Conflict Management of Water in Tourism Area in Indonesia

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Abstract

This study aim to identify the root causes of conflict management of water in tourism areas in Indonesia. The objects in this research are water tourism stakeholders with the number of 90 respondents which are composed of three different water tourism management in Karanganyar, Central Java, Indonesia, namely Grojogan Sewu, Jumog and Peblengan. The research methodology used in this research ismultiple regression analysis and ANOVA statistical methods. This research adopts a researcher-constructed water tourism conflict questionnaire which elaborates variables such as: level of water usage, life worthy, level of justice, level of responsibility, management capability and tourism area to create a value measuring the extent of water tourism conflict by water tourism stakeholders. The results from Multiple Regression test shows that the conflict is strongly influenced by the level of use of water, different tourism area, and management of water resources that occurs in the tourist areas in the important tourist water area in Indonesia namely Karanganyar Central Java over regional autonomy that allows in Indonesia to manage the natural resources. There is lack of conflict management of water studies in tourism area, especially in this sample country.

Keywords: water resources, tourism, conflict management, Indonesia

1. Introduction

1.1 Background

Since the implementation of regional autonomy in Indonesia, which provide flexibility for local governments to manage their own household (Indonesia Law 32/2004). Water Management in the district Karanganyar, resulting in a conflict of interest between tourism stakeholders. Lately, seizure of water resources in some regions of the country are increasing along with pressure from local government to increase their own source revenue. It's very counterproductive to the spirit of the Main 1945 Constitution Article 33, paragraph 3 that the natural resources (including water) is managed by the countryfor the greatest benefit of the people.

The consequences of regional autonomy in regional authority are affecting the water exploitation, causing a shift in water resources from local government into economic commodity. One of the interests of local governments to raise local revenue is to boost the local tourism destinations. In Indonesia during this time, the development of regional tourism aimed to develop local potential derived from natural, social, cultural or economic in order to contribute to the local government. The local community is expected to build, own and manage direct tourist facilities and services, so that people are expected to receive directly economic benefits and reduce urbanization.

But, there are still many obstacles that must be considered and resolved to support the tourism development goals. The conflict between the owner of the objects of nature-based tourism, or among managers and between local governments and the private sector in Indonesia bring various issues that result in reduced visitor interest for the tourist objects. It is important to trace the root of the problem and to find the right resolution. The purpose of this study is to determine the root of the problems faced by water managers in the tourism areas, as well as how to mapping conflicts in the areas.

2. Literature Review

2.1 Theoretical Basis

Availability of water, poor water quality or media depictions of water crisis could result in harm to the image of tourism destinations (Gössling et al., 2012, Hall, 2010, Hall and Härkönen, 2006). Gössling et al., 2012 in a study to review the use of fresh water in the tourism sector and identify the challenges of the current management of the tourism sector and the future. In their study, they concluded that even though tourism increases the global water consumption, water use is directly related to tourism is much less than 1% of the global consumption, and would not be significant even if the sector continue to grow in the anticipated rate of about 4 % per year (international tourist arrivals).

Moreover, Gössling et al., 2012 concluded that the expected changes in the global precipitation patterns due to climate change, management of the tourism sector are advised to engage in proactive water management due to the increasing global water use due to population and economic growth, changes in lifestyle, technology and international trade, and expansion of water supply systems.

Sultana (2011) argues that resource access, use, control, ownership and conflict are not only mediated through social relations of power, but also through the emotional geography where gender subjectivity and emotion contained is how nature-society relations and experienced every day life. Resource struggles and conflicts are not only material but emotional challenges, which are mediated through the body, space and emotion.

Giordano et al. (2007) revealed the importance of shared decision-making process in the management of the water comes from the realization that the engineering approach in addressing the complex and unstructured problems. Ohisson (2000) states that water scarcity carries a major risk of international conflict over shared water resources, he argues that the risk of conflict in the country in fact is greater, and that the risk of international conflict derives from the need to avoid what is defined as a second-order conflict in the country, is not caused by a scarcity of water itself, but the institutional changes necessary to adapt to water scarcity.

Holt and DeVore (2005) mentions at least there are four styles of managing conflict, namely: interesting, compromising, problem solving, and forcing. Their results showed that: 1) choose the force as an individualistic culture style of conflict over collective culture, 2) collective cultures prefer attractive style, compromise, and problem solution is more than individualistic cultures.

Bennett et al. (2001) explores the nature of conflict and how the institutional failure could be a major cause of conflict over natural resources. Their research concluded that local level conflict management could be successful, but without the level of proactive support from the government, this will only be a cause of conflict. The possibility to manage or resolve conflict will depend on the government's ability to: (a) distinguish between positive or negative conflicts; (b) determine the root cause of conflicts and resolve problems, and (c) strengthen the capacity of government institutions to manage conflict.

Kaushal and Kwantes (2006) said that individualism and collectivism influence the style of a person in conflict resolution. There is also a relationship between culture, power, personality, and style of conflict resolution. If it is assumed that people are basically evil and aggressive, conflict management mechanism based controls tend to be viewed more precise. However, if the perceived conflict arises from social conditions, then research on conflict resolution should pay more attention to the wider social relations. Appropriate conflict resolution processes need to be designed to cope with human behavior. The sources of conflict can be examined in terms of issues of social justice and economic gap as well as cultural and psychological problems. Creative approaches to conflict transformation are extremely important.

Becken and Hughey (2013) said that there is a relationship between tourism and disaster risk reduction and management of tourism. It should also be a guide for the tourism sector to complement the existing civil defense plan, thus adding value to the efforts to reduce the risk of natural disasters, including natural disasters in the water sector of tourism.

Barron et al. (2009) examined the patterns of local conflict in Indonesia by mapping conflicts around the village / neighborhood in Indonesia. Violent conflict can be observed across the country. Qualitative analysis showed that local conflicts vary in shape and impact across districts, and that local factors are a key factor. Analysis of the research conducted by Barron et al. (2009) emphasized the importance of economic factors, the positive correlation between violent conflict and poverty, inequality, economic development, and ethnic groups.

3. Methods

3.1 Research Location

This study conducted in Karanganyar Central Java Indonesia as a district that has a natural beauty with huge potential to further develop its natural attractions. Potential in Karanganyar mostly in the form of historical water tourism located on the historical value of the heritage site. However, it is not packed with the good selling points (tourist) and the object is also not optimal because there are conflict water management.

3.2 Research Approach

This research adopts a researcher-constructed water tourism conflict questionnaire which elaborates variables such as: level of water usage, life worthy, level of justice, level of responsibility, management capability and tourism area to create a value measuring the extent of water tourism conflict by water tourism stakeholders. This study is an exploratory study using a questionnaire by using quantitative data analysis. This study used a questionnaire given to stakeholders in water tourism area in Karanganyar done by 1) is given directly to the company where the respondent works, 2) sent through the post office services, and 3) are sent via electronic mail (e-mail).

The objects in this research is water tourism stakeholders with the number 90 respondents which is composed of three different water tourism area management in Karanganyar namely Grojogan Sewu, Jumog and Pablengan. To achieve the research objectives have been formulated, this study was conducted with explanatory research approach that provides an explanation of determining the effect of water tourism management conflict. Determination of the sample is by purposive / judgment sampling where the questionnaires that have completeness on data can be used in this study.

This research models see the influence of level of water usage, life worthy, level of justice, level of responsibility, and management capability to the conflict that occurs. This research resulted in the research model used to test the hypothesis in this study, namely:

Water Tourism Conflict = α + β_1 level of water usage + β_2 life worthy + β_3 level of justice + β_4 level of responsibility + β_5 management capability + β_5 Tourism Area+ e...

Figure 1. Research Framework



4. Analysis and Discussion

4.1 Analysis

Table 1. Coefficients Regression

	Co	efficients ^a			
Model	Unstandardi	zed Coefficients	Standardized Coefficients	t	Sig.
1(Constant)	D 14 567	4 057	Dela	3 591	001
(Constant)	14.507	4.007		0.071	.001



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LifeWorthy TourismArea	.228 - 987	.114 428	.232	1.995 .049	
ManagementCapability a. Dependent Variable: Conf	.297 ict	.148	.230	2.006 .048	

Table 1 shows the results of stepwise regression analysis that the dependent variable using a proxy conflict shows that there are some variables that influence conflict. Three independent variables affecting conflict resolution in Karanganyar Indonesia are Level Use of Water, Tourism, and Capability Management Area. Influence of Water Usage Levels can be seen from the above table are significant at 0.049. Area Tourism affects conflict resolution with a significance of 0.023. While management capabilities affect conflict resolution at 0.048.

Table 2. Adjusted R Square

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate			
1	1 .546° .298 .274 3.04169						
c. Predictors: (Constant), LifeWorthy, TourismArea, ManagementCapability							

Table 2 shows the value Adj R Square of 0.274 or 27.4%. That means the water management conflict in this study influenced by the independent variable in the form of the level of use of Water, Tourism Area, and Management Capabilities of 27.4%. While the remaining 73.6% influenced by others variables.

Table 3. The Results of Homogeneity Test

Test of Homogeneity of Variances								
Levene Statistic df1 df2 Sig.								
A	,825	2	87	,442				
В	,408	2	87	,666				
С	,184	2	87	,832				
D	,351	2	87	,705				
E	,376	2	87	,688				
F	.305	2	87	.738				

Where: A = level of water usage, B = life worthy, C = level of justice, D= level of responsibility, E = Water Tourism Conflict, F = management capability

In the table of homogeneity test of variances, Lavene's statistical value of each of the above shows that the score is greater than the probability value (0,05), it can be concluded that all three variances are identical. This means that the assumptions of ANOVA testing in the fulfilled.

Table 4. The Result of ANOVA Test

ANOVA							
	Sum of Squares	df	Mean Square	F	Sig.		
Between Groups	14,467	2	7,233	,312	,733		
A Within Groups	2015,933	87	23,172				
Total	2030,400	89					
Between Groups	191,356	2	95,678	8,410	,000		
B Within Groups	989,800	87	11,377				
Total	1181,156	89					
Between Groups	45,800	2	22,900	1,785	,174		
C Within Groups	1116,200	87	12,830				
Total	1162,000	89					
Between Groups	9,956	2	4,978	,420	,658		
D Within Groups	1030,100	87	11,840				
Total	1040,056	89					
E Between Groups	193,400	2	96,700	8,948	,000,		

Within Groups	940,200	87	10,807		
Between Groups	97,067	2	48,533	7,238	,001
F Within Groups	583,333	87	6,705		
lotal	680,400	89			

Where: A = level of water usage, B = life worthy, C = level of justice, D= level of responsibility, E = Water Tourism Conflict, F = management capability

- For question on part A about the Level of Water Usage F calculation = 0.312; F table (at the significance level of 5% numerator 2, denumerator 87) = 3.10. F calculation < F table and the probability value (0.733 > 0.05), it can be concluded that the three sample areas are the same or identical.
- For the question on type B about Life Worthy F Calculation = 8.410; F table (at the significance level of 5% numerator 2, denumerator 87) = 3.10. F calculation > F table and the probability value (0.000 < 0.05) it can be concluded that the three sample areas are not the same or identical.
- For the question on type C about Justice F Calculation = 1.785; F table (at the significance level of 5% numerator 2, denumerator 87) = 3.10. F calculation < F table and the probability value (0.174 > 0.05), it can be concluded that the three sample areas are the same or identical.
- 4. For the question on type D about Responsibilities F Calculation = 0.420; F table (at the significance level of 5% numerator 2, denumerator 87) = 3.10. F calculation < F table and the probability value (0.658 > 0.05), it can be concluded that the three sample areas are the same or identical.
- For the question on type E about Background Conflict F Calculation = 8.948; F table (at the significance level of 5% numerator 2, denumerator 87) = 3.10. F calculation > F table and the probability value (0.000 < 0.05) it can be concluded that the three sample areas are not the same or identical.
- 6. For the question on type F about Capability F calculation = 7.238; F table (at the significance level of 5% numerator 2, denumerator 87) = 3.10. F calculation > F table and the probability value (0.001 > 0.05), it can be concluded that the three sample areas are not the same or identical.

Table	5.	Kruskal-Wallis	Test
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Ranks							
	Location	Ν	Mean Rank				
_	Grojogan Sewu	30	43,50				
A B C D	Jumog	30	47,83				
	Pablegan	30	45,17				
	Total	90					
	Grojogan Sewu	30	54,03				
D	Jumog	30	53,00				
A B C D E	Pablegan	30	29,47				
	Total	90					
	Grojogan Sewu	30	48,77				
C	Jumog	30	39,62				
C	Pablegan	30	48,12				
	Total	90					
	Grojogan Sewu	30	48,50				
П	Jumog	30	46,70				
υ	Pablegan	30	41,30				
	Total	90					
	Grojogan Sewu	30	53,65				
T G D P T G E P T	Jumog	30	53,20				
L	Pablegan	30	29,65				
	Total	90					
	Grojogan Sewu	30	52,98				
F	Jumog	30	51,97				
1	Pablegan	30	31,55				
	Total	90					

Where: A = level of water usage, B = life worthy, C = level of justice, D= level of responsibility, E = Water Tourism Conflict, F = management capability

Test Statistics^{a,b}

	А	В	С	D	E	F
Chi-Square	,423 1	7,158	2,313	1,248	16,873	13,079
df	2	2	2	2	2	2
Asymp. Sig.	,809	,000	,315	,536	,000,	,001

a. Kruskal Wallis Test

b. Grouping Variable: Location

Test results in Table5. By using Kruskal-Wallis Test shows the following results:

- 1. At sub A about the Level of Water Usage shows that the chi-square value is 0.423. While the value of statistical tables when seen from the significance level of 5% for df = 2 is 5.991. These results indicate that the statistical calculation <statistical tables (0.423 <5.991), which indicates that the results of the three samples are identical.
- At sub B about Life Worthy shows that the chi-square value is 17,158. While the value of statistical tables when seen from the significance level of 5% for df = 2 is 5.991. These results indicate that the statistical calculation> statistics table (17,158> 5.991) which indicates that the results of the three samples are not identical.
- 3. At sub C about Justice shows that the chi-square value is 2.313. While the value of statistical tables when seen from the significance level of 5% for df = 2 is 5.991. These results indicate that the statistical calculation <statistical tables (2.313 <5.991), which indicates that the results of the three samples are identical.
- 4. At sub D about Responsibilities shows that the chi-square value is 1.248. While the value of statistical tables when seen from the significance level of 5% for df = 2 is 5.991. These results indicate that the statistical calculation <statistical tables (1.248 <5.991), which indicates that the results of the three samples are identical.</p>
- 5. At sub E about Background Conflict shows that the chi-square value is 16,873. While the value of statistical tables when seen from the significance level of 5% for df = 2 is 5.991. These results indicate that the statistical calculation> statistics table (16.873> 5.991) which indicates that the results of the three samples are not identical.
- 6. At sub A about Capability shows that the chi-square value is 13,079. While the value of statistical tables when seen from the significance level of 5% for df = 2 is 5.991. These results indicate that the statistical calculation> statistics table (13,079> 5.991) which indicates that the results of the three samples are not identical.

5. Conclusion

5.1 Conclusion

The results of statistical testing using ANOVA analysis above shows that the question of sub-categories B and E (Life Worthy and Background Conflict) shows that there are identical differences on the results. Therefore, to find a solution of the conflict between the perpetrators will not be appropriate for all parties if there is no any common understanding and the same perception. Therefore conflict resolution must be done with deliberation and presence of approaches to all relevant parties and the willingness of the conflict between the parties to resolve the conflict.

Results of Multiple Regression Testing show that, the conflictis strongly influenced by the level of use of water, different tourism area, and management capabilities. Therefore stakeholders both the manager and the communities must be able to manage the existing water in the area. Good management can be done with coordination among stakeholders so that the conflict in the use of water can b eavoided. By avoiding conflicts that occur, stakeholders can take maximum potential advantage of the water tourism.

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