

# Bongkasa Pertiwi Tourist Village Resilience in Tackling Covid-19 Pandemic

Ni Nyoman Sri Astuti  
Tourism Department  
Politeknik Negeri Bali  
Badung, Bali, Indonesia  
[nyomansriastuti@pnb.ac.id](mailto:nyomansriastuti@pnb.ac.id)

Gede Ginaya  
Tourism Department  
Politeknik Negeri Bali  
Badung, Bali, Indonesia  
[ginaya@pnb.ac.id](mailto:ginaya@pnb.ac.id)

Ni Ketut Bagiastuti  
Tourism Department  
Politeknik Negeri Bali  
Badung, Bali, Indonesia  
[ketutbagiastuti@pnb.ac.id](mailto:ketutbagiastuti@pnb.ac.id)

I Ketut Suarja  
Tourism Department  
Politeknik Negeri Bali  
Badung, Bali, Indonesia  
[suarja@pnb.ac.id](mailto:suarja@pnb.ac.id)

**Abstract**—This study aims to examine the resilience of the management of the Bongkasa Pertiwi Badung tourist village in the midst of the COVID-19 pandemic. The resilience of the management of the Bongkasa Pertiwi Badung tourist village is a form of resilience and adaptation to the empowerment of tourism villages through BUMDes. In particular, this research is expected to be able to produce a model of institutional capacity development for the successful management of Bongkasa Pertiwi Badung tourism village through BUMDes in the tourist village. There are 455 BUMDes that manage tourist villages under tourism awareness groups (Pokdarwis) in Bali which are engaged in various productive sectors, so the approach used in this study is a combination of qualitative and quantitative approach. The qualitative approach is case study. The quantitative approach is descriptive by displaying statistical data where the data collection method uses a questionnaire-based interview. Data analysis methods consist of scoring and weighting with the PCA method, quadrant important-performance analysis, and correlation analysis. Therefore, this research was conducted in the midst of the COVID-19 pandemic which focused on the level of resilience in the management of the Bongkasa Pertiwi Badung tourist village to the impact of the COVID-19 pandemic. As a tourist destination area that receives tourist visits, the analysis is reviewed from the aspect of attractions, activities and amenities. The tourism component is reviewed based on two important respondents in the tourism business, namely visitor/tourist respondents (attractions-activities) and business actors (amenities). The formulation of the indicators for tourism village management resilience in this study was carried out according to the cleanliness, health, safety,

and environmental sustainability (CHSE) framework where the benchmark used focused on the 3rd pillar, which is related to social, cultural, and environmental capacity. The review of the “community” context in this study is related to the community in the tourism business, namely visitors/tourists and small and medium enterprises/SMEs.

**Keywords**—resilience, tourist village, CHSE, COVID-19

## I. INTRODUCTION

The Covid-19 pandemic has a direct impact on various industries in the world, including the travel and tourism transportation industry. These two industries are even recognized by experts as the sectors most affected by the pandemic. However, the World Tourism Organization (UNWTO) stated that the world needs to trust the government and the tourism industry for the recovery phase from the impact of the corona virus [1]. Zurab Pololikashvili [2] states that if people trust the government and the tourism industry to keep them safe from harm, they can travel quickly.

The strategic role of the government is very much needed, especially in overcoming social problems and community problems in the midst of the COVID-19 pandemic [3]. One of the ways to implement this strategic role is through the support of the Ministry of Villages, Development of Disadvantaged Regions and Transmigration. There are three things that have been done regarding

resilience efforts or the ability to adapt in the era of the COVID-19 pandemic [4]. In principle, social resilience is a concept that measures the ability of a society or community to adapt in the face of various crises, challenges, disturbances, threats, and pressures, both from within and from outside the community [5]. Keck and Sakdapolrak [6] formulated at least three dimensions of resilience, namely: (1) the dimensions of coping capacities, namely the ability to cope and find solutions to various forms of difficulties encountered; (2) dimensions of adaptive capacities, namely the ability to learn from past experiences and adapt to future challenges in their social life; and (3) the dimension of transformation capacities, which means the community's ability to create a set of institutions that can promote individual welfare and sustain social resilience in the face of future crises.

Among the three aspects of adaptation in the midst of the current covid-19 pandemic, according to Subair et al [4] is the economic aspect, which is then classified into two main focuses. First, related to efforts to accelerate the post-Covid-

19 pandemic, namely the policy of distributing Village Fund Direct Cash Assistance. Efforts to be carried out by the Ministry of Villages, Development of Disadvantaged Regions and Transmigration related to this matter, are by re-registering Village Owned Enterprises (BUMDes), which includes managing tourist villages through tourism awareness groups (Pokdarwis). So far, 51 thousand BUMDes have been collected under the coordination of the PDTT Ministry of Villages. Longstaff et al [7] revealed that the government's efforts are not a guarantee for the community to be safe from disasters, in this case the government is only the main facilitator. Even the community can save themselves from the disaster that will befall them through the utilization of their resources.

In essence, empowering communities to be able to adapt in the midst of changes and dynamics that occur even in the midst of disasters. This adaptability is an important component that must be owned by the community towards community resilience. According to Jordan & Javernick-Will [8], resilience is the potential possessed in dealing with the effects of a disaster and efforts to overcome the effects of the disaster, to then recover as before quickly.

People's lives in the midst of the COVID-19 pandemic situation make them vulnerable. Vulnerability will increase due to conditions experienced by the community. As stated by Cahyani & Pandjaitan [9], adaptability is an act of community adjustment in order to survive adversity and then lead to a quality life. There are two forms of community adaptation, including: long-term

response and short-term response. The COVID-19 pandemic has made people vulnerable, so it requires people to be able to adapt in order to be resilient [10]. The element of vulnerability is divided into three aspects: exposure, sensitivity, and capacity to adapt. Sensitivity refers to the hazard conditions and the resilience of a system in overcoming the impacts it faces [11-12]. Resilience can also be viewed as a process of scientific adaptation in the midst of difficulties and uncertainty.

The promotion of solidarity and friendship tourism plays a key role in generating public trust, so as to accelerate the recovery of the tourism sector in the midst of the current corona virus pandemic [13]. Solidarity tourism is considered to have better benefits than just traveling. The benefits in question mainly encourage the running of the economy [14]. Sen-Crowe further assured that the public can trust tourism as a new currency from the new normal era. Only in this way, according to Sen-Crowe, can the wheels of the economy be pushed back towards growth and start rebuilding communities affected by Covid-19.

In terms of resilience, if it is looked at the reality, during the Covid-19 pandemic, most tourist village activities temporarily halted their operational activities, so to revive the activities of the tourist village, of course, various efforts need to be made [15]. Until now, the tourist village of Bongkasa Pertiwi Badung as one of the tourist villages in Bali that has re-registered. After that, the Ministry of Villages will provide assistance by referring to the new life order that leads to the implementation of the digitization of Village-Owned Business (BUMDes) [16]. The government's effort through the Ministry of Villages in supporting this implementation is to register tourist villages to accelerate digitization. This is very important because there is an economic base in the tourist village [17]. In addition to these efforts, various micro unit businesses are also assisted in synergizing with the BUMDes so that they can carry out a technology-based marketing process in the Bongkasa Pertiwi Badung tourist village. A comprehensive effort is needed that includes various aspects of resilience in managing the Bonkasa Pertiwi tourist village.

This study aims to investigate the resilience endeavor of Bongkasa Pertiwi tourist village in tackling covid-19 pandemic. It seeks to answer the following questions:

1. How can the management of the Bongkasa Pertiwi Badung tourist village be resilient in the midst of the covid-19 pandemic?
2. What are the priority aspects in the resilience efforts of Bongkasa Pertiwi Badung tourism village management?

## II. METHODOLOGY

### 2.1 Perceived Usefulness

The approach used in this study is a direct research method to the field by conducting surveys and observations to the research location, namely the Bongkasa Pertiwi tourist village, Abiansemal District, Badung Regency. Meanwhile, the analytical approach used is a qualitative and quantitative mix method approach. The use of a qualitative and quantitative combination approach is based on the object of research, namely the Bongkasa Pertiwi Badung tourist village which is one of the tourist villages whose management is through the local BUMDes and there are 455.

BUMDes in Bali that are engaged in various productive sectors. The qualitative approach is a case study by paying attention to the depth aspect to obtain more complete data in the form of writing, verbal, actions, symbols, physical objects or visual images, numbers and not only converted into numbers but non-standard shapes, sizes, and shapes [18].

Qualitative approaches generally rely on data collection through interviews, observation, and documentation and group discussions in the form of online Focus Group Discussions. This technique is relevant to use because of an extraordinary situation or pandemic emergency but has a wide reach for competent parties who are not only in Bongkasa Pertiwi village, but also at the sub-district, district, and even provincial levels. The compiled data consists of secondary data types obtained from various sources.

### 2.2 Data Collection Method

In this study, the data collection method consisted of primary and secondary data (review of literature and important documents). The primary data collection method is the questionnaire-based interview technique. The respondents from this study were determined by calculating the minimum number of samples using the Lemeshow formula [19] as follows.

$$n = \frac{Z^2 \cdot p(1-p)}{E^2}$$

Where:

n = minimum number of samples required

Z = z score at the confidence level

p = population variation (in this study population

characteristics are assumed to vary with a maximum estimate = 0.5)

E = alpha or desired sampling error

### 2.3 Data Analysis Method

The data analysis method used in this study is an analytical method with a quantitative approach consisting of a scoring and weighting method with principal component

analysis to identify the value of performance variables and indicators of resilience, then quadrant analysis is also carried out with the important-performance analysis method to determine which variables are priority ones and need to be intervened as a form of recommendation. In addition, Pearson correlation analysis was also carried out to identify the relationship/correlation between tourism components (attractions, activities and amenities) with the level of resilience referring to the CHSE Resilience framework (Heath Ministerial Regulation, 2020), as shown in table 3.1.

Table 3.1 Indicators of Resilience Management of Bongkasa Pertiwi tourism village

No	Indicator/element Resilience	Variable
1.	Governance	G1(3A): Existence participation in COVID-19 mitigation activities
2.	Society & Economy	SE1(A3): Existence mitigation activities independently by business actors
3.	Rural & Cultural Design	CR1(3A): Existence awareness of the importance of preserving rural natural resources CR2(A3): there are efforts to maintain the sustainability of rural natural resources by business actors
4.	Risk Knowledge	RK1(3A): Existence Knowledge regarding the COVID-19 outbreak RK2(3A): there is knowledge that the Bongkasa Pertiwi Badung tourist village area is prone to covid-19  RK3(3A): Existence knowledge of health protocols for dealing with the covid-19 outbreak
5.	Warning & Evacuation	WE1(3A): Existence Knowledge of the COVID-19 outbreak warning system  WE2(3A): Knowledge about evacuation routes for COVID-19 patients  WE3(3A): Existence understanding of evacuation signs  WE4(3A): There is knowledge of evacuation locations  WE5(3A): Actions to be taken if there are signs of being infected with covid-19 WE6(3A): actions to be taken if there are infected COVID-19  WE7 (3A) : Ownership of SOPs for early warning of COVID-19 transmission by business actors
6.	Emergency Response	ER1(A3): Business actors have an action plan for guests/employees  ER2(A3): There is a collaboration/agreement between business actors and the government/other institutions in the COVID-19 emergency response
7.	Disaster Recovery	DR1(3A): The existence of feeling safe in the tourist village area of Bongkasa Pertiwi

### III. RESEARCH OF THE STUDY

This study concerns with analyzing of the quantitative data from the answer of the research questions and qualitative data from the whole observation, interviews, and results of the questionnaires of Bongkasa Pertiwi tourist village in tackling COVID-19 pandemic.

#### 3.1 The Level of Resilience Analysis

Analysis of the level of resilience (RL) is determined by identifying the performance value of each of the resilience indicators. The reference for the level of resilience is based on the CHSE framework with provisions divided into 3 categories, namely low resilience, intermediate, and high resilience.

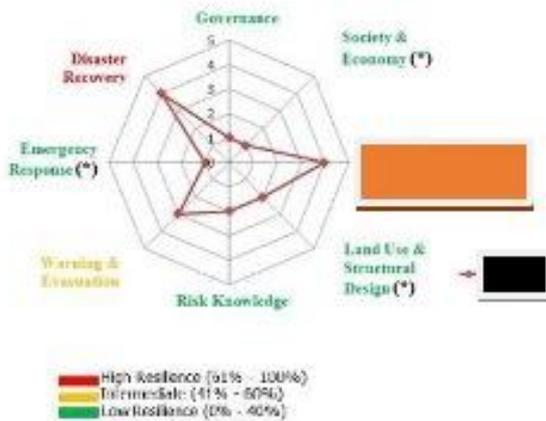


Figure 1. The level of resilience of Bongkasa Pertiwi tourist village to the COVID-19 pandemic

Based on the results of the analysis, it is found that there are 2 elements that are classified as high resilience, namely elements of disaster recovery and rural resource management with each performance value of 70.01% and 76.17%. Then there is one element that is classified as intermediate, namely warning and evacuation with a performance value of 41.47%. While the remaining elements are classified as low resilience, which consists of elements of governance with a performance value of 12.50%, society & economy with a performance value of 5.88%, land use & structural design with a performance value of 27.45%, risk knowledge with performance value by 37.92%, and emergency response with a performance value of 9.76%. F

Furthermore, quadrant analysis was also carried out using the important-performance analysis method to determine the variables that needed intervention to increase the resilience of Bongkasa Pertiwi tourist village in tackling COVID-19

pandemic. The results of the analysis can be seen in Figure 2 below.

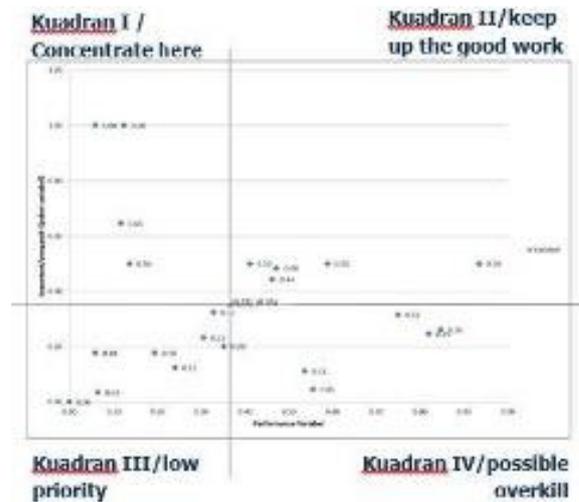


Figure 2. Plotting variables in the quadrant Important-performance analysis

Based on the results of the Important-Performance analysis, it can be seen that in the quadrant plotting above, it can be seen that the provisions of each quadrant can be interpreted as follows.

- Quadrant I: the variables that are in quadrant I means that this variable has a significant influence but needs to be intervened to increase resilience, so that it can be made a top priority for development;
- Quadrant II: the variables in quadrant II mean that this variable has a significant influence with the performance value which is also good, so the condition needs to be maintained;
- Quadrant III: the variables that are in quadrant III means that this variable does not have a significant influence but needs to be intervened (increasing performance scores) in order to increase resilience;
- Quadrant IV: the variables in quadrant IV mean that this variable does not have a significant influence and the performance value is also quite good, so there is no need for intervention in this aspect.

So based on this position, when viewed from the results of plotting the quadrant and the description of each quadrant, the variables that need intervention more are those in quadrants I and III, while the variables in quadrants I and II are not too urgent to intervene. The variables included in quadrants I and III can be seen in Tables 2 and 3. In addition, proposed interventions that should be done on the priority variables based on the results of the quadrant plotting analysis. Then by knowing

the conditions of the variables it will make it easier to make recommendations for increasing the resilience of Bongkasa Pertiwi tourist village itself. To find out more clearly can be seen in the description of table 2 and table 3.

Table 2. Variables in quadrant I along with proposed interventions that should be carried out based on the results of the important-performance analysis.

Quadrant	Indicator	Variable	Intervention
I	Governance (G)	Participation in COVID-19 mitigation activities	Socialization and Improvement Security
	Society and Economy (SE)	The existence of independent mitigation activities by business actors	
	Land Use and Structural Design (LS)	The building is equipped with the availability of security facilities	
	Emergency Response (ER)	Business actors have a self-rescue action plan for guests/employees	

Table 3. Variables in quadrant III along with proposed interventions that should be carried out based on the results of the important-performance analysis

Quadrant	Indicator	Variable	Intervention
III	Risk Knowledge (RK)	Availability of knowledge related to the COVID-19 pandemic	Knowledge Improvement with Socialization
		There is knowledge that the Bongkasa tourist village is prone COVID-19 pandemic	
	Warning and Evacuation (WE)	Knowledge of evacuation routes	Implementation of Early Warning SOP
		Ownership of COVID-19 spread early warning SOPs by business actors	
Emergency Response (ER)	Business actors have a self-rescue action plan for guests/employees	There is a collaboration/agreements between business actors	
Disaster	Perceptions		
	Recovery (DR)	of the resilience of Bongkasa Pertiwi tourist village area	and the government in the effort COVID-19 pandemic emergency response

### 3.2 Correlation of Relationship among the Touris Components

Furthermore, correlation analysis was also carried out to find out how the relationship between tourism components (attractions, activities and amenities) to the level of resilience. Based on the results of the analysis, it is found that the relationship is positively correlated, meaning that if one aspect increases, the other correlated aspects will also increase. The results of the analysis are obtained as follows:

1. Attractions: aspects that have a significant correlation value are related to aspects of natural beauty with rural, cultural and natural tourism objects. These aspects are significantly correlated with the elements of rural resource management. This means that if the management of rural resources increases it will also increase the value of attractions so that the resilience of the tourism business itself will also increase.
2. Activities: aspects of tourist activities that significantly correlated is related to the frequency where most of the visits in the last one year are one time, the average stay is 1-3 weeks with the activities carried out are traveling and having

fun/vacation. These aspects have a high correlation with rural resource management in relation to awareness in preserving rural resources and related to disaster recovery related to the willingness to return to activities in the pandemic situation of COVID-19. This means that if there are more and more activities carried out by visitors, awareness in maintaining CHSE must also increase so that the resilience of Bongkasa tourist village area also increases, as well as the willingness to return to activities, if visitors have a high will, the resilience of Bongkasa tourist village will also be high.

3. Amenity: in this aspect that has a significant correlation is related to insurance ownership by business actors, cooperation with other companies/parties, employee ownership, alternative business ownership, and duration of business > 10 years. These aspects are directly positively correlated on the elements of emergency response, society and economy as well as risk knowledge.

#### IV. CONCLUSION

Based on the results of the analysis that has been carried out regarding the resilience of Bongkasa Pertiwi tourist village area to the COVID-19 pandemic, it was concluded that the level of resilience in Bongkasa Pertiwi tourist village area when viewed from the 8 elements of resilience according to CHSE framework, the elements of resilience based on the results of the performance indicator values can be divided into 3 categories, namely high resilience, intermediate, and low resilience. Based on the results of the

analysis, it was found that there are 5 elements of resilience that are classified as low resilience, namely elements of governance, society and economy, land use and structural design, risk knowledge and emergency response. While the warning and evacuation elements are classified in the intermediate category. Then the elements of rural resource management and disaster recovery are included in the high resilience category.

In order to increase the level of resilience, intervention was carried out by conducting an important-performance analysis so that variables belonging to quadrants I and III were obtained as variables that needed intervention with 4 important aspects, namely: a) There was socialization that was held regularly with increased participation and increased security for business buildings; b) increasing the knowledge of both visitors and business actors regarding the understanding of the COVID-19 pandemic; c) the application of COVID-19 pandemic early warning SOPs for tourism

businesses must be encouraged; d) increased cooperation in COVID-19 pandemic emergency response efforts.

#### ACKNOWLEDGMENT

The authors are very grateful to some parties who have given contributions and encouragements in completing this article. Particular thanks are owed to State Polytechnic of Bali who funded the authors' research, so thanks to the Director and the Head of Bongkasa Pertiwi Village, Head of Pokdarwis Bongkasa Pertiwi tourist village.

#### REFERENCES

- [1] United Nations Office for Disaster Risk Reduction (UNISDR) (2013) Global Assessment Report 2013. <https://www.zaragoza.es/contenidos/medioambiente/onu/1005-eng.pdf>. Diakses pada 21 Juli 2017.
- [2] UNWTO (United Nation World Tourism Organisation). 2020. Tourism Barometers. Madrid: WTO.
- [3] Nurcahya, E. 2019. Tugas Pemerintah dalam Menyelesaikan Masalah–Masalah Sosial: Tinjauan Mengenai Masalah Badan Usaha Milik Desa. *Responsive*, 2(1), 1–7.
- [4] Subair, Kolopaking, L. M., Adiwibowo, S., & Pranowo, M. B. 2014. Communities' Resilience in Responding Climate Change through Livelihood Strategy: A Case Study in Fisher's Village in Ambon Island of Maluku. *Jurnal Sosial Ekonomi KP*, 9(1), 77–90.
- [5] Maguire, B., and P. Hagan. 2007. "Disasters and Communities: Understanding Social Resilience." *The Australian Journal of Emergency Management* 22: 16–20
- [6] Keck, Markus and Patrick Saktapolrak, 2013, What Is Social Resilience? Lessons Learned and Ways Forward, dalam *Jurnal Erdkunde*, Vol 67 No 1, 5-19, Department of Geography University of Bonn, Germany.
- [7] Longstaff, P.H., Armstrong, N.J., Perrin, K., Parker, W.M. and Hidek, M.A., 2010. Building resilient communities: A preliminary framework for assessment. *Homeland security affairs*, 6(3), pp.1-23.
- [8] Jordan, E., & Javernick-Will, A. 2012. Measuring Community Resilience and Recovery: A Content Analysis of Indicators. In *Construction Research Congress 2012: Construction Challenges in a Flat World* (pp. 2190–2199). TIB University Library.
- [9] Cahyani, R. I., & Pandjaitan, N. K. 2015. Resiliensi Komunitas Petani Padi Sawah dalam Menghadapi Serangan Hama di Dusun Benge, Kabupaten Karawang. Institut Pertanian Bogor. Retrieved from <http://repository.ipb.ac.id/handle/123456789/75112>
- [10] Birkmann, J. 2006. Measuring Vulnerability to Promote Disaster Resilient Societies: Conceptual Frameworks and Definitions. In *Measuring Vulnerability to Natural Hazards: Towards Disaster Resilient Societies*, John Birkmann. (Ed). Tokyo: United Nation University Press.
- [11] Jepson, M., & Colburn, L. L. 2013. Development of Social Indicators of Fishing Community Vulnerability and Resilience in the U.S. Southeast and Northeast Regions. U.S. Dept. of Commerce.
- [12] Dillashandy, N. A. 2017. Kapasitas Adaptasi dan Resiliensi Komunitas Menghadapi Bencana Erupsi Gunung Merapi (Kasus: Dusun Kalitengah Lor, Desa Glagaharjo,

- Kecamatan Cangkringan, Kabupaten Sleman, D.I. Yogyakarta). Institut Pertanian Bogor.
- [13] Susanto, A. 2017. Strategi Peningkatan Resiliensi Masyarakat Pesisir Terhadap Tekanan Sosio-Ekologis (Studi Kasus Pesisir Kota Semarang). *Jurnal Matematika, Saint, dan Teknologi*, Volume 18, Nomor 1, Maret 2017, 11-27
- [14] Sen-Crowe B, McKenney M, Elkbuli A. Social distancing during the COVID-19 pandemic: Staying home save lives. *American Journal of Emergency Medicine*. 2020;38:1519–1520.
- [15] Zhang Y, Zhao Q, Hu B. Communitybased prevention and control of COVID-19: Experience from China. *Am J Infect Control*. 2020;0(2020):3–4
- [16] Ridlwan, Z. 2014. Urgensi Badan Usaha Milik Desa (BUMDesa) dalam Pembangunan Perekonomian Desa. *Fiat Justisia Jurnal Ilmu Hukum*, 8(3), 424–440.
- [17] Skerratt, S., 2013. Enhancing the Analysis of Rural Community Resilience: Evidence from Community Land Ownership. *Journal of Rural Studies*, 31, pp.36-46.
- [18] Neuman, W.L. 2013. *Quantitative Approaches* (7th Revised Edition). Harlow: Pearson Education Limited.
- [19] Hade, E.M., Ferketich, A.K., Lehman, A.M., Paskett, E.D., Wewers, M.E., Ruffin, M., Tatum, C. and Lemeshow, S., 2020. Background and design of the Community Awareness Resources and Education (CARE) project: reducing cervical cancer in Appalachia. medRxiv.
- [20] Health Ministerial Regulation (Keputusan Menteri Kesehatan Republik Indonesia) Nomor HK.01.07/MENKES/413/2020. Retrieve from <https://covid19.go.id/p/regulasi/keputusan-menteri-kesehatan-republik-indonesia-nomor-hk0107menkes4132020>. Accessed on 24 July 2020