

# C30. Imam Bachtiar

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## TOURIST SATISFACTION IN THE MARINE RECREATION PARK GILI MATRA, NUSA TENGGARA BARAT, INDONESIA

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### Abstract

Tourism development in a marine park may have either positive or negative impacts on the protected natural habitats and its species. Marine Recreation Park (MRP) of Gili Matra, consisting of Gili Air, Gili Meno and Gili Trawangan islands, is one of the most popular tourist destinations in the Lesser Sunda Islands, Indonesia. Tourism development, however, is out of control by local and central governments. Since 1986 to present, most government management plans on tourism development of MRP Gili Indah is lack of implementation. The present study examined tourist satisfaction levels on tourism services and snorkeling and scuba diving experience. Using a systematic random sampling method, 51 respondents at Gili Trawangan (GT) and 46 respondents at Gili Meno and Gili Air (GM + GA) were interviewed using prepared questionnaires. The results show that level of tourist satisfaction between GT and GM + GA is not significantly different. Development of accommodation and restaurant showed highest level of tourist satisfaction. On the other hand, sign-posting, tour operators and shops show lowest tourist satisfaction. In snorkeling and scuba diving experiences, tourist satisfaction is high on water clarity and value for money. Tourist satisfaction, however, is very low on coral health, coral abundance and other marine life abundance. Fish size and abundance provide moderate tourist satisfaction. Rubbish and waste are the main issues of GT and GM + GA, while crowding is a big issue only at GT. Local and central governments should be aware of these results and start putting management plan in place, to ensure sustainable tourism development at the MRP Gili Matra.

Keywords: marine park, Gili Matra, tourist, satisfaction, development

### INTRODUCTION

Tourist satisfaction is very important factor in determining sustainability of tourism industry. Tourism is about selling cultural and natural assets to visitors. The impact of tourist development depends on how large cultural and natural assets to be sold. In the Marine Recreation Park (MRP) of Gili Matra, tourism development is more rely on nature than culture. After 30 years of tourism development, MRP Gili Matra has changed a lot. In its early development, mid 1980s, MRP Gili Matra offered a lonely tropical micro-island atmosphere, pristine beach, coral reefs, sunshine and crystal clear water. By 1990s, extensive tourism development took place on the island and may have impacted the environment that might have reduced tourist satisfaction.

Tourism in marine parks potentially provides financial support to run effective management (Dharmaratne et al., 2000). On the other hand, tourism development may also threat environmental quality of the marine park. MRP Gili Matra is one of the most popular tourism destinations in Indonesia. Number of visitors increased sharply in the last five years. Number of staying visitors increased more than ten folds from about 20,300 people in 2007 to 270,000 people in 2012. Although number of visitors showed fluctuation on the island history, it is expected to increase in the next following years. This rapid tourist development may jeopardize the future of the marine park, since indications of habitat degradations obviously seen at both land and marine area.

At present, tourism development is nearly out of control by both local and central governments. Land use practices are violating existing land use regulations. Most green-belts, i.e. public open space 50-100 m from the shore line, has been occupied with tourism facilities, such as bar, café or restaurants. Secondly, in the period of 2007-2012, number of rooms increased from 777 and 2581 rooms. Many of them do not have business permits from government. Number of boats to bring tourist into and out of the island is also out of control. From years 2000 to 2010, number of boats increased from 52 to 220 boats, that there is no more rooms in the harbor to park the boat. A former beautiful snorkeling area at Gili Trawangan (GT) has been changed to condition similar to a harbor or marina. Coral reef on this site now becomes a desert-like snorkeling area.

Violation of government regulations has begun in early tourism development at MRP Gili Matra. In 1989, Government of Nusa Tenggara Barat (NTB) Province issued a Provincial Act 9/1989 about Tourism Development Area. On this Act, accommodation was only permitted on the mainland (Lombok) and Gili Air (GA) while Gili Meno (GM) and Gili Trawangan (GT) were defined as a tourist destination or attraction only. In 1990, accommodation grew rapidly at GT. Three years later, 1992, a Governor Decree (GD) was issued to set room quota for the three islands. Number of accommodation at GT, GM and GA was only limited to 200, 100 and 200 rooms respectively. Additional rooms must be built on mainland adjacent to the Gili Matra, i.e. Bangsal, Pemenang, and Pantai Sira. Rise building was also prohibited on the islands. The so called GD 500/1992 was still in place in the year 2000. But slowly it has been violated and is never been considered by any parties. Violators are mainly big companies, i.e. big hotels and dive centers.

Preventing further uncontrolled tourism development, District Government of Lombok Barat (DGLB) has initiated a Detail Spatial Plan (DSP) for the three islands, but again community rejection hindered the DSP to be a district act. In 2006, DGLB issued a Bupati (Shire) Decree on Spatial and Construction Plan for the three islands. Execution has been prepared to clear up the green-belt area on March 2007. Strong community resistance, however, resulted in the execution plan failure. Similar resistance also happened with Marine Zoning Plan introduced by Natural Conservation Agency (BKSDA, Balai Konservasi Sumber Daya Alam) in 1998. In fact, the MRP Gili Matra was under management of the BKSDA from 1993 to 2009. The zoning plan was never been discussed anymore. The implemented zoning plan was a revised version of an introduced zoning plan by local university (Bachtiar 2000).

Without any management plan, tourism development might shortly end up with destruction of natural and cultural attractions. According to Butler's (1980) model, unplanned tourism development easily tends surpasses the critical carrying capacity threshold of the islands. The resulting anthropogenic impacts on the cultural and natural resources may eventually cause a significant decline in the quality of the tourism experience. Declining tourist satisfaction will in turn reduce the numbers of tourists and a decline in the tourism industry upon which the operators and communities on these islands now depend for their livelihood. Although the WTO held a workshop on Indicators of Sustainable Development for Tourism Destinations in Lombok in March, 2007 (WTO 2007) to discuss these indicators with 90 tourism attendants, it appears that subsequent actions have not resulted from the workshop.

Tourism development in MRP Gili Matra is in the evolution process from backpackers or mass tourism into resort-type tourism (Hampton and Jeyacheya, 2013). The evolution of the resort-type tourism brings about increasing demand on environmental quality and experience. On the other hand, existing mass tourism has reduced environmental quality on the islands. The present study was to examine tourist satisfaction in the MRP Gili Matra. As there is no available similar data on previous studies at MRP Gili Matra, this study will provide the first data on tourist satisfaction.

Furthermore, we compared tourist satisfaction between Gili Trawangan (GT) and Gili Meno plus Gili Air (GM + GA) altogether.

## METHODOLOGY

### Location

The study was carried out in the MRP Gili Matra, or the Village of Gili Indah, between December 2012 and January 2013. The village consisted of three small islands (keys): Gili Trawangan (GT), Gili Meno (GM) and Gili Air (GA) (Figure 1). Tourist development was initiated in Gili Air in early 1980s, but latter development in 1990s Gili Trawangan developed very fast leaving the other two islands.

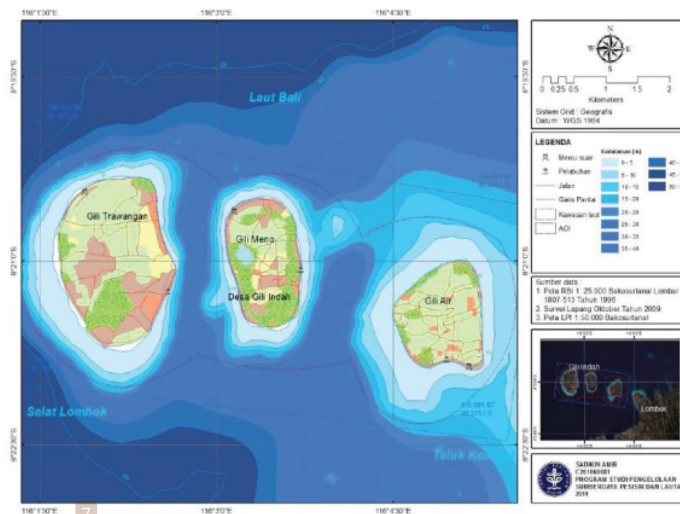


Figure 1. Map of Marine Recreation Park Gili Matra, on the north-west side of the Lombok Island. (Source: Amir, 2012).

In this study, GT data is separated from the other two islands (GM + GA). At present, GT has the most tourism infrastructure development. This development is indicated by the availability of about 6 (six) automatic teller machine (ATM) and tens of dive operators. In contrast there is not any ATM machine at GM + GA. GT also has different tourism atmosphere from GM + GA. In the GT there is a regular party every night provided by restaurant on schedule base. In contrast, there is no party at all in the GM + GA. These differences may influence tourist choice and perception about visited islands.

### Data Collection

Data collection was carried out by Australian students learning Bahasa Indonesia at the University of Mataram. Students were trained in questionnaire administration in Australia then coordinated in Indonesia by Tracey Henning a planning student, and supervised by two USC staff. Enumerators were stationed at the ferry terminals on each island where respondents were waiting for ferry leaving off the island or at a ferry terminal on mainland where tourist just left the three islands. Respondents were chosen using a systematic random sampling method of every sixth person. Data was collected using self-administered questionnaires written in English. Overall, there were 50 respondents on GT and 46 respondents from GM + GA.

The questionnaires consisted of 28 items with closed and open types of question. The open questions asked for respondent comments on their enjoyment factors in visiting the islands. The

closed questions has 5 (five) levels of satisfaction to be chosen by respondents: 0=no satisfaction, 2=low satisfaction, 3=neutral, 4=satisfied, and 5=very satisfied. Option of 'not sure' was also provided in the questionnaire. Data of 'not sure' option was not analyzed statistically as it can not be grouped into other options, and its proportion is very small.

Tourist satisfaction was defined as proportion of respondents' choice of 'satisfied' and 'very satisfied'. 'Neutral' choice is more likely to be grouped into choices of 'low satisfaction' and 'no satisfaction'. This paper only published some part of the study focusing on tourist level of satisfaction. Tourist satisfaction was divided into two aspects: i.e. tourism services and snorkeling/scuba diving experiences. Satisfaction on tourism services was to describe tourist perception on general services. Satisfaction on snorkeling and diving experience was to explore tourist perception on marine environment quality. The two satisfaction aspects each has 9 (nine) and 11 questions respectively.

Respondents were tourist visiting or staying at the MRP Gili Matra. Tourists visiting GT in some ways have different profile from those visiting GM + GA. Tourist at GT has younger age, higher income, and higher education level than those at GM + GA. At GT, 59% respondents were from European countries and 18% were from Australia and New Zealand. At GM + GA, 49% were from Australia and New Zealand and 37% respondents were from European countries.

## RESULTS

Overall tourist satisfaction on tourism services and experience quality was considerably low and moderate in the MRP Gili Matra. Tourist satisfaction was 53.06% at GT and 72.09% at GM + GA. More tourist feel satisfied when visiting GM + GA than visiting GT (Figure 2). Although this difference seems pronounce but it is statistically not significant. The proportion of tourist satisfaction on GT is homogenous with GM + GA ( $N=93$ ,  $df=2$ ,  $\chi^2=4.866$ ,  $P>0.05$ ). This result showed that tourist satisfaction at GT is more rapidly decreasing than at GM + GA.

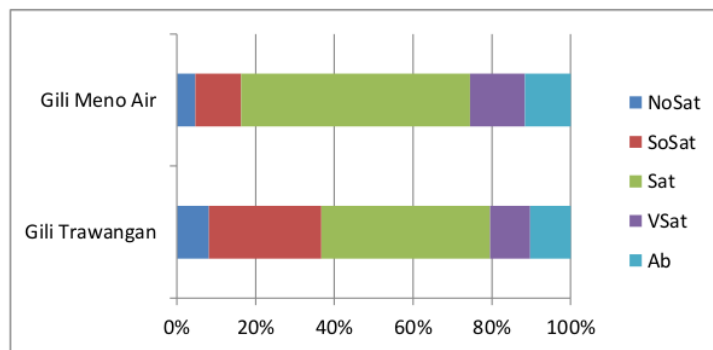


Figure 2. Comparison of overall tourist satisfaction at Gili Trawangan versus Gili Meno and Gili Air. NoSat=not satisfied, SoSat=somewhat satisfied, Sat=satisfied, VSat=very satisfied, Ab=Abstain

### 1) Satisfaction on general services and goods

At both locations, 5 out of 9 component of tourist satisfaction have less than 60% satisfaction. Entertainment, shops, sign posting and public transport were perceived have low satisfaction at two locations. In addition, information service is considered unsatisfied at GT while tour operator was not satisfied at GM + GA.

Tourist perception in the two locations also shows close similarities. Figure 2 showed tourist satisfaction on tourism development at GT. Most tourist (>90%) feel satisfied and very satisfied with accommodation and restaurants at GT. In contrast, they show large proportion of less satisfaction with

sign-posting, public transport, and shops. Similar patterns of satisfaction were also found at GM + GA (Figure 3).

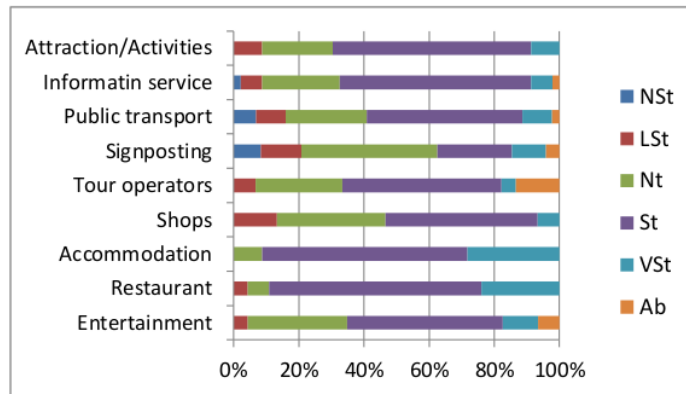


Figure 2. Tourist satisfaction at Gili Trawangan. NSt=not satisfied, LSt=low satisfaction, Nt=neutral, St=satisfied, VSt=very satisfied, Ab=Abstain

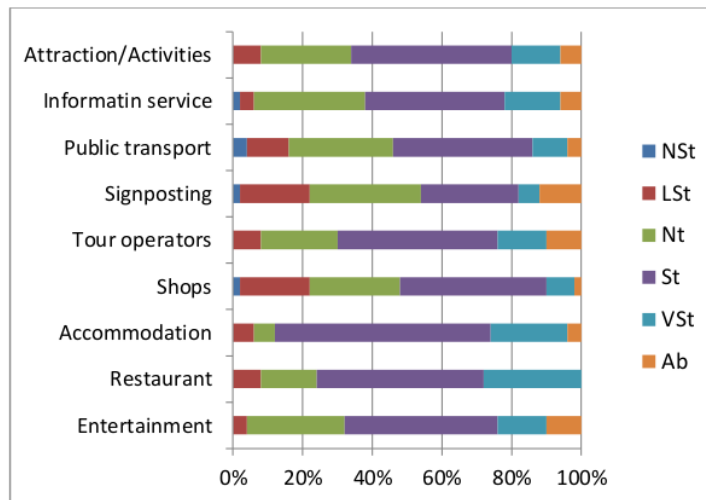


Figure 3. Tourist satisfaction in Gili Meno and Gili Air. NSt=not satisfied, LSt=low satisfaction, Nt=neutral, St=satisfied, VSt=very satisfied, Ab=Abstain

Tourists visited GT showed the same level of satisfaction with those visited GM + GA on entertainment and attraction (Table 1). Both locations showed respectively about 58 and 70% for entertainment and attraction. This result indicated that most tourist have known their characteristic destination before choosing an island to visit and stay. They chose their island destination based on their own perceptions and needs.

Furthermore, information service provided tourist satisfaction with 56.00% at GT and 65.22% at GM + GA, while tour operators provided 53.33% satisfaction at both locations. This means that tour operators were perceived do not provide good services for tourist. Meanwhile, information center had a moderate service satisfaction to tourist.

These results showed that there are still many efforts needed to improve experience quality of visitors in the MRP Gili Matra. Sign-posting and public transports are two sectors where government

usually has a bigger role than community. Government and community need to collaborate to improve tourist services. Government should set up a service standard runs by tourist operators, and train them to fulfill the expected standards.

Table 1. Chi-square analysis (homogeneity test) on tourist satisfaction between Gili Trawangan and Gili Meno+Gili Air.

Chi-squares	df	N	$\chi^2$	P
Entertainment	4	88	0.288028	>0.05
Restaurant	4	96	3.748861	>0.05
Accommodation	4	94	0.591048	>0.05
Shops	4	94	1.466296	>0.05
Tour operators	4	84	0.426607	>0.05
Signposting	4	90	0.478158	>0.05
Public transport	9	76	0.541861	>0.05
Information service	4	92	3.74416	>0.05
Attraction/Activities	4	93	1.588131	>0.05
Overall satisfaction	2	93	4.865762	>0.05

## 2) Satisfaction on swimming, snorkelling and diving

Tourist satisfaction on swimming, snorkeling and scuba diving experiences is high on water clarity and value for money. Both factors respectively showed 67.74 and 60.00% tourist satisfaction at GT, and 76.19 and 86.49% satisfaction at GM + GA. Tourist perception on water clarity and value for money are better at GM + GA than GT. Statistically, however, distribution of tourist satisfaction levels on the two factors is not different between the two locations (Table 2).

Table 2. Chi-square analysis (homogeneity test) on tourist satisfaction in swimming, snorkeling and scuba diving between Gili Trawangan and Gili Meno+Gili Air.

Chi squares	df	$\chi^2$	P
Water clarity	4	1.9721	>0.05
Water cleanliness	9	1.1423	>0.05
Sea calmness	4	0.2316	>0.05
Safety on boat	4	1.4303	>0.05
Safety on water	4	0.7884	>0.05
Coral abundance	4	0.7696	>0.05
Coral health	4	0.8744	>0.05
Fish size	2	0.0054	>0.05
Fish abundance	4	0.6157	>0.05
Other marine life abundance	4	0.0897	>0.05
Value for money	4	4.4614	>0.05

There were 3 (three) components that most tourist feel dissatisfaction in swimming, snorkeling and diving experience. These are corals health, coral abundance, and other marine life abundance. At GT, tourist satisfaction on the three components were 29.03, 36.67 and 30.00% respectively, while at GM + GA tourist satisfaction were 17.95, 35.71 and 34.15% respectively

(Figure 5 and 6). These results show that corals and other marine life are in bad condition that reduced tourist enjoyment and satisfaction in the MRP Gili Matra.

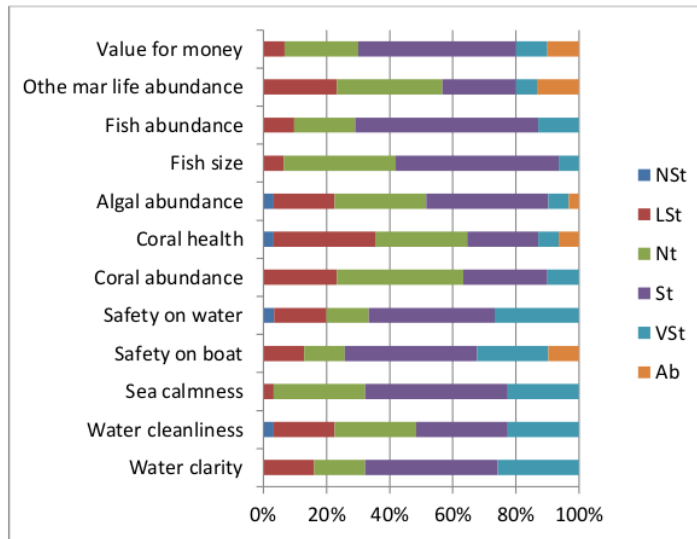


Figure 5. Tourist satisfaction on swimming, snorkeling and scuba diving at Gili Trawangan. NSt=not satisfied, LSt=low satisfaction, Nt=neutral, St=satisfied, VSt=very satisfied, Ab=Abstain

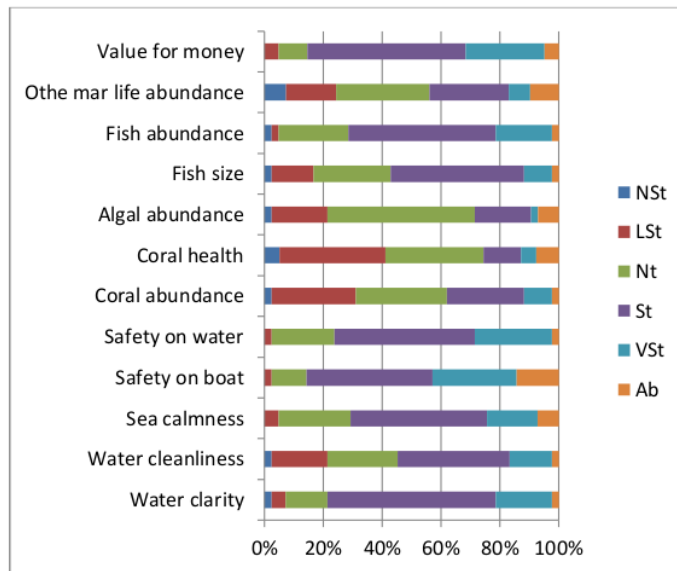


Figure 6. Tourist satisfaction on swimming, snorkeling and scuba diving at Gili Meno and Gili Air. NSt=not satisfied, LSt=low satisfaction, Nt=neutral, St=satisfied, VSt=very satisfied, Ab=Abstain

Tourist experience with reef fish showed moderate satisfaction. There were 58.06 and 70.97% tourists felt satisfied and very satisfied with fish size and abundance respectively at GT. Similar



satisfaction levels were also found at GM + GA with 54.67 and 69.05% respectively. It appears that condition of fish population is very much better than coral and other marine life populations.

Sustainable dive tourism is very dependent on sustainable uses of coral reefs. In most sites in GT, coral reefs are in poor conditions that experience divers might have low level of enjoyment. In contrast, GT has many dive operators, the largest number in Lombok. On GM + GA, there are still several dive spots that offer healthy coral reefs, clear water, many fishes and turtles. These spots may compensate poor coral reefs condition on the Gili Matra that many tourists still like to dive on this marine conservation area. Dive boats from GT also frequently bring divers and snorkelers to dive sites at GM and GA. This contributed to indifference satisfaction levels between two locations. Most diving tourist can perceive well environmental features that are ecologically important for the sustainability of the marine life in Bonaire (Uyara et al., 2009). Tourist enjoyment on diving are closely related attributes that are indicators of the health of coral reefs. It was not clear that diving tourist are beginners or experienced ones at GT. Beginner diver can hardly distinguish good or bad coral reef conditions.

Tourism and biodiversity can mutually inclusive when coastal management runs well. Tourism industry may improve biodiversity conservation efforts by reducing community dependence on extractive income from natural habitats and increase community awareness on values of biodiversity conservation (Hudson and Lee, 2010). This does not happened in the MRP Gili Matra. As it was discussed on the introduction section, relationship between local community and district government is rarely in harmony. Lack of good communication between district government and local people about coastal management is a big hazard on coastal resources conservation.

### 3) Satisfaction-related factors

Open questions about factors increasing and increasing enjoyments show little different perception between two locations, GT and GM + GA. The two locations show similarities in that tourists very enjoy local hospitality, snorkeling and diving, natural landscape and atmosphere, and no motorized vehicles (Table 3). At smaller proportion tourist at GT enjoy wildlife and marine life, while tourist at GM + GA enjoy quiet at night. In factors decreasing tourist enjoyment, tourists mostly complained about rubbish and waste management at the two locations (Table 4). At GT, tourist complained about crowded and dead corals. At GM + GA, tourist complained about too loud music and bad experience at Bangsal Harbor.

Table 3. Factors increasing tourist enjoyments at two locations. Number of tourist suggesting the factors are shown in column.

Factors	Gili Trawangan	Gili Meno and Gili Air
Local hospitality	8	11
Snorkeling and diving	3	10
No car and motorcycle	2	3
Natural landscape and atmosphere	3	9
Wildlife and marine life	3	0
Quiet at night	0	3

Rubbish and waste is the most decreasing factor of tourist enjoyment at GT. District and provincial governments need to be aware about this issue. At present all rubbish is dumped in the middle of the island that occupies about 2000 m<sup>2</sup> of land. There is potentially solution on the rubbish issue. Local businesses are willingly to pay at any costs to bring rubbish back to the mainland. The

District Government of Lombok Utara, however, does not have any dumping location yet. The uses of cidomos as transportation mode at MRP Gili Matra are unique and environment friendly. The waste of horses should be cleaned up from all streets. The way cidomo owners and drivers in treating horses should also be improved as the western standard, where most visitors come from.

Table 4. Factors decreasing tourist enjoyments. Number of tourist suggesting the factors are shown in column.

Factors	Gili Trawangan	Gili Meno and Gili Air
Rubbish and waste	10	4
Crowded	3	0
Dead coral	2	0
Bangsals harbor	0	2
Music too loud	0	2

Crowding is the second serious issue at GT. Crowding not only occurs on land but also in the sea. GT has too many visitors and too many boats. Both have negative impacts on island environment and tourist enjoyment. At Molokini Shoal Marine Life Conservation District, Hawaii, 67% visitors felt crowded and no longer tolerate when they encountered more than 16 boats in one spot (Bell et al., 2011). At GT, they will certainly encounter more than 16 boats in all the beach and dive sites.

Loud music at GM + GA and low hospitality at the Bangsal Harbour, where tourist take a boat to the islands, are also need improvements. Local people at MRP Gili Matra may apply a local agreement as the local regulation called *awig-awig* (Bachtiar, 2000). Village of Gili Indah may initiate an *awig-awig* on this music issue that all people living on the island have high obedience on such a regulation. Hospitality issue at Bangsal however needs interventions from District Police and District Government.

## CONCLUSION

Tourist satisfaction at the MRP Gili Matra is considerably low and moderate. Satisfaction visiting GT is lower than GM + GA. There are a number of improvements needed to maintain MRP Gili Matra as a major tourist destination in the Province of NTB. Government interventions are required to improve information service, tour operator service, rubbish and waste management, harbor hospitality, and to reduce crowding. Dissatisfaction on snorkeling and diving experiences needs intervention to rehabilitate coral reefs and to keep away boats from snorkeling area. Local community needs to collaborate with district government to cope with these issues.

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