

# TOURISM AND CONSERVATION MANAGEMENT OPTIONS FOR KARIMUNJAWA MARINE NATIONAL PARK (Case Study and Reviews)

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## ABSTRACT

*Tourism is a nature-based industry that will have impacts on the environment. In order to achieve successful and sustainable tourism, tourism development and conservation of natural resources have to go hand in hand. This will be only attained through an environmental strategic tourism planning approach.*

*Karimunjawa islands as one of the largest marine protected areas in Indonesia, provide a wide range of opportunities for research and environmental education as well as for tourism and recreation. In 1995, the Central Java Government conducted a tourism development study, but the study failed to assess current tourist market. This study intent to analyse the existing tourist market and to offer management guidelines.*

*The study was conducted using qualitative methods to analyse the existing tourism market and its' development plan by reviewing and examining the primary and secondary sources. The study revealed that local residents are not fully involved in the development of the tourism plan. It is considered that, at least initially, tourism in the Karimunjawa Islands should be developed on a selective and small-scale base. It is recommended that a development manual, guidelines and policies be prepared in support of the tourism development plan. Public education program and involvement of the local community should be encouraged to support the tourism plan. The proposed management guidelines cover three issues : the environmental impact of tourism development; the appropriate institutional and legal framework to regulate and monitor tourism development, especially on the islands; and the extent of local community participation*

## I. INTRODUCTION

Tourism has been recognised as one of the largest sectors of global economic activity. In the past two decades, tourism has grown rapidly throughout the world (Gunn, 1988; WTO, 1993; Hall, 1994). Despite the well-recognised economic benefits of tourism, such development has also been known to have detrimental effects on the environment. Many articles have discussed the degradation of natural resources (see Cohen, 1978; Pearce, 1989; Wall, 1991).

The Indonesian Government has attempted to develop tourism industry to become the major source of national

revenue, after gas and oil, and as such to provide employment growth (Hall, 1994, Dahuri, 1995). Since the coastal regions are the most popular tourist destinations, the Indonesian Ministry of State for Environment has been committed to integrating environmental concerns into coastal management, including tourism. The action for achieving a sustainable marine program, began in 1992 involved stimulating implementation of integrated and sustainable marine resource uses (Sugandhy, 1995).

The World Wildlife Fund/ International Union for Conservation of Nature and Natural Resources (WWF/IUCN) in co-operation with the

Forestry Department has established a marine conservation data atlas in order to recognise the need of effective management and control of Indonesia's marine areas. The data atlas is used as a basic guide for identification of marine conservation areas in Indonesia (Morrison, 1992 and Soemarsono, 1995). As a result, some 34 marine protected areas covering

about 3 million hectares have been established in Indonesia (see Appendix 1). This includes six reserves (Arakan Wowontulap, Bunaken, Kepulauan Karimunjawa, Kepulauan Seribu, Taka Bonerate and Teluk Cendrawasih) which qualify as marine national parks (Soemarsono, 1995).

#### Appendix 1. Distribution of Marine Protected Areas In Indonesia

No	Location Name	Province	IUCN Type	Established Year	Area (ha)
1	Arakan Wowontulap	North Sulawesi	2	1991	13,800
2	Bali Barat	Bali	2	1978	6,220
3	Baluran	East Java	2	n.a	2,500
4	Bukit Barisan Selatan	Lampung	1	1990	201,600
5	Bunaken	North Sulawesi	2	1991	75,266
6	Gili Meno	NTB	5	1993	2,954
7	Gunung Api Banda	Maluku	5	1992	734
8	Kepulauan Aru Tenggara	Maluku	1	1991	114,785
9	Kepulauan Karimata	West Kalimantan	1	1985	77,000
10	Kepulauan Karimunjawa *) **)	Central Java	2	1988	111,625
11	Kepulauan Seribu	DKI Jakarta	2	1982	108,000
12	Laut Banda *)	Maluku	5	1977	2,500
13	Leuweung Sancang	West Java	1	1990	1,150
14	Pangandaran	West Java	2	1990	n.a
15	Perairan Kangean	East Java	4	n.a	n.a
16	Pulau Dua	West Java	1	1984	30
17	Pulau Kasa	Maluku	4	1978	1,100
18	Pulau Krakatau	Lampung	1	1990	11,200
19	Pulau Moyo	NTB	5	1986	6,000
20	Pulau Pombo	Maluku	5	1973	1,000
21	Pulau Sangalaki	East Kalimantan	5	1982	280
22	Pulau Sangiang	West Java	5	1991	700
23	Pulau Semama	East Kalimantan	4	1982	220
24	Pulau Weh	Aceh	5	1982	2,600
25	Sabuda Tataruga	Irian Jaya	4	1993	5,000
26	Taka Bonerate *) **)	South Sulawesi	2	1992	530,765
27	Tanjung Keluang	Central Kalimantan	5	1984	2,000
28	Teluk Bintuni	Irian Jaya	4	n.a	4,500,000
29	Teluk Cendrawasih *) **)	Irian Jaya	5	1990	1,453,500
30	Teluk Kupang	NTT	5	1993	50,000
31	Teluk Maumere	NTT	5	1987	59,450
32	Teluk Raja Ampat	Irian Jaya	4	1993	60,000
33	Tujuh Belas Pulau	NTT	1	1987	11,900
34	Ujung Kulon	West Java	2	1992	76,100

Source: Alder *et al.* (1994), Bleakley and Wells (1995), Soemarsono (1995)

Note: n.a.: not available

\*) East Asian Priority

\*\*) National Priority

The Indonesian Government has attempted to maintain and even to enhance the quality of coastal resources by establishing marine and coastal protected areas. However, this effort has not been an unqualified success, due to largely limited support for implementation of management plans (Alder and Dutton, 1994). Many of the protected areas were apparently established for conservation purposes and without encouraging tourism in the marine parks. No attention was given to marketing the parks, and current park regulations do not permit entry fees to be charged.

Therefore, tourism development options need to be carefully evaluated to ensure that potential tourist areas are capable of use for the longer term without depleting the quality of the natural environments. In 1995, the Central Java Government, through its tourist office, has conducted a tourism development study for the Karimunjawa Islands. In this study, government identified that 89 hectares of land could be developed to accommodate 35,600 tourists (Dinas Pariwisata, 1995). However, it failed to assess current tourist visitation levels and it was conducted with limited involvement of local residents.

## II. STUDY APPROACH

### 2.1. Study context:

This research focuses to analyse the existing tourist market and to offer management guidelines by developing a strategic tourism development plan for Karimunjawa and encourage co-ordination between related sectors in management of the park

### 2.2. Study method :

A qualitative research methods is used to examine tourism development options through field survey in the region.

The existing information and other related studies is also reviewed to analyse current management option.

## III. OVERVIEW OF THE KARIMUN-JAWA MARINE NATIONAL PARK

### 3.1. Location and regional setting

Karimunjawa Islands as one of the districts in the Jepara Regency, lies in the Java Sea about 115 km north of Semarang. The area can be reached by air as well as by sea from Semarang and by sea from Jepara. The islands is composed of 27 islands and cover an area of 7,120 ha with an interior sea of 107.225 ha. The five largest islands are Karimunjawa, Kemujan, Parang, Genting and Nyamuk support permanent settlement.

Morphologically, the area is divided into three units; high relief hills (50%), undulating hills (35%) and lowland plains (15%) with altitude ranging from sea level to 512 m (PPA, 1980). The highest point on the islands is the peak of Mount *Bendera* on Karimunjawa island. Mountainous views are the dominant visual feature of the entire archipelago.

In the archipelago, there are no permanent rivers. Freshwater supply for households is provided from wells and springs, with the depth of wells ranging from 5 to 15 m. Water from one of the springs in Karimunjawa village, *Legon Goprak*, is piped to the village.

### 3.2. Conservation values

The Karimunjawa Marine National Park is recognised as one of the big marine park which is also rich in their natural under water resources. There are at present two islands defined as protected areas- Burung and Geleang Islands. The high amenity value of marine and coastal landscape is provided within the islands.

Urban development is generally confined at the capital administrative place, with a total permanent population of about 7300 people. In summary, the park provides a wide range attractions for diverse range of activities and potentially is suitable for a tourism site.

### **3.3. The Importance of Conservation to Tourism in Karimunjawa**

In many tropical countries protected areas are attracting tourist visitation, and with the proper planning, tourism can bring significant economic and environmental benefits to the region (MacKinnon *et al.*, 1986). Karimunjawa has potential to be developed as a major marine tourism destination. However, there is a need to protect and manage its natural resources.

In the early 1980s, a series of major studies on conservation management needs in Indonesia were undertaken. Two studies of relevance were a Directorate for Nature Conservation (PHPA) study and a Food and Agricultural Organisation (FAO) study. The PHPA study focused specifically on the Karimunjawa Islands as a site of national conservation significance (PPA, 1980), whilst the FAO study was more a general, regional study (FAO, 1982). The FAO study found that coastal areas in the Central Java province are the most seriously damaged in Indonesia. It estimated that the area of "coral gardens" in Bali and Java had declined, from 20,000 hectares to less than 15,000 hectares, during the preceding decade. The FAO study also identified 43 potentially important conservation sites in Central Java province, and the Karimunjawa Islands were one of the few marine areas on the list. The islands were ranked eleventh in overall order of importance. A further rating of the management feasibility of each site was also prepared. Significantly, the Karimunjawa Islands is rated higher than all other sites in this

regard. These high ratings combined with the earlier PPA assessment, were instrumental in drawing attention to the conservation significance of the Karimunjawa Islands (Dutton, *et al.*, 1993).

However, the problems involved in the protection of the environment in Indonesia include enforcement (Hall, 1994 and Polunin *et al.*, 1984), communication and co-ordination, and community involvement (Alder *et al.*, 1994). As tourism is a largely nature-based industry that has impacts on the environment, tourism development activities should take environmental considerations into account within its development plan in order to minimise its impacts.

### **3.4. The Importance of Tourism to Karimunjawa**

Tourism can be used as a tool to promote growth and development of specific areas as the economic impacts of tourism can create income and employment benefits for regions and communities (Gunn, 1988). As a means of stimulating economic diversification and broadening employment opportunities for island residents, the Central Java government has begun to actively promote tourism in this area based on the appeal of its natural environment.

Karimunjawa's tourist potential has not been fully exploited, yet the region is rich in natural attractions. As marine tourism becomes a major tourism attraction, the Karimunjawa Islands can be offered to be an alternative destination to the Seribu Islands Marine National Park, near Jakarta. This is because the natural resources in Karimunjawa are more diverse and in better condition as well as being more central to Java, the most populous area in Indonesia. Therefore, it is important that the islands be preserved, because of the unique natural life on the islands and in the surrounding sea. It is also apparent that tourism can provide

positive incentives for the conservation of the natural resources

In the regional tourism development policy, Karimunjawa was identified as one of the priority tourism destinations in Central Java. As such, it will assist tourist industry to develop the islands, as the natural resources of the islands are 'largely intact' and attractive for such use (Dutton *et al.*, 1993). Along with this, there is considerable interest for tourism development by both the local community and regional government. Although, detailed planning has not been undertaken for such development, supporters of tourism development believe that it could enhance the economic base of the islands and contribute to national tourism development. However, there are also concerns that tourism development could jeopardize the integrity of the Karimunjawa Islands Marine National Park.

The present patterns of resource use are clearly not suitable in the long-term, as they will cause the environmental quality to gradually decrease. These activities include, for example, destruction of coral reefs associated with collecting giant clam fossils (Sya'rani, 1987) and fishing activities using poison and explosive material (Dutton *et al.*, 1993).

The objectives of tourism development in the Karimunjawa Marine National Park are as follows:

- 1) to manage the natural resources for purposes of conservation, research and education as well as for tourism and recreational uses;
- 2) to give positive action in further economic development and increase the incomes of local communities;
- 3) to support tourism development with relevant information and interpretation to attract private investment;
- 4) to make the Park an important tourist destination in Central Java;
- 5) to provide direction for multi-functional long-term development (Sammeng, 1995).

Dutton *et al.*, (1993) identified current impediments to 'low key' approaches to develop tourism in the Karimunjawa. These were as follows:

- 1) lack of education and preparation for tourism,
- 2) lack of tourism infrastructure, and
- 3) lack of an agreed master plan for development that takes into account social, economical and environmental factors.

### 3.5. Management issues

In 1986, an area of 111,625 hectares around the Karimunjawa Islands was declared a Marine Reserve to protect and preserve its diverse natural resources and ecosystems. In 1988, the islands were declared a Marine National Park. The objectives of the park management plan are:

- 1) to protect life-buffer systems;
- 2) to conserve its diverse natural resources and its ecosystems;
- 3) to sustain natural resource use and its ecosystems for research, science and education, and tourism and recreation (Central Java Government, 1988).

Although the park is the fourth largest Marine Protected Area in Indonesia, there is little evidence that the reserve has achieved its conservation management objectives. Indeed, current activities of the park users (notably fishing) have reduced the productivity of the marine ecosystems (Dutton *et al.*, 1993). The park was zoned in 1990 into four zones for management purposes, but a management plan has not been implemented, since the Directorate for Nature Conservation (PHPA) has not approved it (Alder *et al.*, 1995).

In order to assist management of protected areas, the Karimunjawa National Marine Park is divided into two zones: the eastern zone, composed of 5,985 hectares

of land and 50,812.5 hectares of surrounding water; and the western zone which covers about 870 hectares land and the interior sea of 55,442.5 hectares (Figure 1). However, there are still some administrative problems for management of the national park. These include lack of managerial skills, limited funds, limited enforcement and coordination.

Management of the marine park was under responsibility of the Directorate for Nature Conservation within the Forestry Department. However, local government and the community have to be encouraged to participate in the management. The Management Plan of the Karimunjawa Marine National Park is still in a draft form. Since 1998 the management responsibility of the park is beyond "Balai Taman Nasional Karimunjawa".

#### IV. CONCLUSION

It is considered that, at least initially, tourism in the Karimunjawa Islands should be developed on a selective and small-scale base. Tourism development zone is proposed as a means of guiding the management of coastal resources affected by tourism in Karimunjawa Islands. The management guidelines include the following :

1. Any development for tourism and recreation must blend with the natural environment, conserve the outstanding park areas;
2. Sensitive coastal and marine habitats and those significance scientific interest must be conserved;
3. The local community must participate in the development and management of coastal tourism resources; and
4. Appropriate legal and institutional arrangement must be established to administer the offshore islands.

Technical guidelines for physical planning, which take into account the impact of the physical structures on the environment, must be made. Appropriate physical planning criteria can be applied to protect the coastal area from inappropriate development. Other specific management guidelines proposed cover three issues : the environmental impact of tourism development; the appropriate institutional and legal framework to regulate and monitor tourism development, especially on the islands; and the extent of local community participation.

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