

# THE ANALYSIS OF SUSTAINABLE DEVELOPMENT IN KEMIREN TRADITIONAL VILLAGE TOURISM, GLAGAH DISTRICT, BANYUWANGI REGENCY

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## Abstract

**Tourism is seen as one of the prospective industries in the future. Tourism development strategy in Banyuwangi based on ecotourism, in the form of natural tourism, culture and with community-based. To achieve the system in community development in kemiren traditional village tourism that is sustainable, it is necessary to apply the concept of sustainable development. In this study using eight dimensions. Analysis method in this study using Multi Dimensional Scaling (MDS) conducted with RapTourism approach (Rapid Appraisal for Tourism). The results of the study stated that the multidimensional sustainability status of Kemiren Traditional Village Tourism at this time is quite sustainable. The sustainability status of each dimension of Kemiren Traditional Village Tourism at this time is also quite sustainable. The most dominant to ind dominant dimension sequence of the sustainability of Kemiren Traditional Village Tourism is the belief or spiritual dimension, management dimension, ecological dimension, social dimension, cultural dimension, infrastructure and technology dimension, economic dimension, and legal and institutional dimension.**

**Keyword: sustainable development, tourism, traditional village**

## 1. INTRODUCTION

Tourism is seen as one of the prospective industries in the future. Ulfah (2013) in [1] stated that tourism as a service industry is the main driver of the world economy,

so that many countries are racing to make their country as an object rich in tourism attractions. Nowadays, tourism sector has become a mainstay business commodity in some developed and developing countries.

Tourism is very important for Indonesia because tourism increases its contribution to Gross Domestic Product (GDP). This will trigger more foreign exchange income and also provide employment opportunities for the people of Indonesia. Banyuwangi Regency is one of the regencies in East Java Province that has a lot of natural beauty that has the potential to be a tourism object. Banyuwangi regency has many natural attractions that are already famous for their natural beauty and can attract tourists who will potentially develop the economy in the area. The following is the number of domestic and foreign tourists visiting Banyuwangi Regency (Table 1).

Table 1 Number of Domestic and Foreign Tourist Visits in Banyuwangi Regency year 2010-2019 (soul)

Tahun	Tourist Visit		Total Tourist Visits
	Domestic	Foreign	
2010	654602	16977	671579
2011	789101	13377	802478
2012	860831	5502	866333
2013	1057952	10462	1068414
2014	1363530	30068	1393598
2015	1727958	45569	1773527
2016	4022449	77139	4099588
2017	4832999	98970	4931969
2018	5200000	127420	5327420
2019	5307054	101622	5408676

Source: Dinas Kebudayaan dan Pariwisata Kabupaten Banyuwangi, 2020

Table 1 shows that the total number of domestic and foreign tourists visiting Banyuwangi from 2010 to 2019

has always increased. The increasing number of tourists makes Banyuwangi a growing tourist destination in Indonesia today. In addition to having a lot of natural beauty and cultural diversity through various festivals, there are other factors that make tourist visits to this area increase, namely the increasing number of flights to the region.

Tourism is very important for Indonesia because tourism increases its contribution to Gross Domestic Product (GDP). This will trigger more foreign exchange income and also provide employment opportunities for the people of Indonesia. Banyuwangi Regency is one of the regencies in East Java Province that has a lot of natural beauty that has the potential to be a tourism object. Banyuwangi regency has many natural attractions that are already famous for their natural beauty and can attract tourists who will potentially develop the economy in the area.

Tourism development strategy in Banyuwangi based on ecotourism, in the form of natural tourism, culture and with community-based. Even for village-based tourism development. Kemiren Traditional Village Tourism is one of the tourism villages in Banyuwangi. The government designated it as a cultural heritage area and developed it as Osing Tourism Village. Kemiren Banyuwangi Traditional Village offers an exploration of local culture that is very interesting to try. So, traveling to Banyuwangi can also be a form of preserving culture. However, the current phenomenon is the COVID-19 pandemic which allows for restrictions on activities that allow crowd engagement.

To achieve the system in community development in kemiren traditional village tourism that is sustainable, it is necessary to apply the concept of sustainable development. Sustainable development is a development that meets the needs of the present without sacrificing the ability of future generations to meet its own needs (Gallopín, 2003) in [2]. The essence of this concept is that social, economic and environmental goals must be mutually supportive and related in the development process.

The approach used in assessing sustainable development is not only assessed from three dimensions (economic, socio-cultural and ecological). Qureshia et al (2019) in [3] measure sustainable development through socioeconomic and ecological sustainability. While other concepts and literature add other dimensions to the criteria for sustainable

development. For example, research from Deswina, et al (2015) in [4] that uses ecological, economic, social, technological and institutional law dimensions in their research. David and Panuntun (2015) in [5] assess sustainability through economic, social, ecology, transparency, innovation. In addition, there are many more studies that use different dimensions.

In this study using eight dimensions. The dimensions used are economic dimension, social dimension, cultural dimension, ecological dimension, management dimension, belief or spiritual dimension, infrastructure and technology dimension and legal and institutional dimension. The selection of these eight dimensions in conducting this research on the basis of consideration of the dimensions is appropriate and represents the state of Kemiren Traditional Village Tourism. So the approach to sustainable development is very diverse in line with the diversity faced by each country or region or object studied. Therefore, the author will discuss in the title "Analysis of Sustainable Development in Kemiren Traditional Village Tourism, Glagah District, Banyuwangi Regency".

In order for the discussion to be more directed and detailed, then based on the background that has been explained there is a problem formulation that is: How big is the index value and multidimensional sustainability status of Kemiren Traditional Village Tourism at this time? Based on the background and problem formulation, the goal to be achieved in this research is to find out how big the index value and multidimensional sustainability status of Kemiren Traditional Village Tourism at this time.

## 2. LITERATURE REVIEW

### 2.1 Sustainable Development Theory

Sustainable development has now become a paradigm of development in almost all countries and related to development and environmental activities (Ukaga, Maser and Reichenbach, 2011) in [6]. Sustainable development has been key in the world's development discourse. [7] Sustainable development has various definitions in its development. The U.S. Environmental Protection Agency (USEPA) defines sustainable development as a development process that can improve the economy, preserve the environment, and social circumstances for the benefit of current and future

generations (Chang, 2015). This concept is also contained in pasal 33 ayat 4 Undang-undang Dasar 1945 which reads "The national economy is organized based on economic democracy with the principle of togetherness, equitable efficiency, sustainable, environmentally sound, self-reliance, and by maintaining the balance of progress and national economic unity."

The concept of sustainable development itself consists of two concepts. According to Mensah (2019) in [8], the concepts include:

1. The concept of development, consists of several theories that explain the concept of development. These theories include Modernization theory, Dependency Theory or Dependency, World System Theory and Globalization Theory.
  - a. Modernization Theory. In modernization theory, development distinguishes the world community into two main categories, namely traditional and modern society. According to Tipps (1976) in [9] traditional society is entangled by norms, beliefs and values, which hinder their development. According to Harrod Domar, for advanced traditional society must imitate the culture of modern society, which is characterized by the accumulation of capital and industrialization compatible with development. In essence, this theory seeks to improve the standard of living of traditional people through economic growth by introducing modern technology (Huntington, 1976). But this theory was criticized for not taking into account the developmental views on freedom and self-esteem.
  - b. Dependency Theory. Karl Mark's (Marxist) theory rejects the teachings of Modernization Theory and asserts that industrialization took place in developed countries as a result of the exploitation of poor and underdeveloped countries by developed countries (Webster, 1984) in [10]. However, this theory fails to explain the dependence of poor countries because developed countries instead secure access to economic surpluses of poor countries.
  - c. World System Theory holds that the specialization and transfer of international trade resources from the periphery (less developed countries) to the core (developed countries) development on the periphery by making them dependent on the core

countries (Petras, 1987) in [11]. System Theory views the world economy as an international hierarchy of unequal relations (Reyes, 2001) and that unequal relationships in such exchanges are the source of The World Number One surplus.

- d. Globalization Theory, derived from the global mechanism of deeper integration of economic transactions among countries (Portes, 1992) in [12]. According to Parjanadze (2009) in [13], globalization is supported by factors and orientation of politics, economy, technology and socio-culture. Although these development theories have drawbacks, they have paved the way for the current concepts and paradigms of global development, namely "Sustainability" and "sustainable development".

## 2. The Concept of Sustainability

Sustainability is the application of concepts to connote improving and maintaining a healthy economic, ecological and social system for human development (Thomas, 2015) in [14]. Sustainability makes the focus of human activities and their ability to meet human needs and desires without spending their productive resources. Therefore it is necessary to build thought about how people should live their economic and social lives on ecological resources available for human development.

The definition of sustainable development has several objectives, including economic, social, and ecology. The models of sustainable development in accordance with the International Union for Conservation of Nature and Natural Resources (IUCN) are as follows:

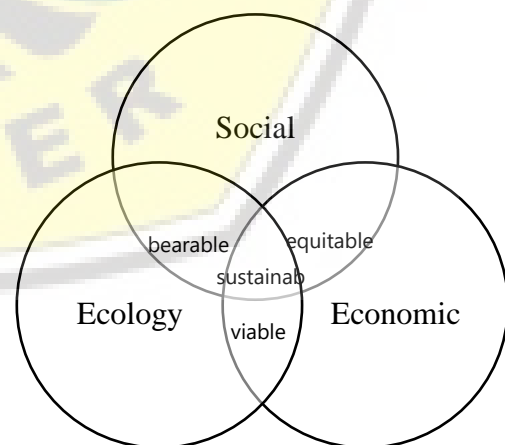


Figure 1 Sustainable Development Model  
Source: Parmawati (2018)

Parmawati (2018) in [15] stated that the model explains that in sustainable development there are three main aspects, namely economic development, social development, and ecological development. These aspects are interconnected so they cannot be separated. Causal relationships that are owned by these three aspects can lead to changes in one aspect and will affect other aspects. The relationship between aspects of economic development and social development creates equitable relationships. The relationship between aspects of social development and ecological development creates a bearable relationship. The relationship between aspects of ecological development and economic development creates a viable relationship. If these three aspects have started to be done in a balanced manner, it can be expected to create sustainable conditions.

## 2.2 Kemiren Tradisional Village

In Indonesia, villages have been regulated in Undang-undang Republik Indonesia Number 6 Year 2014. In the Law referred to as villages are villages and traditional villages or so-called by other names, hereinafter referred to as villages, is a unity of legal communities that have territorial boundaries authorized to regulate and manage government affairs, the interests of local communities based on community initiatives, rights of origin, and / or traditional rights recognized and respected in the system of government of the Unitary State of the Republic of Indonesia. Furthermore, that Undang-undang regulated in Peraturan Pemerintah Republik Indonesia Number 43 Year 2014 concerning The Implementation Undang-Undang Number 6 Year 2014 about Villages.

Tourism development is one of the leading priorities of regional development contained in the Banyuwangi Regency Medium Term Development Plan (RPJMD) in 2016-2021. More specifically, the direction of development policy is reviewed from aspects of spatial planning in Banyuwangi Regency, one of which is the development of integrated tourism areas based on the potential of natural tourism, cultural tourism and artificial tourism.

## 3. RESEARCH METHOD

The analysis method in this study used Multi Dimensional Scaling (MDS) which was done with RapTourism (Rapid Appraisal for Tourism) approach. This approach is a modified approach from Rapfish (Rapid Appraisal for Fisheries) developed by Fisheries Center, University of British Columbia (Pitcher and Preikshot, 2001) in [16]. Rapfish ordination approach with MDS method in this study was conducted through several stages according to Budiharsono (2014: 19-29)

1. Determination of attributes that include eight dimensions namely economic dimensions, social dimensions, cultural dimensions, ecological capital dimensions, management dimensions, belief or spiritual dimensions, infrastructure and technology dimensions and legal and institutional dimensions. The attributes in each dimension of sustainability obtained through field observation and study of the library are studied or reviewed. In this study there were 50 attributes analyzed, each: 8 attributes for economic dimension, 7 attributes for social dimension, 6 attributes for cultural dimension, 7 attributes for ecological dimension, 5 attributes for management dimension, 5 attributes for trust or spiritual dimension, 6 attributes for infrastructure and technology dimension, and 6 attributes for legal and institutional dimension.
2. Assessment of each attribute in the ordinal scale (scoring) based on the sustainability criteria of each dimension obtained through the filling of the questionnaire. In this study using the type of interval scale that is likert scale. In this study, researchers used a seven-point Likert scale consisting of: Strongly Disagree, Disagree, Somewhat Disagree, Neutral, Somewhat Agree, Agree, Strongly Agree. The score range ranges from 1 to 7 which is interpreted from strongly disagreeing to strongly agreeing depending on the condition of each attribute. But in order to avoid unwanted answers, researchers are trying to eliminate neutral answers. If there is only one value, because the questionnaire is filled in deliberation by all respondents, then the value is immediately put in the line of each dimension. but if there are many questionnaires filled out by each respondent, then the value entered is the median value.
3. Assess the index and status of sustainable development in Kemiren Traditional Village Tourism which is studied multidimensionally and in each

dimension. The division of hoses describing the status of the sustainability index can be found in Table 2.

Table 2 Hose Index and Status of Sustainable Development of Society on Kemiren Traditional Village Tourism

Index Value	Sustainability Category
0 – 25.00	Bad
25.01 – 50.00	Less
50.01 – 75.00	Enough
75.01 – 100	Good

4. Leverage analysis to determine the sensitive changer or dimension affects sustainability so that the result of analysis of leverage attributes /factors. Determination of sensitive attributes is carried out based on the order of priority in leverage analysis by looking at the form of Root Mean Square (RMS) ordination change on the X axis. The greater the value of RMS change, the greater the role of such attributes in improving the status of sustainable development in Kemiren Traditional Village Tourism.
5. Kite Diagram, to find out what dimensions are most dominant to the Kemiren Traditional Village Tourism system. In Microsoft Excel, kite diagramming is done by filling each dimension with an index value of all attributes per dimension.

#### 4. RESULT AND DISCUSSION

##### **Sustainability of Kemiren Traditional Village Tourism in economic dimension**

The sustainability index of the economic dimension in Kemiren Traditional Village Tourism can be seen in Figure 2

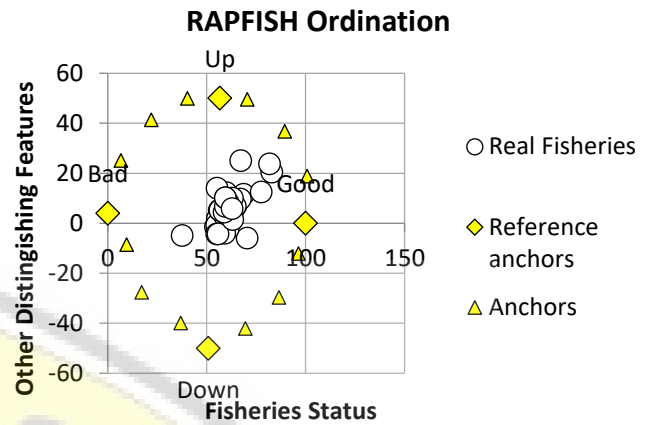


Figure 2 Kemiren Indigenous Village Tourism Sustainability Index on Economic Dimension

Source: Processed Primary Data, Year 2020

Based on Figure 2, the ordination of Rap-Tourism in the economic dimension obtained the value of the sustainability index of Kemiren Traditional Village Tourism is 61,402 (located at the ordination scale position between 50.01-75.00). This shows that the sustainability of Kemiren Traditional Village Tourism in the economic dimension is in a fairly sustainable status. Stress value of  $0.241 < 0.25$ , which means that the analysis results in the study are sufficient in accordance with the field conditions. The value of R2 (coefficient of determination) of 0.91332 indicates that the model using these indicators has explained 91.332% of the existing model. This indicates that the indicators used have been excellent.

The results of rap-tourism ordination show the status of sustainability in Kemiren Traditional Village Tourism in the economic dimension that is in the category of quite sustainable. When economic growth increases, not only does it have a good impact on the country, the positive benefits can also be felt directly. Regional development is determined by the potential of a region, so the policy made by the local government should refer to the potential of the area that has the opportunity to be developed. Related to this pandemic, many policies from Kemiren Village that make the community remain productive, such as inviting citizens of cooperatives, especially those engaged in fashion and convection, to help government programs in the movement of cloth masks, by producing more personal protective equipment including masks.

The results of this research are in line with previous research conducted by Delya Tri Adha Putri year 2019,

with the title "Analysis of Tourism Sustainability at The Peak of Mas Sukadanaham, Bandar Lampung". The purpose of this research is to (1) Analyze the sustainability status of tourism in the Mas Sukadanaham Peak area, and (2) Develop recommendations for sustainable tourism management strategies at The Mas Sukadanaham Peak. The variables used are ecological, economic, socio-cultural, and infrastructure. The results showed that Puncak Mas Sukadanaham multidimensionally has a sustainability value that is quite sustainable (68.82). The economic dimension (66.93) and the socio-cultural dimension (52.42) are quite sustainable while the ecological dimension (78.59) and the infrastructure dimension (77.36) are very sustainable. Tourism management strategy of Puncak Mas Sukadanaham to be sustainable as follows: economic dimension required development of market segment and optimization of tourism promotion at the international level. In the socio-cultural dimension, education is carried out to the local community and tourism managers about awareness of preserving the environment. In the ecological dimension, waste sorting program is carried out in the area of tourist attractions. Then, in the dimension of infrastructure facilities need to build temporary disposal facilities (TPS) in the Sukadanaham area. The results of leverage of attributes analysis on economic dimensions can be seen in Figure 3.

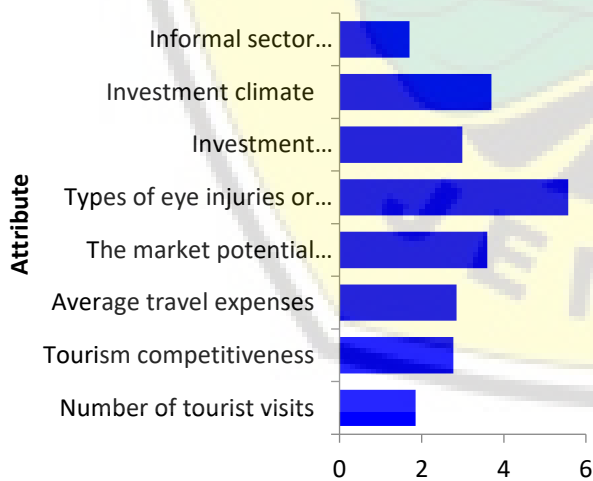


Figure 3 Leverage of Attributes Analysis on Economic Dimensions

Source: Processed Primary Data, Year 2020

Based on the analysis of Leverage Attributes such as Figure 3 can be known sensitive attributes on the

economic dimension. Sensitive attributes are attributes that play a role for sustainability in the dimensions studied, where these attributes are able to encourage and inhibit the sustainability of Kemiren Traditional Village Tourism in the economic dimension. Sensitive attributes can be seen from the Root Mean Square (RMS) value, which belongs to the sensitive category which is an attribute that has an RMS value  $\geq 2\%$ . In the economic dimension, sensitive attributes are tourism competitiveness, average travel costs, market potential of tourism, types of injuries or souvenirs, percentage of poor people and investment climate. Meanwhile, insensitive attributes are the number of tourist visits and the development of the informal sector.

### Sustainability of Kemiren Traditional Village Tourism in Social Dimension

The social dimension sustainability index in Kemiren Traditional Village Tourism can be seen in Figure 4.

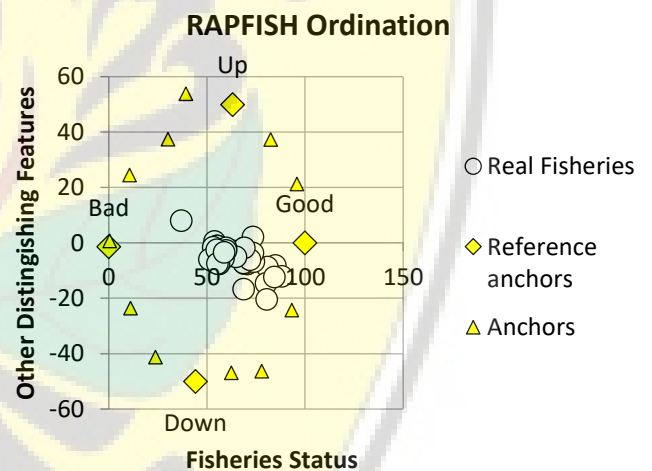


Figure 4 Kemiren Indigenous Village Tourism Sustainability Index on Social Dimension

Source: Processed Primary Data, Year 2020

Based on Figure 4, rap-tourism ordination results in the social dimension obtained the sustainability index value of Kemiren Traditional Village Tourism is 64,336 (located on the ordination scale position between 50.01-75.00). This shows that the sustainability of Kemiren Traditional Village Tourism in the social dimension is in a fairly sustainable status. Stress value of  $0.249 < 0.25$ , which means that the analysis results in the study are sufficient in accordance with the field conditions. The R2 value (coefficient of determination) of 0.91930 indicates that

the model using these indicators has explained 91.930% of the existing model. This indicates that the indicators used have been excellent.

The results of rap-tourism ordination show the status of sustainability in Kemiren Traditional Village Tourism on the social dimension that is in a fairly sustainable category. This dimension is related to the quality of human life and improving the overall welfare of society. Through comprehensive development can produce Indonesian people excel in intellectual intelligence and tough character, behave positively and constructively.

The results of this study are in line with previous research conducted by Puspita Deswina, Rizal Syarief, Latief M Rachman, M Herman Year 2015, with the title "Sustainability Analysis of Rice Crop Management of GeneticAllly Engineered Products in West Java and East Java". The purpose of this research is to find out the sustainability of Bt PRG Rice crop based on attributes that make up the ecological, economic, social, technological and institutional law dimensions. The variables used are ecological, economic, social, technological and institutional law. The results of the study on multidimensional sustainability are classified as fairly sustainable criteria with a value of 58.99%, except for the technological dimension with a value of 46.71% which is classified as less sustainable. Sustainability value for environmental dimension 73.02%, economic dimension 69.30%, social dimension 51.22% and institutional legal dimension 54.74%. Obtained ten leverage factors that can influence the improvement of sustainability index, namely from ecological dimension (Possibility of crossing genetic material from PRG crops to non-PRG crops), economic dimension (Farmers' dependence on PRG crops, affordable prg seed purchase price), social dimension (public perception and acceptance, public involvement in decision making), technology dimension (number of prg crops own R&D results, human resources ability to research and test PRG crops) and institutional legal dimension (implementation of regulations and laws , labeling against PRG).

The results of leverage of atributes analysis on social dimension can be seen in Figure 5.

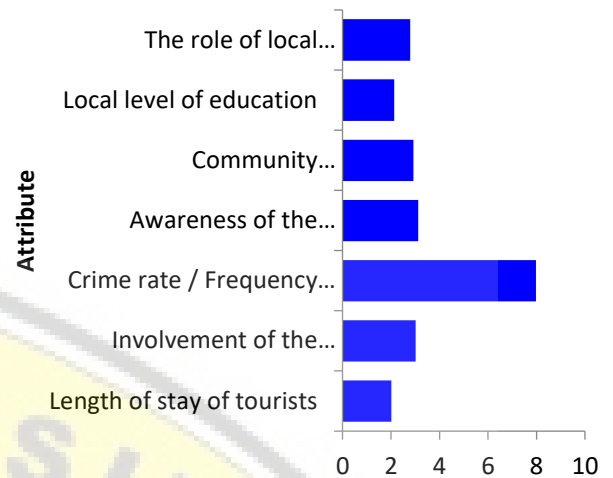


Figure 5 Leverage of Attributes Analysis on Social Dimensions

Source: Processed Primary Data, Year 2020

Based on the analysis of Leverage Attributes such as Figure 5 can be known sensitive attributes on the social dimension. Sensitive attributes are attributes that play a role for sustainability in the dimensions studied, where these attributes are able to encourage and inhibit the sustainability of Kemiren Traditional Village Tourism in the social dimension. Sensitive attributes can be seen from the Root Mean Square (RMS) value, which belongs to the sensitive category which is an attribute that has an RMS value  $\geq 2\%$ . In the social dimension, sensitive attributes are the length of stay of tourists, involvement / participation of the surrounding community in tourist villages, the level of criminality / frequency of conflict, awareness of the importance of tourism, community empowerment, the level of local education and the role of local government and village devices

### Sustainability of Kemiren Traditional Village Tourism in cultural dimension

The sustainability index of the cultural dimension in Kemiren Traditional Village Tourism can be seen in Figure 6.

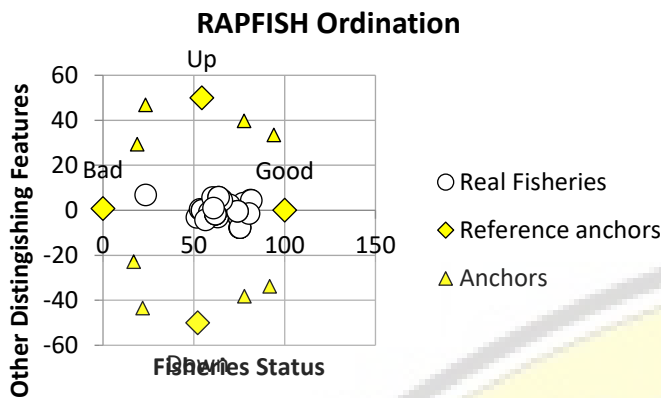


Figure 6 Kemiren Indigenous Village Tourism Sustainability Index on Cultural Dimension

Source: Processed Primary Data, Year 2020

Based on Figure 6, the ordination of Rap-Tourism in the cultural dimension obtained the value of the sustainability index of Kemiren Traditional Village Tourism is 63,342 (located at the position of the ordination scale between 50.01-75.00). This shows that the sustainability of Kemiren Traditional Village Tourism in the cultural dimension is in a fairly sustainable status. Stress value of  $0.249 < 0.25$ , which means that the analysis results in the study are sufficient in accordance with the field conditions. The R2 value (coefficient of determination) of 0.90268 indicates that the model using these indicators already explains 90.268% of the existing model. This indicates that the indicators used have been excellent.

The results of rap-tourism ordination show the status of sustainability in Kemiren Traditional Village Tourism in the cultural dimension that is in a fairly sustainable category. The cultural dimension itself is a dimension on the sustainability of Kemiren Traditional Village Tourism which is important because cultural heritage is an expression of the way of life that is embraced by a community from generation to generation, including the ability, practice, places, objects, artistic expression, and value system embraced. Cultural heritage is often expressed as a real and unreal cultural heritage.

The results of this study are in line with previous research conducted by Sutamana, Yusli Wardiatnob, Mennofatria Boerc, Fredinan Yulianda Year 2017, with the title "Assessment of Sustainable Management on Regional Waters Conservation Area (KKPD) Biak Numfor Regency (Sustainable Management Assessment in Regional Water Conservation Area (KKPD) Biak Numfor

Regency". The purpose of this research is to analyze sustainable management in the Regional Water Conservation Area (KKPD) of Biak Numfor Regency. The variables used are ecological, economic, socio-cultural and institutional. The results of this study showed that there are four dimensions of sustainable management of KKPD Biak Numfor classified supported by each ordinate value as follows, ecological dimension (59.90%), economic dimension (57.13%), socio-cultural dimension (51.80%) and institutional dimensions (43.48%). Attributes are used as sustainability management levers that have 7 (seven) attributes, including, three dimensional ecological attributes (pelagic fish stocks, water quality and coral fish abundance), two attributes of economic dimensions (tourism and aquaculture), one attribute socio-cultural dimension (ethnic), and one dimensional institutional attribute (economic institution).

The results of leverage of attributes analysis on cultural dimension can be seen in Figure 7



Figure 7 Leverage of Attributes Analysis on Cultural Dimensions

Source: Processed Primary Data, Year 2020

Based on the analysis of Leverage Attributes such as Figure 7 can be known sensitive attributes on the cultural dimension. Sensitive attributes are attributes that play a role for sustainability in the dimensions studied, where these attributes are able to encourage and inhibit the sustainability of Kemiren Traditional Village Tourism in the cultural dimension. Sensitive attributes can be seen from the Root Mean Square (RMS) value, which belongs to the sensitive category which is an attribute that has an RMS value  $\geq 2\%$ . In the



cultural dimension, sensitive attributes are the presence of traditional ethnicities, the presence of religious beliefs associated with culture, the level of skills related to culture, the practice of respect for local culture, there is adaptation to local norms and the presence of regional cultural arts as tourist attractions.

**Sustainability of Kemiren Traditional Village Tourism in Ecological Dimension**

The sustainability index of the ecological dimension in Kemiren Traditional Village Tourism can be seen in Figure 8.

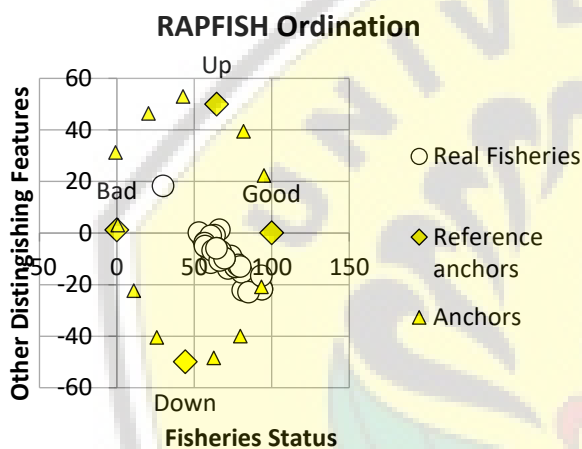


Figure 8 Kemiren Indigenous Village Tourism Sustainability Index on Ecological Dimension

Source: Processed Primary Data, Year 2020

Based on Figure 8, rap-tourism ordination results in ecological dimension obtained the sustainability index value of Kemiren Traditional Village Tourism is 68,809 (located at the ordination scale position between 50.01-75.00). This shows that the sustainability of Kemiren Traditional Village Tourism in the ecological dimension is in a fairly sustainable status. Stress value of 0.217 < 0.25, which means that the analysis results in the study are sufficient in accordance with the field conditions. The R2 value (coefficient of determination) of 0.92720 indicates that the model using these indicators has already explained 92.720% of the existing model. This indicates that the indicators used have been excellent. The results of rap-tourism ordination show the status of sustainability in Kemiren Traditional Village Tourism in the ecological dimension that is in a fairly sustainable category. The ecological dimension itself is a dimension on the sustainability of Kemiren Traditional Village

Tourism which is important because realizing a sustainable environment is an important issue for environmental problems that occur recently. The rate of population growth and increasing human needs and the development of science and technology caused the environment to be sacrificed to meet the needs of human life. Whereas between humans and their environment there is a reciprocal relationship. It is this reciprocal relationship that is studied in ecology. Ecology adheres to the principle of balance and harmony of all components of nature. All living things play their part in creating harmony and balance of nature.

The results of this study are in line with previous research conducted by Arif Budi Wibowo, Sutrisno Anggoro and Bambang Yulianto in 2015, with the title "Sustainability Status of Ecological Dimension in Minapolitan Sustainable Area Development Based on Freshwater Cultivation In Magelang Regency". The variable used is ecology. From the results of the research obtained that the sustainability status of ecological dimensions in the development of minapolitan area of Magelang Regency is in a fairly sustainable status (50-70%). Strategies for improving sustainability status are carried out with improvements to sensitive attributes that have a significant effect on sustainable values and status.

The results of leverage of attributes analysis on ecological dimensions can be seen in Figure 9.

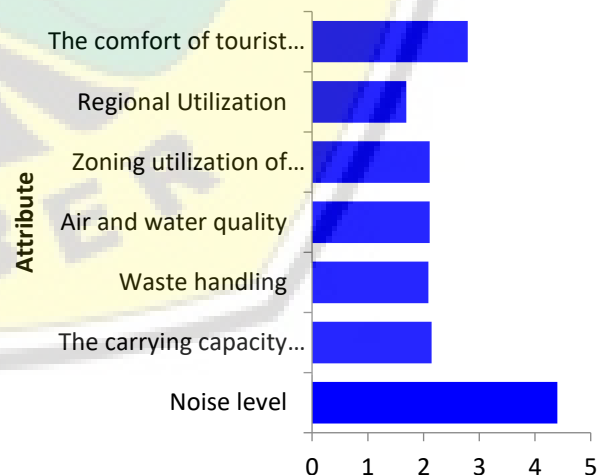


Figure 9 Leverage of Attributes Analysis on Ecological Dimensions

Source: Processed Primary Data, Year 2020

Based on the analysis of Leverage Attributes such as Figure 9 can be known sensitive attributes on the ecological dimension. Sensitive attributes are attributes that play a role for sustainability in the dimensions studied, where these attributes are able to encourage and inhibit the sustainability of Kemiren Traditional Village Tourism in the ecological dimension. Sensitive attributes can be seen from the Root Mean Square (RMS) value, which belongs to the sensitive category which is an attribute that has an RMS value  $\geq 2\%$ . In the ecological dimension, sensitive attributes are noise level, carrying capacity of tourist areas, waste handling, air and water quality, zoning utilization of tourist attractions, and the comfort of tourist attractions. While insensitive attributes are the utilization of regions.

### Sustainability of Kemiren Traditional Village Tourism in the Management Dimension

The sustainability index of management dimension in Kemiren Traditional Village Tourism can be seen in Figure 10.

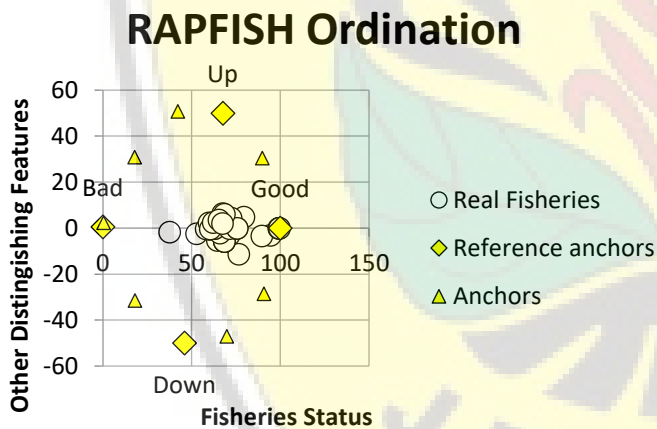


Figure 10 Kemiren Indigenous Village Tourism Sustainability Index on Management Dimension  
Source: Processed Primary Data, Year 2020

Based on Figure 10, the result of Rap-Tourism ordination in the management dimension obtained the sustainability index value of Kemiren Traditional Village Tourism is 69,812 (located at the ordination scale position between 50.01-75.00). This shows that the sustainability of Kemiren Traditional Village Tourism in the management dimension is in a fairly sustainable status. Stress value of  $0.232 < 0.25$ , which means that the analysis results in the study are sufficient in

accordance with the field conditions. The value of R2 (coefficient of determination) of 0.90582 indicates that the model using these indicators has explained 90.582% of the existing model. This indicates that the indicators used have been excellent.

The results of the Rap-Tourism Ordination show the status of sustainability in Kemiren Traditional Village Tourism in the management dimension that is in a fairly sustainable category. The management dimension itself is a dimension on the sustainability of Kemiren Traditional Village Tourism which is important because good management science is very important in organizing and directing a group or an organization. So that the management process can be structured in order to achieve goals and achieve the success of the company. the success of an organization in implementing and organizing plans, building organizations, directing, supervising, and controlling, depending on management.

The results of this study are in line with previous research conducted by Agustina Eunike, Dewi Hardiningtyas, Silvie Indah Kartika, and Andronicus Year 2018, titled "Sustainability Analysis of Beach And Mangrove Tourism in Clungup Beach, Malang Regency of East Java. (Sustainability Analysis of Beach and Mangrove Tourism in Clungup Beach, Malang Regency, East Java)". The purpose of this research is to analyze the sustainability of beach and mangrove tourism in Clungup Beach by using ecological, social and management dimensions. The variables used are ecological, social, and management management. The results showed that the most sensitive attributes in the research object are rainfall, mangrove type, community knowledge about the environment, community dependence on coastal resources, and interaction between management groups and stakeholders. The results of the Monte Carlo analysis show that the ecological and management dimensions are at a stable stage, while the social dimensions are most dynamic and changeable. There are four recommendations for the management of tourist areas in Clungup Beach, namely regulations on the management of exploitation of coastal areas, adequate infrastructure to support the safety of tourists, developing environmentally friendly tourism activities, and strict regulations in expanding tourism in coastal areas.

The results of leverage of attributes analysis on management dimensions can be seen in Figure 11

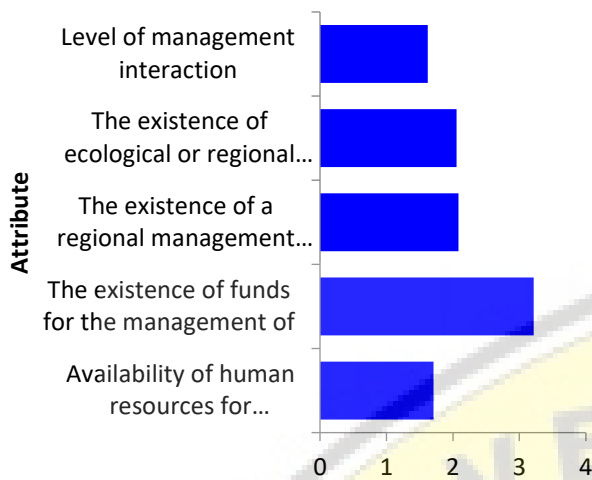


Figure 11 Leverage of Attributes Analysis on Management Dimensions

Source: Processed Primary Data, Year 2020

Based on the analysis of Leverage Attributes such as Figure 11 can be known sensitive attributes on the management dimension. Sensitive attributes are attributes that play a role for sustainability in the dimensions studied, where these attributes are able to encourage and inhibit the sustainability of Kemiren Traditional Village Tourism in the management dimension. Sensitive attributes can be seen from the Root Mean Square (RMS) value, which belongs to the sensitive category which is an attribute that has an RMS value  $\geq 2\%$ . In the management dimension, sensitive attributes are the existence of funds for management, the existence of regional management plans, and the monitoring of ecology or regions. While insensitive attributes are the availability of human resources for management and level of management interaction.

### Sustainability of Kemiren Traditional Village Tourism in The Dimension of Belief or Spiritual

The sustainability index of the belief or spiritual dimension in Kemiren Traditional Village Tourism can be seen in Figure 12.

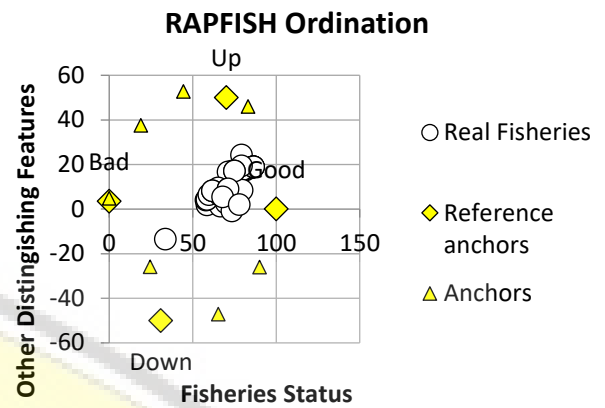


Figure 12 Kemiren Indigenous Village Tourism Sustainability Index on The Dimension of Belief or Spiritual

Source: Processed Primary Data, Year 2020

Based on Figure 12, rap-tourism ordination results in the dimension of trust or spiritual obtained the value of the sustainability index of Kemiren Traditional Village Tourism is 72,520 (located at the position of ordination scale between 50.01-75.00). This shows that the sustainability of Kemiren Traditional Village Tourism in the belief or spiritual dimension is in a fairly sustainable status. Stress value of  $0.246 < 0.25$ , which means that the analysis results in the study are sufficient in accordance with the field conditions. The value of  $R^2$  (coefficient of determination) of 0.92366 indicates that the model using these indicators has explained 92.366% of the existing model. This indicates that the indicators used have been excellent.

The results of rap-tourism ordination show the status of sustainability in Kemiren Traditional Village Tourism in the dimension of belief or spiritual that is in a fairly sustainable category. The dimension of belief or spiritual itself is the dimension on the sustainability of Kemiren Traditional Village Tourism which is important because the belief is the belief that others where we depend will meet our expectations. Trust is also a person's willingness to rely on others to which we have faith in him. Trust is a mental state based on a person's situation and social context. When a person makes a decision, he or she will prefer a decision based on the choice of the person he or she can trust more.

The results of this study are not in line with any research that is used as a reference in this research. This is because the dimension of belief or spirituality used in

this research is based on the circumstances or phenomena in Kemiren Village. The results of leverage of attributes analysis on belief or spiritual dimension can be seen in Figure 13

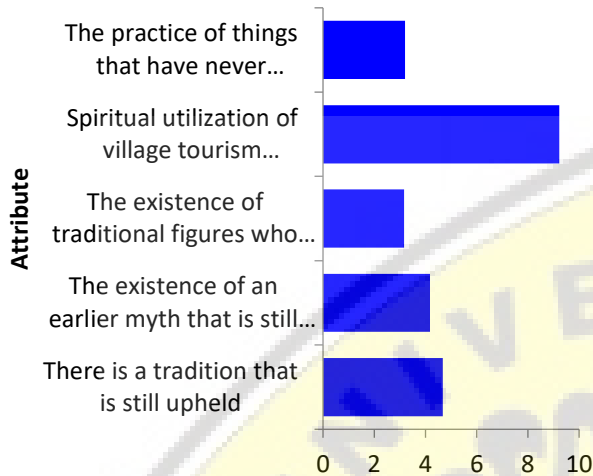


Figure 13 Leverage of Attributes Analysis on Belief or Spiritual Dimensions

Source: Processed Primary Data, Year 2020

Based on the analysis of Leverage Attributes such as Figure 13 can be known sensitive attributes on the dimension of belief or spiritual. Sensitive attributes are attributes that play a role for sustainability in the dimensions studied, where these attributes are able to encourage and inhibit the sustainability of Kemiren Traditional Village Tourism in the dimension of belief or spiritual. Sensitive attributes can be seen from the Root Mean Square (RMS) value, which belongs to the sensitive category which is an attribute that has an RMS value  $\geq 2\%$ . In the dimension of belief or spiritual, sensitive attributes are the existence of traditions that are still upheld, the existence of previous myths that are still believed, the existence of traditional figures who are edified or respected, spiritual utilization of the attraction of village tourism and the practice of things that have never changed in the past.

### Sustainability of Kemiren Traditional Village Tourism in Infrastructure and Technology Dimension

The sustainability index of infrastructure and technology dimensions in Kemiren Traditional Village Tourism can be seen in Figure 14.

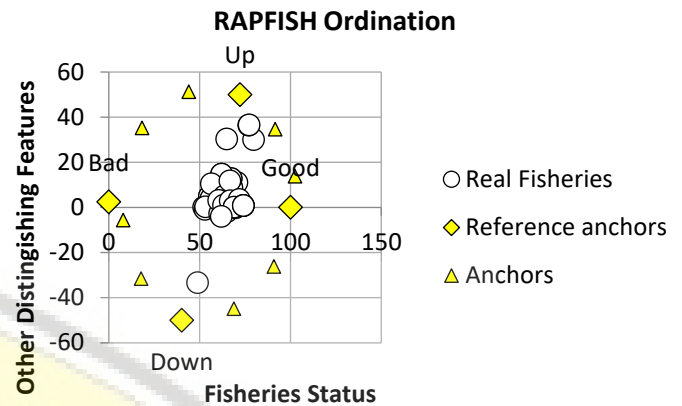


Figure 14 Kemiren Indigenous Village Tourism Sustainability Index on Infrastructure and Technology Dimensions

Source: Processed Primary Data, Year 2020

Based on Figure 14, rap-tourism ordination results in infrastructure and technology dimensions obtained the sustainability index value of Kemiren Traditional Village Tourism is 63,006 (located at the ordination scale position between 50.01-75.00). This shows that the sustainability of Kemiren Traditional Village Tourism in the infrastructure and technology dimensions is in a fairly sustainable status. Stress value of  $0.247 < 0.25$ , which means that the analysis results in the study are sufficient in accordance with the field conditions. The value of  $R^2$  (coefficient of determination) of 0.89222 indicates that the model using these indicators has explained 89.222% of the existing model. This indicates that the indicators used have been excellent.

The results of rap-tourism ordination show the status of sustainability in Kemiren Traditional Village Tourism in the dimension of infrastructure and technology that is in a fairly sustainable category. The dimensions of infrastructure and technology itself are dimensions on the sustainability of Kemiren Traditional Village Tourism which is important because infrastructure is the driving wheel of economic growth. From the allocation of public and private financing, infrastructure is seen as the locomotive of national and regional development. Until now technology has become a necessity in everyday life. Technology has become a reference in the progress of an organization or region. Because with it will make every job become leih easy, effective and efficient.

The results of this study are not in line with previous research conducted by Nava Neilulfar Alvi, Isye Susana Nurhasanah and Citra Persada, Year 2018, with the title

"Evaluation of Maritime Tourism Sustainability of Pahawang Island Pesawaran Regency." The purpose of this research is to evaluate the evaluation of the sustainability of marine tourism in Pahawang Island, Pesawaran Regency by using ecological, economic, socio-cultural, institutional, and infrastructure and technology dimensions. The variables used are ecological, economic, socio-cultural, institutional, and infrastructure and technology. Results from MDS Analysis show that the sustainability of ecological dimensions (53.998%) and economic dimensions (51.288%) at a fairly sustainable level, while the socio-cultural dimension (42,629%), the institutional dimension (37,678%), and the infrastructure and technology dimension (37,881%) at a less sustainable level.

The results of leverage of attributes analysis on infrastructure and technology dimensions can be seen in Figure 15

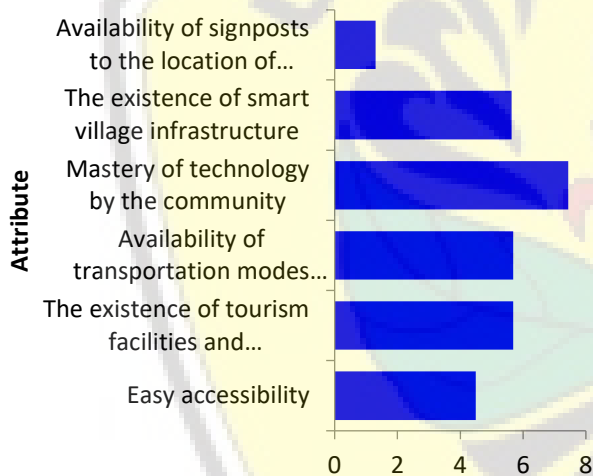


Figure 15 Leverage of Attributes Analysis on Infrastructure and Technology Dimensions

Source: Processed Primary Data, Year 2020

Based on the analysis of Leverage Attributes such as Figure 15 can be known sensitive attributes on the dimensions of infrastructure and technology. Sensitive attributes are attributes that play a role for sustainability in the dimensions studied, where these attributes are able to encourage and inhibit the sustainability of Kemiren Traditional Village Tourism in the dimensions of infrastructure and technology. Sensitive attributes can be seen from the Root Mean Square (RMS) value, which belongs to the sensitive category which is an attribute that has an RMS value  $\geq 2\%$ . In the dimensions of

infrastructure and technology, sensitive attributes are easy accessibility, the existence of tourism facilities and infrastructure, the availability of transportation modes to tourist villages, mastery of technology by the community and the existence of smart kampung infrastructure. While the insensitive attribute is the availability of signposts to the location of tourist villages.

**Sustainability of Kemiren Traditional Village Tourism in Legal and Institutional Dimension**

The sustainability index of the legal and institutional dimensions of Kemiren Traditional Village Tourism can be seen in Figure 16.

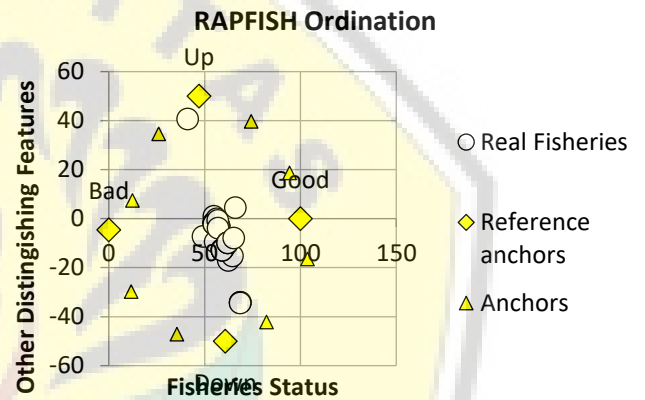


Figure 16 Kemiren Indigenous Village Tourism Sustainability Index on Legal and Institutional Dimensions

Source: Processed Primary Data, Year 2020

Based on Figure 16, rap-tourism ordination results in legal and institutional dimensions obtained the sustainability index value of Kemiren Traditional Village Tourism is 59,087 (located at the ordination scale position between 50.01-75.00). This shows that the sustainability of Kemiren Traditional Village Tourism in the legal and institutional dimension is in a fairly sustainable status. Stress value of  $0.241 < 0.25$ , which means that the analysis results in the study are sufficient in accordance with the field conditions. The value of R<sup>2</sup> (coefficient of determination) of 0.91611 indicates that the model using these indicators has explained 91.611% of the existing model. This indicates that the indicators used have been excellent.

The results of the Rap-Tourism Ordination show the status of sustainability in Kemiren Traditional Village

Tourism in the legal and institutional dimension that is in the category of quite sustainable. The legal and institutional dimension itself is a dimension on the sustainability of Kemiren Traditional Village Tourism which is important because the law is a collection of rules that govern people in the life of society in the surrounding environment, where in these regulations in addition to maintaining human rights itself, there are also obligations that must be carried out by humans themselves. Usually people who break the law can be subject to sanctions or fines under the violated regulations. The most fundamental role of the law is to ensure justice and truth in the social order. Institutions that play a very important role to manage resources and distribution for that there is an element of institutional is very necessary in order to pay attention and seek to increase the potential to support a development.

The results of this study are in line with previous research conducted by Puspita Deswina, Rizal Syarief, Latief M Rachman, M Herman Year 2015, with the title "Sustainability Analysis of Rice Crop Management of GeneticAllly Engineered Products in West Java and East Java". The purpose of this research is to find out the sustainability of Bt PRG Rice crop based on attributes that make up the ecological, economic, social, technological and institutional law dimensions. Variables used are ecological, economic, social, technological and institutional legal variables The results of the study of multidimensional sustainability are classified as fairly sustainable criteria with a value of 58.99%, except for the technological dimension with a value of 46.71% which is classified as less sustainable. Sustainability value for environmental dimension 73.02%, economic dimension 69.30%, social dimension 51.22% and institutional legal dimension 54.74%. Obtained ten leverage factors that can influence the improvement of sustainability index, namely from ecological dimension (Possibility of crossing genetic material from PRG crops to non-PRG crops), economic dimension (Farmers' dependence on PRG crops, affordable prg seed purchase price), social dimension (public perception and acceptance, public involvement in decision making), technology dimension (number of prg crops own R&D results, human resources ability to research and test PRG crops) and institutional legal dimension (implementation of regulations and laws , labeling against PRG).

The results of leverage of attributes analysis on legal and institutional dimensions can be seen in Figure 17.

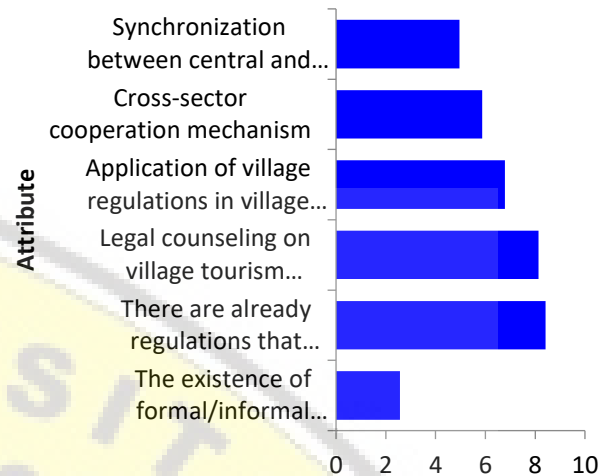


Figure 17 Leverage of Attributes Analysis on Legal and Institutional Dimensions

Source: Processed Primary Data, Year 2020

Based on the analysis of Leverage Attributes such as Figure 17 can be known sensitive attributes on the legal and institutional dimensions. Sensitive attributes are attributes that play a role for sustainability in the dimensions studied, where these attributes are able to encourage and inhibit the sustainability of Kemiren Traditional Village Tourism in the legal and institutional dimensions. Sensitive attributes can be seen from the Root Mean Square (RMS) value, which belongs to the sensitive category which is an attribute that has an RMS value  $\geq 2\%$ . In the legal and institutional dimensions, sensitive attributes are the existence of formal / informal institutions that regulate, there are already regulations that protect the patents of tourism villages, legal counseling of village tourism management, application of village regulations in village tourism, mechanisms of cross-sector cooperation and synchronization between central and regional policies.

### Sustainability of Kemiren Traditional Village Tourism

The sustainability of Kemiren Traditional Village Tourism in economic, social, cultural, ecological, management, trust or spiritual, infrastructure and technology, and law and institutional after being analyzed using MDS method per dimension shows the results in Table 3.

Table 3 Results of Sustainability Analysis of Kemiren Traditional Village Tourism

No.	Dimensions	Index Value	Description
1.	Economic	61.402	Fairly Sustainable
2.	Social	64.336	Fairly Sustainable
3.	Culture	63.342	Fairly Sustainable
4.	Ecologi	68.809	Fairly Sustainable
5.	Management	69.812	Fairly Sustainable
6.	Belief or Spiritual	72.520	Fairly Sustainable
7.	Infrastructure and Technology	63.006	Fairly Sustainable
8.	Law and Institutional	59.087	Fairly Sustainable
9.	Multidimensional	65.289	Fairly Sustainable

Source: Processed Primary Data, Year 2020

Based on the results of multidimensional MDS analysis, shows that Kemiren Traditional Village Tourism is in a fairly sustainable status with sustainability index values namely economic, social, cultural, ecological, management, trust or spiritual, infrastructure and technology, and legal and institutional dimensions (on a scale of 50.01 – 75.00). Once the sustainability index value of each dimension i.e. economic, social, cultural, ecological, management management, trust or spiritual, infrastructure and technology, and law and institutional are known, after that it is continued by illustrating on the kite diagram as follows:

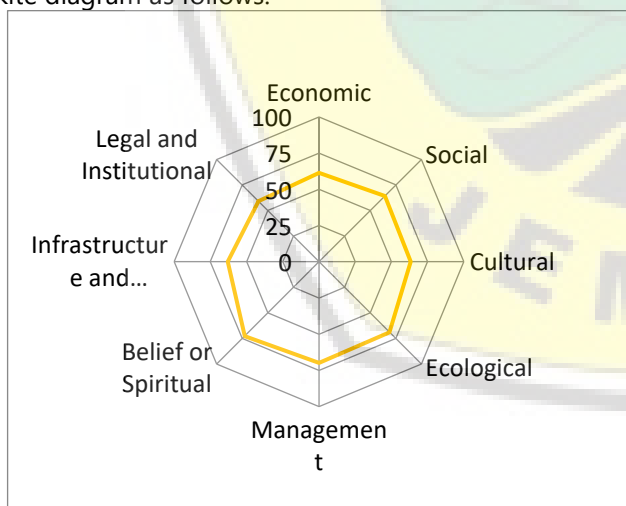


Figure 18 Sustainability Index Value in a Kite Diagram

Source: Processed Primary Data, Year 2020

Figure 18 shows which attributes are most dominant to the sustainability of Kemiren Traditional Village Tourism. Based on Figure 4.28, the most dominant to least

dominant dimension is the trust or spiritual dimension with an index value of 72,520, management dimensions with an index value of 69,812, ecological dimensions with an index value of 68,809, social dimensions with an index value of 64,336, cultural dimensions with an index value of 63,342, infrastructure and technology dimensions with an index value of 63,006, economic dimensions with an index value of 61,402, and legal and institutional dimensions with an index value of 59,087. Improved sustainability status can be made through improvements to sensitive attributes that have the highest index value in each dimension.

### 3. CONCLUSION

Based on data analysis and research discussion that has been submitted in the previous chapter, it can be concluded as follows:

1. The sustainability status of each dimension of Kemiren Traditional Village Tourism at this time are:
  - a. The sustainability status of the economic dimension is quite sustainable.
  - b. The sustainability status of the social dimension is quite sustainable.
  - c. The sustainability status of the cultural dimension is quite sustainable.
  - d. The sustainability status of the ecological dimension is quite sustainable.
  - e. The sustainability status of the management dimension is quite sustainable.
  - f. The sustainability status of the belief or spiritual dimension is quite sustainable.
  - g. The sustainability status of infrastructure and technology dimensions is quite sustainable.
  - h. The sustainability status of the legal and institutional dimensions is quite sustainable.
2. The most dominant to not dominant dimension sequence of the sustainability of Kemiren Traditional Village Tourism is the belief or spiritual dimension, management dimension, ecological dimension, social dimension, cultural dimension, infrastructure and technology dimension, economic dimension, and legal and institutional dimension.

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