptions of disaster mitigation efforts and tourism safety policies, thereby slowing down tourism recovery.

Several previous studies have discussed aspects of disaster mitigation and Tourism safety in the post-disaster context, but there are still gaps that have not been comprehensively examined. Ritchie & Jiang examined crisis management in tourism but focused more on government response than on the perceptions of local communities (Ritchie & Jiang, 2019). Borbon & Pulhin examined changes in tourist behaviour post-COVID-19 pandemic, without relating it to public perceptions of tourist decisions, but did not examine the role of mitigation policies in rebuilding the trust of tourists and the public (Borbon & Pulhin, 2023). Hao et al. discuss the impact of risk perception on tourist decisions, but do not examine the role of mitigation policies in rebuilding the trust of tourists and the community (Hao et al., 2022). Yang & Kim highlight community resilience in tourism sustainability but do not examine the post-disaster psychological impact on the community's perception of tourism safety (E. Yang & Kim, 2023). Rosselló shows that natural disasters reduce the number of tourists but does not discuss how mitigation can restore public confidence (Rosselló et al., 2020). Amalia et al examine the relationship between destination image and tourist satisfaction but do not include disaster mitigation and tourist safety as factors shaping post-disaster destination image (Amalia et al., 2023). Lynch et al. analyzed how risk perception affects post-disaster choices, but have not examined sustainable tourism policies in improving public perceptions of Tourism safety (Lynch et al., 2024).

From this gap analysis, this study offers a new contribution by examining the relationship between disaster mitigation, Tourism safety, satisfaction with sustainable tourism policies, and the psychological condition of post-disaster communities in shaping perceptions of disaster destinations, Tourism safety, satisfaction with sustainable tourism policies, and the psychological condition of the community towards community perceptions of tourism in Tanjung Lesung after the tsunami.

The researcher wants to fill this gap based on the need to understand how the public perceives disaster mitigation efforts and Tourism safety in Tanjung Lesung after the tsunami. Public perception not only affects individuals' sense of security when at tourist destinations, but can also influence the decision to revisit and recommend the destination to others. In addition, public perceptions of sustainable tourism policies and post-disaster psychological conditions also play an essential role in shaping their attitudes towards the recovery efforts being made.

Based on the model developed in this study, several main variables are considered to influence public perception: disaster mitigation, tourism safety, satisfaction with sustainable tourism policies, and post-disaster psychological conditions. This model shows that disaster mitigation and tourism safety efforts influence the community's perception both directly and indirectly through satisfaction with sustainable tourism policies. The psychological condition of the community after the disaster also plays a vital role in moderating the influence of these variables.

This study seeks to examine the impact of disaster mitigation, post disaster psychological conditions, and tourism safety on public perception and satisfaction with

sustainable tourism policies. It also seeks to evaluate the mediating role of satisfaction in the relationship between these factors and public perception.

Research Methods

This research uses a quantitative approach to analyze public perceptions of disaster mitigation and tourism safety in Tanjung Lesung after the tsunami. The quantitative approach was chosen because it produces measurable and structured data, making it easier to test hypotheses and develop conclusions based on the data collected (Creswell, 2014). This study was designed as a descriptive survey with questionnaires as a data collection technique. The survey design was chosen to directly identify and measure public perceptions using questions relevant to this study. The survey was conducted on the Tanjung Lesung community affected by the tsunami disaster. This design allows for large-scale data collection with high efficiency and supports the statistical analysis needed in the structural model (Hair, Jr. et al., 2022).

The sampling technique was carried out using purposive sampling, which is a non-probability sampling technique selected based on specific considerations. The criteria for respondents in this study were: At least 18 years old, residing in the Tanjung Lesung area, having experienced the impact of the 2018 tsunami, and having a basic understanding of tourism activities in the area. A total of 97 respondents who met these criteria voluntarily participated in filling out the questionnaire. This number is considered sufficient for PLS-SEM analysis, considering that the sample size in a model with moderate complexity is between 30 and 100 respondents.

Data were gathered through a questionnaire, which consisted of several parts to measure research variables: disaster mitigation, tourism safety, satisfaction with sustainable tourism policies, community psychological conditions, and public perception. This questionnaire used a 5-point Likert Scale (1 = Strongly Disagree, 5 = Strongly Agree) to facilitate the measurement of respondents' perceptions (see Table 1). This instrument was compiled based on relevant literature and previous studies. Validity was tested using convergent and discriminant validity, while reliability was measured using Composite Reliability (CR) and Cronbach's Alpha. The expected AVE value is more significant than 0.50, while the expected Cronbach's Alpha and CR values are over 0.70 (Hair, Jr. et al., 2022).

Table 1. Research Variable Description

Variable	Indicator	Reference
Disaster Mitigation	Infrastructure Preparedness	(Hidayat & Rasadi, 2020)
	Early Warning System	(S. Li et al., 2023)
	Community Disaster Training	(Muthia et al., 2020)
	Government Policies and Regulations	(Aronsson-Storrier, 2020)
Tourism Safety	Emergency Facilities in the Tourist Site	(Raharjana et al., 2020)
	Safety Perceptions in the Tourist Site	(Situmorang, 2021)
	Evacuation Procedures	
	Conditions of Tourist Infrastructure	(L. Yang, 2017) (Wahyuningtias et al., 2020)
Public perception	Perception of tourism safety	(Hao et al., 2022)
	Perception of Mitigation Effectiveness	(Que et al., 2022)
	Perception of confidence in tourism policies	(E. Yang & Kim, 2023)
	Satisfaction with mitigation measures	(J. Wang et al., 2023)

Public satisfaction with sustainable tourism policies	Quality of sustainability policies,	(Putra et al., 2023)
	Implementation of sustainable tourism programs	(Latif, 2021)
	Contribution to the environment	(Jasrotia et al., 2023)
Communities' Psychological Conditions of Post-Disaster	Post-disaster stress levels	(Jl & Moon, 2020)
	Psychological resilience	(Y.-S. Yang & Bae, 2022)
	Post-traumatic risk perception	(Sodeyama et al., 2022)
	Community involvement in recovery	(Deng et al., 2022)

Source: data processed by researchers, 2024

With this method, the research is expected to produce valid and reliable findings in identifying factors that influence public perception of disaster mitigation and tourism safety in Tanjung Lesung.

The data collected were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the SmartPLS 14 software. PLS-SEM is a statistical method that is suitable for studying complex relationships between latent variables, especially when the data is not normally distributed and the sample size is relatively small (Hair, Jr. et al., 2022). PLS-SEM was chosen because of its ability to handle predictive models with reflective and formative constructs.

Data analysis began with the evaluation of the measurement model to test the reliability and validity of the research instrument. Construct reliability is tested using Cronbach's Alpha and Composite Reliability, where the expected reliability value is ≥ 0.70 . Convergent validity is tested using the Average Variance Extracted (AVE) with a minimum standard of 0.50 which indicates that the measurement variables reflect the constructs being measured (Sarstedt et al., 2020). Discriminant validity is calculated using the Fornell-Larcker criteria to ensure that the constructs differ significantly from each other.

The structural model evaluation is conducted to test the hypotheses after the measurement model satisfies the reliability and validity criteria. The hypotheses are tested by observing the path coefficient and t-statistic value generated using the bootstrapping technique (5000 samples). A hypothesis is considered significant if the p-value < 0.05 . In addition, the researchers report the R-squared values for the dependent variables to elucidate the extent of variance that the independent variable can explain. The researchers tested the following main hypotheses:

H1: Disaster mitigation has a positive effect on public perception.

H2: Disaster mitigation has a positive effect on satisfaction with sustainable tourism policies.

H3: Post-disaster psychological conditions of the community affect public perception.

H4: Post-disaster psychological conditions of the community affect satisfaction with sustainable tourism policies.

H5: Satisfaction with sustainable tourism policies affects public perception.

H6: Tourism safety affects public perception.

H7: Tourism safety affects satisfaction with sustainable tourism policies

The hypotheses are formulated based on a conceptual model that integrates disaster mitigation theory, destination security, post-disaster psychology, and sustainable tourism principles. The test is conducted simultaneously using PLS-SEM to see the direct and indirect influence between variables in shaping public perception of post-disaster tourism destinations

Results and Discussion

Outer Model Evaluation

An evaluation of the measurement model was conducted to ensure that the constructs in this study had sufficient validity and reliability. Based on the results of the analysis shown in Table 2.

Table 2. Convergent Validity

Construct	α	ho_a	Composite reliability	AVE
Disaster Mitigation	0.898	0.908	0.929	0.767
Post-Disaster Psychological Condition of the Community	0.887	0.888	0.922	0.747
Public perception	0.934	0.934	0.953	0.835
Satisfaction with Sustainable Tourism Policies	0.839	0.849	0.903	0.757
Tourism Safety	0.851	0.854	0.900	0.692

Source: Smart-PLS4 Analysis

The construct validation analysis includes Disaster Mitigation, Post-Disaster Psychological Condition of the Community, Public perception, Satisfaction with Sustainable Tourism Policies, and Tourism Safety, which are evaluated through Cronbach's Alpha, rho_A, Composite Reliability, and Average Variance Extracted (AVE) values. All the constructs have Cronbach's Alpha (α) values above 0.7, indicating that the indicators used have good internal consistency. Public perception has an α value of 0.934, indicating that the indicators used to measure public perception are very reliable. Disaster Mitigation has an α value of 0.898, indicating that this construct also has strong reliability in measuring public perceptions regarding disaster mitigation efforts in Tanjung Lesung.

The rho_A value, which is also above 0.7 for all constructs, indicates consistent and accurate measurement reliability. The Composite Reliability of each construct is above 0.9, for example, the Post-Disaster Psychological Condition of the Community has a value of 0.922, indicating that these constructs have a very high level of combined reliability in measuring variables related to post-disaster public perceptions.

In addition, the AVE values for all the constructs were more significant than 0.5, confirming adequate convergent validity (Hair, Jr. et al., 2022). Satisfaction with Sustainable Tourism Policies has an AVE value of 0.757, indicating that the construct can explain more than 75% of the variance of its indicators. This result is significant as it shows that the research variables measured, such as satisfaction with tourism policies and perceptions of security, can be relied upon to provide valid insights into public perceptions of tourism recovery and management efforts in Tanjung Lesung post-tsunami.

Therefore, the reliability and validity evaluation results support the use of these constructs in the structural model analysis, which aims to understand how disaster mitigation and sustainable tourism policies affect public perceptions. This provides confidence that the data used in this study are reliable and valid to answer the research question regarding the factors that influence public perceptions of tourist destinations that have experienced disasters.

Discriminant validity can ensure that each construct assesses various features. Thus, the study results can provide more detailed insights into the factors that influence public views of disaster mitigation and tourism safety in Tanjung Lesung (see Table 3).

Table 3. Fornell-Larcker criterion

Construct	Disaster Mitigation	Post-Disaster Psychological Condition of the Community	Public perception	Satisfaction with Sustainable Tourism Policies	Tourism Safety
Disaster Mitigation	0.876				
Post-Disaster Psychological Condition of the Community	0.703	0.864			
Public perception	0.651	0.727	0.914		
Satisfaction with Sustainable Tourism Policies	0.770	0.820	0.722	0.870	
Tourism Safety	0.858	0.777	0.616	0.809	0.832

Source: Smart-PLS4 Analysis

The results of the discriminant validity test use the Fornell-Larcker criterion to evaluate whether each construct in the model has adequate discriminant validity. Discriminant validity ensures that a construct is more correlated with its indicators compared to other constructs. In the Fornell-Larcker criterion, the square root value of the Average Variance Extracted (AVE) for each construct must be greater than the correlation between constructs, and this is shown in the diagonal of the table.

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The Disaster Mitigation construct has an AVE square root of 0.876 which is higher than its correlation with other constructs, such as Post-Disaster Psychological Condition of the Community (0.703) and Tourism Safety (0.858). This indicates that the disaster mitigation construct can be well distinguished from other constructs. Likewise, Post-Disaster Psychological Condition of the Community shows an AVE square root of 0.864 which is more significant than its correlation with other constructs: Public perception (0.727) and Tourism safety (0.777), indicating that this construct has adequate discriminant validity.

Public perception has an AVE square root of 0.914 which is higher than all correlations with other constructs, including Satisfaction with Sustainable Tourism Policies (0.722), indicating that public perception can be accurately measured by its indicators without being confused with different constructs. The Satisfaction with Sustainable Tourism Policies construct also shows good discriminant validity with a square root of AVE of 0.870, which is higher than its correlations with other constructs such as Disaster Mitigation (0.770) and Post-Disaster Psychological Condition (0.820). Lastly, Tourism safety has an AVE square root of 0.832, which is greater than its correlations with other constructs, including Post-Disaster Psychological Condition (0.77), guaranteeing that this construct is clearly defined in the model.

The robust discriminant validity in this study guarantees that each construct accurately assesses distinct dimensions, hence enabling the findings to yield more precise insights into the factors influencing public views of disaster mitigation and tourism safety in Tanjung Lesung. These results indicate that the measurement model meets the required reliability and validity criteria, providing a strong basis for further analysis in testing the structural model and hypotheses.

Inner Model Evaluation

The inner model is evaluated to assess the strength of the relationship between latent constructs and the model's ability to explain the dependent variable through the R-squared (R^2) value presented in Table 4.

Table 4. R-square

Construct	R-square	Adjusted R-square
Public perception	0.601	0.583
Satisfaction with Sustainable Tourism Policies	0.760	0.752

Source: Smart-PLS4 Analysis

The table shows that the R-squared value of Public Perception is 0.601, indicating that the independent variables in the model, such as Disaster Mitigation, Tourism Safety, and Post-Disaster Psychological Conditions, can explain 60.1% of the variance in public perception. This shows that collectively these factors have a reasonably strong influence on shaping public perception of the Tanjung Lesung tourist destination post-disaster. The adjusted R-squared value for public perception is 0.583, which is slightly lower than the R-squared because it takes into account the number of independent variables in the model to provide a more realistic estimate of the model's ability to explain variance and also prevent overestimation.

The R-squared value for the Satisfaction with Sustainable Tourism Policies construct is 0.760, indicating that 76% of the variance in satisfaction with tourism policies can be explained by variables such as disaster mitigation, tourism safety, and post-disaster psychological conditions. This indicates that these factors have a powerful influence on the level of public satisfaction with the tourism policies being implemented. The Adjusted R-square value of 0.752 is slightly lower than the R-square, indicating that even though it has been adjusted for the number of independent variables, the model still has good predictive ability, with around 75.2% of the variance in satisfaction with tourism policies explainable.

Overall, the R-square and Adjusted R-square values indicate that the independent variables studied can explain well the variance in public perceptions and satisfaction with sustainable tourism policies. This suggests that disaster mitigation strategies, tourism safety policies, and post-disaster psychological support are essential in shaping public views and satisfaction with disaster-affected tourist destinations, which are relevant for the formulation of future mitigation policies and strategies.

Furthermore, hypothesis testing was carried out using the bootstrapping method with 5000 samples. The test results show that all paths of the relationship between constructs are statistically significant (p -value <0.05) as presented in Table 5.

Table 5. Hypothesis Test Results

Path Coefficient	Standard deviation (STDEV)	T statistics	P values	Hypothesis	Decision
Disaster Mitigation -> Public Perception (H1)	0.117	3.295	0.001	H1	accepted
Disaster Mitigation -> Satisfaction with Sustainable Tourism Policies (H2)	0.087	2.599	0.009	H2	accepted
Post-Disaster Psychological Condition of the Community -> Public Perception (H3)	0.104	5.687	0.000	H3	accepted
Post-Disaster Psychological Condition of the Community -> Satisfaction with Sustainable Tourism Policies (H4)	0.078	5.954	0.000	H4	accepted
Satisfaction with Sustainable Tourism Policies -> Public Perception (H5)	0.132	2.539	0.011	H5	accepted
Tourism safety -> Public Perception (H6)	0.165	2.056	0.021	H6	accepted
Tourism safety -> Satisfaction with Sustainable Tourism Policies (H7)	0.107	2.399	0.016	H7	accepted

Source: Smart-PLS4 Analysis

The results of the structural model analysis in Table 5 show how factors influence public perceptions regarding disaster mitigation and tourism safety in Tanjung Lesung post-tsunami. Disaster mitigation is proven to have a significant influence on public perception (H1) with a path coefficient value of 0.117 and a P value of 0.001, indicating that the mitigation efforts have been able to form a positive view of the public towards disaster preparedness in the area. In addition, disaster mitigation also affects public satisfaction with sustainable tourism policies (H2), which means that effective disaster prevention and handling measures contribute to satisfaction with tourism policies.

The psychological condition of the community after the disaster significantly affects their perception (H3) as well as satisfaction with sustainable tourism policies (H4), indicating that good psychological recovery after a disaster can improve the community's view of the security and quality of existing tourism policies. Tourism safety, with a path coefficient value of 0.165 (H6), also plays a vital role in shaping public perceptions, confirming that the sense of security felt by tourists and locals is a key factor in improving perceptions of the tourist destination. This indicates that factors such as disaster mitigation, psychological conditions, and tourism safety significantly contribute to shaping public perceptions of Tanjung Lesung post-tsunami, which supports efforts to strengthen sustainable tourism policies in the area.

Visualization of Structural Model

The structural model in this study presents a visualization of the relationship between latent constructs that have been tested using the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique (Figure 1)

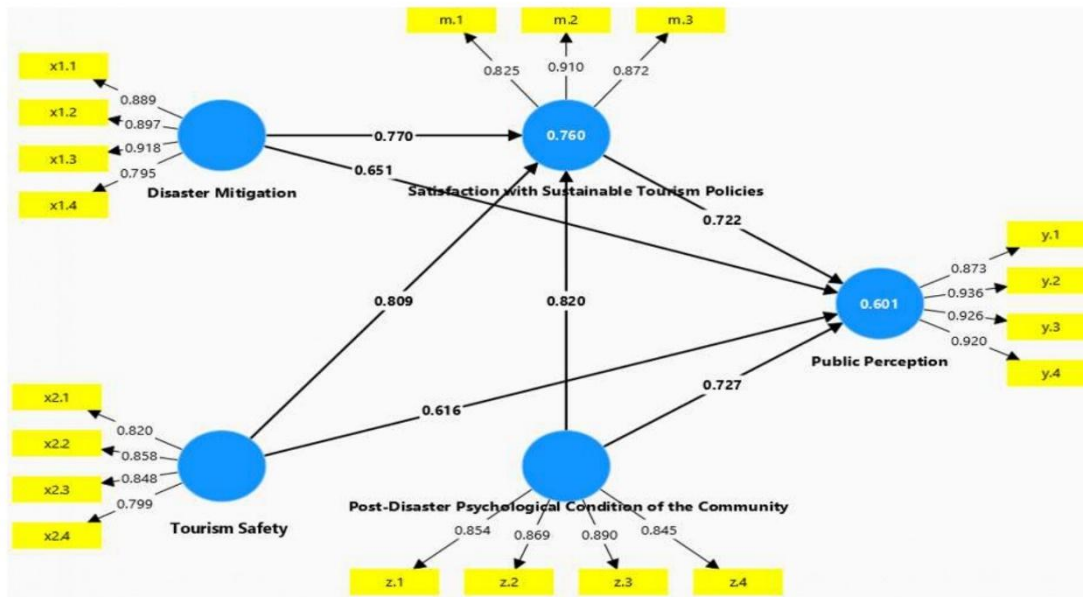


Figure 1. SmartPLS Model
Source: Smart PLS4 analysis

The structural model in Figure 1 analyzes the relationship between various factors that influence public perception in the context of disaster mitigation and sustainable tourism policies. This model includes four main variables: Disaster Mitigation, Tourist Safety, Post-Disaster Psychological Conditions, and Satisfaction with Sustainable Tourism Policies, which contribute to public perception.

H1 & H2: The Effect of Disaster Mitigation

The results of the analysis show that disaster mitigation has a positive and significant effect on people's perceptions of destinations (coefficient = 0.117; $p = 0.001$) and also on satisfaction with sustainable tourism policies (coefficient = 0.087; $p = 0.009$). These findings show that the more tangible the mitigation efforts, such as the construction of resilient infrastructure, early warning systems, and disaster training, the higher the level of public trust and satisfaction with the management of post-disaster tourist destinations. This is in line with risk mitigation theory (Alexander, 2019), which states that the effectiveness of risk management before and after a disaster will greatly determine public perceptions of safety and public trust. In addition, (Que et al., 2022) emphasizes that successful mitigation depends heavily on the involvement of local communities, transparency of information, and the active role of local governments in risk reduction.

This study also reinforces the findings (Hidayat & Rasadi, 2020) which state that the development of a participatory mitigation system is able to build a sense of security and public trust in public policies, especially in the context of disaster-prone tourist destinations. This is consistent with previous findings from (Han & Li, 2017; Tsai & LinLiu, 2017; J. Wang et al., 2023) which show that disaster prevention efforts and the construction of safety facilities can increase tourists' sense of security and comfort. In the context of Tanjung Lesung as a Special Economic Zone, mitigation is not only related to physical safety but also plays a vital role in shaping the public's psychological perception of the sustainability of tourist destinations.

H3 & H4: The Role of Post-Disaster Psychological Condition of the Community

The psychological condition of the community has been proven to have a significant influence on perception ($\beta = 0.104$) and satisfaction with tourism policy ($\beta = 0.078$). This shows that post-disaster trauma, stress, and anxiety affect the way people view the safety, comfort, and effectiveness of tourism recovery policies. This finding is in line with studies (Becken & Loehr, 2022; Sodeyama et al., 2022) that emphasize the importance of social resilience in the recovery process of post-disaster destinations. Psychosocial support and strengthening the capacity of local communities are essential elements in rebuilding public confidence in tourism activities and government policies. Without attention to psychological aspects, the recovery process can be hampered by prolonged fear and mistrust.

Although the influence of psychological conditions on satisfaction is classified as weak ($\beta = 0.078$), the relationship is still statistically significant. This means that the psychological condition of post-disaster communities still contributes to the formation of satisfaction. Still, the impact is not as important as other variables such as security and mitigation. This indicates that psychological recovery efforts are still needed as part of a sustainable policy strategy. The findings are reinforced by (Cheng et al., 2023; Jiang et al., 2024; H. Wang et al., 2022) which state that structured psychosocial support is essential to restoring positive community perceptions and strengthening the effectiveness of sustainable tourism policies.

H5: Satisfaction with Sustainable Tourism Policies as a Mediator

Satisfaction with sustainable tourism policies is proven to mediate the relationship between risk factors and perceptions ($\beta = 0.132$, $p = 0.011$). This finding shows that the effectiveness of policies not only has a direct impact on perceptions but also strengthens the influence of other factors, such as mitigation and security, on how the public views post-disaster destinations. This is in line with the findings (Cheng et al., 2023; Sarker et al., 2023; E. Yang & Kim, 2023), which emphasize that comprehensive and sustainable policies not only increase public satisfaction but also strengthen positive perceptions of tourist destinations. From the perspective of public service satisfaction theory, the public will tend to give a positive assessment if the policy is considered fair, transparent, and has a real impact. This opinion is reinforced by (Gössling et al., 2021), who assert that satisfaction with sustainable tourism policies can strengthen the public's perception of destination safety and recovery as well as build public trust and increase long-term resilience through holistic economic, social, and environmental approaches.

H6 & H7: Contribution of Tourism Safety

Tourism safety affects public perception ($\beta = 0.165$) and satisfaction ($\beta = 0.107$). These findings show that the stronger the public's perception of destination security, the greater their level of trust and satisfaction with the destination's management efforts. These results are in line with findings (Rosselló et al., 2020) that show that risk perception influences tourists' intentions to visit again. In the context of Tanjung Lesung, people trust destinations that display physical and social preparedness and resilience. This finding is also reinforced by (Ritchie, 2014) who emphasizes that risk management and perception of security are the main determinants in the recovery and management of tourist destinations after a disaster. Security includes not only the existence of emergency infrastructure or early warning systems but also the public's perception of the destination's readiness to protect their safety.

Conclusion

This study aims to examine the influence of disaster mitigation, tourism safety, satisfaction with sustainable tourism policies, and post-disaster psychological conditions on public perceptions in Tanjung Lesung post-tsunami. The results of the PLS-SEM analysis indicate that disaster mitigation and tourism safety play an important role in shaping public perceptions of tourist destination security. In addition, satisfaction with sustainable tourism policies serves as a significant mediator in the relationship between mitigation efforts and public perceptions. Post-disaster psychological conditions were also found to have a direct effect on public perceptions and satisfaction with sustainable tourism policies. These findings confirm that a holistic approach that integrates comprehensive disaster mitigation policies, increased tourism safety, and attentiveness to community psychological conditions is essential to restore and strengthen Tanjung Lesung's image as a safe and sustainable tourist destination. Practical disaster mitigation efforts can increase community satisfaction, which in turn will improve their perceptions of the destination. Meanwhile, good tourism safety is also a significant determinant in creating positive perceptions. Thus, this study provides important insights for policymakers and destination managers in developing tourism recovery and management strategies in disaster-prone areas.

This study has various limitations that must be noted. First, it used a survey approach with a purposive sampling technique, so the results may not be fully representative of the broader population. Second, the data were collected only from Tanjung Lesung, so that the results may be less generalizable to other tourist destinations with different characteristics. In addition, this study only measured public perceptions at a specific period after the disaster, with no consideration of perception changes in the long term.

Recommendations for further studies include using a more representative sampling method, such as stratified random sampling, so that the research results can be generalized to a broader population. They may also explore other variables that have the potential to influence public perception, such as economic, social, or cultural factors, and extend the observation period to identify changes in perception over time. The addition of qualitative studies can help delve deeper into the reasons and psychological factors influencing public perception more comprehensively.

In practice, policymakers and tourism managers in Tanjung Lesung are advised to continue improving disaster mitigation efforts and strengthening tourism safety infrastructure. Special attention should be given to psychological support for disaster-affected communities, as improving their welfare and supporting the recovery of the tourism destination as a whole is a priority.

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