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Evaluating Contrasting Approaches to Marine Ecotourism: 'Dive Tourism' and 'Research Tourism' in the Wakatobi Marine National Park, Indonesia

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Introduction

The establishment of marine protected areas (MPAs) in developing countries is perceived as solving problems of over-exploitation of marine resources whilst also offering opportunities to promote alternative sources of income for local communities through tourism-related activities (Boersma and Parrish 1999; Gubbay 1995). These activities, commonly referred to as nature-based tourism or ecotourism, constitute one of the fastest growing sectors of the travel market (World Tourism Organisation 2002). Increasing consumer choice and spending ability in developed countries has led to an expansion of destinations catering to tourists demanding increasingly remote and unspoiled locations. Whilst the definition of ecotourism itself is subject to debate, most writers accept the following description:

...[ecotourism is] environmentally responsible, enlightening travel and visitation to relatively undisturbed natural areas to enjoy and appreciate nature and any accompanying cultural features both past and present that promotes conservation, has low visitor impact and provides for beneficially active socio-economic involvement of local populations (Ceballos-Lascurain 1996).

This definition highlights the fact that although ecotourism should cause minimal disturbance to the natural environment, it should also bring about economic and social benefits to local communities. The degree to which ecotourism fulfils these objectives is to some extent dependent upon the ability of government departments with jurisdiction over protected areas to influence the development of ecotourism activities. In developing countries, this ability is severely restricted by a lack of resources, leading to many protected areas being labelled 'paper parks' as a result of the lack of managerial control over activities within them (MacAndrews 1998).

In analysing the impacts of ecotourism in developing countries, attention has progressed from a focus on purely economic or environmental benefits to an approach which adopts a development-oriented perspective (Scheyvens 1999). This latter approach emphasises the need to facilitate community development through ecotourism in a manner that empowers the local community in a number of ways. Economic benefits are therefore seen not just in terms of total revenue but also with regard to the numbers of people involved and the extent to which these benefits are distributed within communities. The development approach focuses on socio-cultural impacts. For example, whether ecotourism improves community cohesion through activities such as investing in communal facilities and reinforcing the value of local traditions and the awareness of the natural environment. Attention is also paid in this analysis to the impact of ecotourism on local people's ability to influence decisions regarding the management of the protected area. These impacts can be analysed in terms of their capacity to empower the local community in economic, social and environmental terms.

This paper will utilise a development approach to examine two contrasting tourism operations in a marine national park in Indonesia which both advertise themselves under the banner of ecotourism. The analysis will demonstrate the contrasting impacts of ecotourism and identify issues related to the effective management of ecotourism in developing countries. It is hoped that this will serve to underline the need to critically assess the value of marine ecotourism in terms of its impact on local communities and their ability to actively contribute and participate in the management of their local environment.

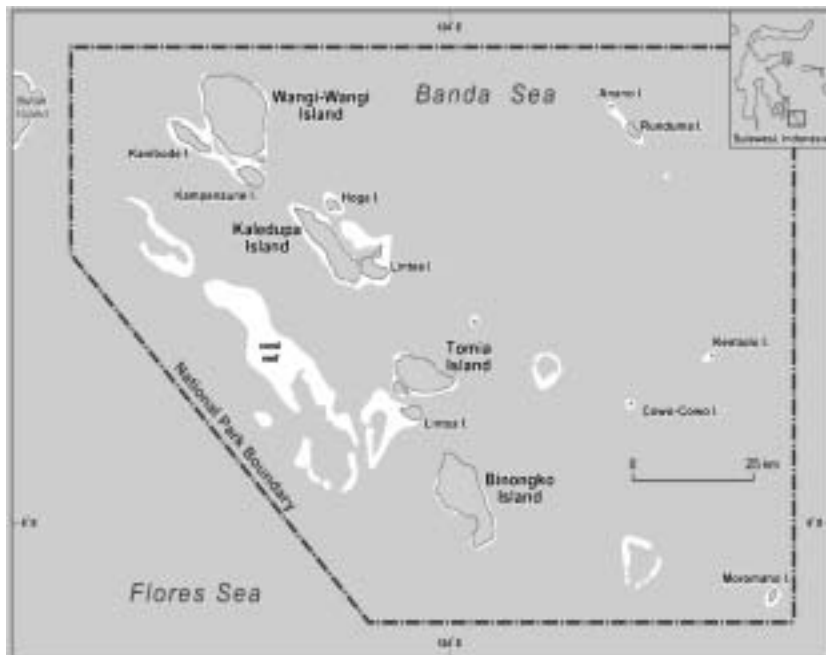


Figure 6.1. Location of Wakatobi Marine National Park.

Background to Case Study Area

The Wakatobi Marine National Park, located in the Tukang Besi islands of southeast Sulawesi, Indonesia (Fig. 6.1) covers a total area of 13,900 km² and was officially designated in 1996, making it one of the largest and newest marine national parks in Indonesia. The park encompasses the four major islands of Wangi-Wangi, Kaledupa, Tomia and Binongko, which support a total of around 80,000 people, as well as sixteen smaller uninhabited islands and atolls. Arable and pastoral activities are mainly practised by the Wakatobi ethnic group, which constitutes around 92 percent of the islands' population. The other group in the area are the Bajau or 'sea gypsies' who are scattered throughout coastal environments of Southeast Asia. These communities rely almost exclusively on marine resources for food, fuel and building materials, whilst engaging in small scale trading of surplus fish catches with the Wakatobi. Surveys conducted by overseas non-governmental organisations in the early 1990s highlighted the threat to marine biodiversity posed by the increasing use of destructive fishing practices by local communities subject to competition with outside fishermen, a factor common to many areas in

Indonesia (Cesar *et al.* 1997). Proposals to establish an MPA were further justified through reference to the historical significance of Sulawesi in connection with the studies of Alfred Russel Wallace, as well as the potential to promote marine ecotourism in such a remote and relatively pristine area of Indonesia. This resulted in the rapid designation of the area as a marine national park in 1996, within 3 years of the initial proposal.

Given its remote location, which until recently required a minimum of two days overland and sea travel from the nearest regional airport, it is not surprising that ecotourism is limited to two centres of activity in the Wakatobi. Despite their contrasting modes of operation as detailed in Table 6.1, both operations promote themselves as ‘ecotourism’ in publicity materials, justifying this with references to economic and social benefits reaching local communities in their vicinity as well as their strategies relating to marine conservation. It is the intention of this study to analyse the differing economic, social and environmental impacts of these two examples of ecotourism, which will be henceforth referred to as ‘dive ecotourism’ and ‘research ecotourism’, reflecting their core clientele and main activities.

Table 6.1. Characteristics of two ecotourism operations in the Wakatobi Marine National Park

	<i>Dive ecotourism: Wakatobi Divers, Tomia Island http://www.wakatobi.com</i>	<i>Research ecotourism: Operation Wallacea, Hoga Island http://www.opwall.com</i>
<i>Ownership</i>	Swiss-owned company	UK-owned company
<i>Year established</i>	1995	1996
<i>Operating season</i>	10 months (March–December)	3 months (July–September)
<i>Clientele and origin</i>	Experienced divers / photographers; predominantly from USA and W. Europe	University students, almost all from UK & Ireland; specialising in marine biology / geography
<i>Visitor capacity</i>	22 (2000)	120 (2001)
<i>Cost of visit</i>	US\$2700 for 2 weeks including return flight from Bali	US\$2400 for 4 weeks; US\$3250 for 6 weeks exclud- ing all flights
<i>Number of employees</i>	6 foreign, 22 local	25 foreign, 29 local

Despite the vastly differing visitor capacity of the two operations, the total number of visitors to both is relatively similar. Whilst the capac-

ity of the dive ecotourism operation has remained stable since its inception, its resort facilities are booked up for the duration of its open season, giving rise to a total of around 480 visitors per year. In contrast, whilst the research ecotourism operation is only open to coincide with the university summer vacation in the UK and Ireland, there has been a rapid increase in total visitor numbers during this period from 50 in 1995 to 300 in 2001.

Furthermore, in July 2001 the construction of an airstrip on the island of Tomia was completed. The presence of the airstrip, which had been privately financed by the dive ecotourism operation, reduced the travel time from Bali to Tomia from two days to four hours. The implications of this with regard to the future development of ecotourism within the region will be discussed later in this paper. It is also worthwhile to note that there is very little personal or professional contact between the owners of these two ecotour operations in the Wakatobi.

Methodology

Field research was conducted for two periods of eight weeks, one in 2000 and one in 2001. This was initiated through a series of interviews with the owners and employees of the two ecotour resorts. The interviews explored a range of issues including daily operations, product marketing and the relationships between local communities and national park authorities. These were followed by interviews with local employees and individuals from communities located in close proximity to the two ecotour resorts. These interviews focused upon the extent to which economic and social benefits were reaching local communities and the nature of any perceived problems associated with the presence of the ecotour operators. Interviews were conducted with the assistance of locally based translators and, in the case of the Bajau, questions were phrased in the Bajau dialect in order to ensure accuracy of response. Participant observation provided insights based upon informal discussions with a range of informants, together with notes of activities and interactions between local residents and overseas visitors. Secondary sources of information were also utilised in the research. Analysis of available financial records from the ecotour operators was conducted to obtain additional economic data, and the socio-cultural impact of the ecotour operators was also addressed through analysis of web-based publicity material.

Results and Discussion

Economic Impacts

The annual expenditures of the ecotour operators on locally obtained goods and services was determined through interviews and analysis of financial records. For the purposes of this study, 'local' was defined as goods or services that were obtained from the island where the ecotour operator was based. The data are summarised in Table 6.2.

Table 6.2. Local spending associated with two ecotourism operators in Wakatobi Marine National Park

	<i>Dive ecotourism local spend- ing year 2000 (US\$)</i>	<i>Research ecotourism local spending year 2000 (US\$)</i>
Accommodation	-	9210
Local staff salaries	10560	3500
Food and drink	500	3900
Non-food items	-	4210
Total	11060	20820

It is apparent from Table 6.2 that whilst the dive ecotourism operation is open 10 months per year in comparison to the 3 months during which the research ecotourism operation is active, the latter spends approximately double the total quantity of income on locally derived goods and services. In order to put these data into perspective, the average monthly salary in this region of Indonesia is in the order of US\$40, hence the total spent by the research ecotourism operation is equivalent to the monthly wage of 520 people. This is primarily due to the policy of renting accommodation provided by local landowners in order to house individuals. The research ecotourism operation is also dependent upon local suppliers of non-food items, primarily related to the operation and maintenance of dive boats, which are supplied by a village co-operative shop.

These practices have wider implications in terms of the distribution of economic benefits within and between local communities. In the case of the dive ecotourism operation, the reliance upon food imported from outside the local area means that financial benefits are essentially limited to the 22 local staff who are employed by the ecotour operator. However, in the case of the research ecotourism opera-

tion, in addition to the direct benefits experienced by employees, a large number of local individuals also benefit indirectly through use of the co-operative, whose participants will receive some additional income when profits from the co-operative are returned to its members. Furthermore, the purchasing policies of the research ecotourism operation ensure that economic benefits reach both ethnic groups in the local community. The landowners supplying accommodation are all members of the majority Wakatobi ethnic group, whilst the minority Bajau are the people from whom fresh fish are purchased on a daily basis.

However, there are certain constraints and potential problems associated with the incorporation of local communities into the economic activities of ecotourist operators. It is inevitable that the communities in close proximity to the ecotour operator will experience greater opportunities to realise economic benefits to the detriment of more distant communities. This may generate resentment against both the ecotour operator and those communities enjoying a greater share of the economic benefits. Furthermore, during the course of this study, a limit on local purchases had to be imposed in order to avoid excessive use of local markets and a concurrent inflation in prices or shortage of supplies. There is also a potential danger in an excessive reliance of the local communities on the research ecotourism operator as a source of income, as this activity only operates for a limited period of time each year. This could lead to overcapacity in terms of producing and supplying goods when not required by the ecotour operator, whilst in the longer term it is possible that the neglect of other income-generating activities could lead to a loss of skills and knowledge, particularly in the farming sector. An additional problem relates to the rental of locally owned accommodation, which has resulted in a sharp increase in building activity as the numbers of 'research ecotourists' have increased in recent years. In legal terms, the Department of Forestry, as the lead authority in Indonesia's national parks, is charged with ensuring that building activity takes place within designated zones, whilst the Department of Tourism is responsible for ensuring that buildings conform to appropriate designs. However, both of these departments are severely restricted in terms of budgetary allowances at the national and provincial level, and as a result there is no effective monitoring or control of building activity within the marine park. Consequently, the increase in building activity can have environmental implications with regard to wastewater disposal and can result in a considerable degree

of visual intrusion. Finally, questions need to be raised about the financial stability of ecotourism in the longer term, which will depend upon a range of economic, social and political factors at the international level as well as the fortunes of the individual ecotour operator. If visitor numbers decline, it is likely that the financial losses experienced amongst local individuals and communities will cause disaffection and possible opposition to any alternative proposals to develop ecotourism in the area, with potential consequences for the longer term viability of the marine park.

Socio-Cultural Impacts

When evaluating the impact of ecotourist operations on the social and cultural fabric of local communities, a distinction can be drawn between direct and indirect effects. The former refers to the consequences of interaction between visitors, local communities and the ecotour operator itself with regard to the maintenance or otherwise of local institutions, traditions and values. The latter refers to the image of the local community projected by the advertisements of the ecotour operator. The way in which ecotour operators portray local people will influence the expectations of visitors and thereby affect the nature of subsequent social interaction with local communities.

Direct Impacts

The direct socio-cultural impacts of ecotourism are largely dependent upon two factors: the willingness of local communities to accommodate the presence of foreign visitors and the nature of informal social contact between the two groups. The first factor may be considerably influenced by the extent to which local communities benefit in economic terms from the presence of ecotourists, a relationship that has been explained elsewhere through the use of social exchange theory (Ap 1992). The second factor is reflected in local residents' attitudes towards ecotourism. In the present context these attitudes were found to be markedly different for the two types of tour operations. Both factors were addressed through discussions with individuals living in close proximity to the ecotour operations and with the operators themselves. With regards to the dive ecotourism organisation, visitors are offered the opportunity to undertake small organ-

ised group tours of the nearest Bajau fishing village and observe activities promoted as traditional sarong and boat manufacturing. Residents did not perceive these tours as offering a regular source of income through the sale of handicrafts or food produce because the tours occurred too infrequently and without prior notice. Whilst the operator does purchase occasional supplies of fish from the Bajau settlement, again these were seen to be too infrequent to present a reliable or significant source of income to individuals. With regards to the employment of residents in the dive ecotourism operation, research demonstrated that jobs in maintenance and catering available to local residents were taken almost exclusively by individuals from the mainstream Wakatobi ethnic group and not from the Bajau group. As discussed below, the nature of these types of employment may reinforce any existing stereotyped images of both visitor and local resident, with little opportunity for informal exchange and interaction.

It can therefore be concluded that in the case of the dive ecotourism operation, the potential for mutually beneficial social interaction between visitors and local communities in Tomia and the Bajau in particular will be extremely limited. Taken alongside the restricted range of economic benefits outlined above, it is perhaps to be expected that attitudes towards ecotourism held by local residents may be characterised by apathy or negativity. Such attitudes were found in the Bajau fishing community in connection with the designation of a no-fishing zone around the dive ecotour resort. The no-fishing zone was created in 1995, predating the establishment of the marine national park itself. This restriction was imposed in order to safeguard the reef adjacent to the dive resort from the perceived threat associated with local fishing activity and destructive fishing practices such as cyanide and bomb fishing in particular. Such threats are commonly attributed to nomadic fishing communities such as the Bajau on account of their propensity to venture over large distances in fishing activities and their perceived immunity to the consequences of overfishing and destructive fishing practices (Hopley and Suharsono 2000). Whilst this may have been the case in the past, the 'true' nomadic Bajau are increasingly rare in Indonesia and elsewhere in Southeast Asia, primarily due to direct and indirect state pressure to conform with an image of mainstream modern society (Hope 2002). This process of sedentarisation has resulted in contemporary Bajau settlements such as those visited in the course of this study being built on stilts over reef flats, where individual

houses are connected by a series of raised walkways and bridges. It is therefore questionable as to whether the exclusion of all artisanal fishing activity regardless of the technique utilised can be justified in terms of marine resource conservation alone. The interests of the dive ecotourism operator in terms of guaranteeing visitors sole access to 'undisturbed' coral reefs appear to be paramount in this case, to the detriment of the local fishing economy and the relations between residents and the ecotour operator. The legal implications of this are addressed later in this paper, but it is important to note at this stage that the designation and subsequent strict enforcement of the no-fishing zone without local consultation provides a basis for ongoing resentment towards the existence and activities of the dive ecotourism operation within the local community.

The extent of social contact between visitors and local residents is therefore considerably restricted because most overseas visitors encounter local people working primarily in maintenance and cleaning roles for the dive ecotour operator. Those tourists who do visit local villages do so in a highly formalised and structured manner. As highlighted by Teye *et al.* (2002), it is important to recognise that employment within tourism should not be assumed to generate support for the industry, as individuals working for a tourist operator may well hold negative attitudes as a result of their experiences. Whilst there was no direct evidence for this in the current study, it does appear that employees' attitudes may contribute to the negative opinions held by local people.

Conversely, the extent to which positive socio-cultural impacts can be generated through economic benefits and maximising the opportunity for informal contact between visitors and local communities is reflected in the opinions held by local people in contact with the research ecotourism operation. Surveys of local residents in both 2000 and 2001 indicated a near unanimous level of support for the continued operation and expansion of the research ecotourism operation, with respondents referring to the range of economic as well as socio-cultural benefits associated with its existence. As stated earlier, there is opportunity for both ethnic groups to benefit in economic terms from the activities of this ecotour operator through formal means such as providing food, labour and accommodation. During 2001, it was noted that additional economic benefits are increasingly being realised on an informal basis by members of the Wakatobi ethnic group through providing tours of the island of Kaledupa and the Bajau ethnic group through canoe trips around the village of Sampela.

Both of these are offered to overseas visitors as a weekend recreational pursuit and involve a wider cross-section of the local communities, with young people and children often being at the forefront of these activities. Thus, the local community has welcomed developments that facilitate the wider distribution of economic benefits. Such developments are in accordance with economic principles of ecotourism, as they will lessen the possibility that benefits are restricted to a few individuals in positions of power within local communities.

In addition to these formal and informal means of generating income, local residents stressed the impact of the research ecotourism operation on local culture and society as a reason for their continued support. Perhaps the most significant factor in this sense relates to the accommodation policy pursued by the research ecotourism operator. The majority of visitors are housed on the island of Hoga in accommodation built specifically for this purpose by local residents who often live nearby and undertake daily maintenance of the property. In addition, a number of visitors are housed in rooms rented from local families. As visitors stay for a minimum period of two weeks up to a maximum of eight weeks, this provides ample opportunity for informal social contact and interaction with the families of hosts or landlords. Personal observations recorded numerous instances of visitors conversing with local individuals, playing with children or engaging in sporting activities. The latter was particularly evident during national holidays such as Independence Day, a highlight of which was organised competitions between local teams and those composed of visitors.

It is also important to note the significance of the research activities undertaken by the visitors to the research ecotourism operation, the vast majority of whom are university students. Many of these projects involve working with fishermen, women and children from both ethnic groups as part of research programmes. The projects often relate to socio-economic aspects of local communities as well as their relationship with the national park authorities and the park's impact upon local livelihoods. Consequently, visitors spend a considerable amount of time interviewing individuals in their homes and other informal settings as well as accompanying fishermen during their daily activities, all of which will serve to acculturate the visitors to the local environment and, it may be assumed, increase local communities' acceptance of them. Some of these activities are particularly oriented towards community development. They include the

provision of English language classes for adults in their homes and for children in schools, the implementation of a census for villages and, in Sampela, the provision of birth control services for those women wishing to participate. These programmes are recognised as valuable by local communities and serve to generate support for this type of ecotourism activity. Local residents expressed an awareness that their villages and, particularly in the case of the Bajau, their culture represent a significant attraction for overseas visitors staying and working in the settlement.

Taking these opinions into account, it can be seen that this form of ecotourism is potentially beneficial in terms of social capital and community development in a number of ways. One area of concern may be expressed with regard to adverse socio-cultural impacts of Western visitors, which have been noted elsewhere as particularly significant in remote or rural communities in developing countries. This may take place gradually through a process of commodification or loss of cultural authenticity (Sharpley 1999) or as a result of cultural and value differences generating conflict and hostility (Reisinger 1994). Such processes have not been noted in the current case study, however. This could reflect the fact that the current scale of research ecotourism activity is relatively small, and total numbers of visitors are limited. Furthermore, surveys of visitors have indicated a high level of awareness of potential adverse cultural impacts and a willingness to conform to local societal norms and values (Galley and Clifton, forthcoming). Although the situation may change in the future, there is little indication that adverse socio-cultural impacts have been taking place thus far.

Comparison of these two examples of ecotourism therefore highlights the positive contribution which research ecotourism can make to local communities. In particular, close informal interaction can raise local communities' awareness of the distinctive nature of their values and customs in comparison to those of foreign visitors. Research ecotourism can also add to the social capital of the community through improving their knowledge of the natural environment and their expertise in foreign languages. In contrast, the limited potential for contact between local individuals and visitors in the dive ecotourism operation, in combination with the relatively limited economic benefits available to local communities, has generated an atmosphere of apathy or distrust which needs to be addressed.

Indirect Impacts

These findings are borne out by an analysis of publicity material available on the websites of the two ecotour operators, which is the main source of advertising for these companies. The analysis compared the language and images used to describe the local community and visitors' interactions with local individuals. This is important because these projections of the local community influence visitors' pre-conceived notions of the local community, thereby either reinforcing or combating stereotyped images of indigenous communities. Furthermore, they influence visitor behaviour by implying that visitors may act as passive consumers of local culture, or on the other hand, they may emphasise that visitors are guests of the local community and are expected to act accordingly.

A distinct difference is evident in the portrayal of the local communities and visitor behaviour in the websites of the respective ecotour operators. The dive ecotourism website utilises phrases such as *'experience the culture!'*, *'the natives are friendly – no-one is begging or pestering visitors'* and *'it is possible you will be the first tourist some villagers have ever seen'*, which are supplemented with images of local individuals in traditional dress performing a ritual dance. The research ecotourism website, by contrast, uses images of local individuals alongside their houses alongside quotes such as *'you will be working, travelling and socialising with ordinary Indonesians'*, *'[the people are] very welcoming, friendly and interested in you'* and *'you will need to adapt to the social and cultural standards'*. It is evident that visitors to the dive ecotourism operation may expect to receive samples of local culture if they so require, thereby demoting the local community to a subservient position and implying that local people will be in awe of foreign visitors to some extent. This perspective, which could be characterised as a neo-colonial attitude toward indigenous culture, stands in stark contrast to the ideas projected by the research ecotourism publicity, which stresses the need for the visitor to adapt to local norms and values and presents images assumed to represent daily life amongst everyday Indonesians. Although the research ecotourism depiction is simplistic, with little attention to the widespread problems of poverty, education and healthcare within this region of Indonesia, it is clearly far more congruent with ecotourism principles in terms of respecting local cultural values and ensuring local people are not disadvantaged in any way as a result of ecotourism activities.

Environmental Impacts

The third area of analysis of ecotourism impacts in the Wakatobi is the management of the marine national park. As stated earlier, many protected areas in developing countries are beset by financial problems that inhibit the implementation of management plans designed to ensure conservation and sustainable use of resources within the protected area. However, the development of ecotourism within national parks such as the Wakatobi requires a high degree of financial investment and commitment to the region on behalf of the ecotour operators. For example, the construction of an airstrip financed by the dive ecotourism operator. In the face of management uncertainty, ecotour operators will inevitably seek to ensure that the quality of their principal environmental assets is maintained in order to secure their investment in ecotourism. This is manifest in several areas of activity within the Wakatobi and has considerable implications for the local community's ability to become empowered in decision-making activities affecting their local environment.

In order to secure their investment in the Wakatobi, both ecotour operators have established organisations that are partly or wholly financed by the ecotourism operation. The ecotour operators justify the existence of these organisations, or 'trust funds', by explaining the need to expand their areas of activity in order to ensure the continued conservation of the wildlife in the marine park. They refer to the inability of the park authority to undertake such activities. These activities include providing educational material to local communities highlighting the importance of coral reefs as fish spawning grounds and training local people to monitor reef quality and disseminate information to other members of the community. Given the availability of qualified staff and the reliance of both ecotourism operations on overseas visitors, these activities would seem to represent a logical step in facilitating community involvement in environmental management.

However, the trust funds are also active in other areas. In terms of enforcement, the trust funds are increasingly important in supplying fuel to park rangers in order to enable them to mount patrols. As the proportion of funding supplied by the ecotour operators increases, the patrols will be under more pressure to strictly enforce rules applying to fishing activity in the vicinity of the ecotour resorts in order to ensure the resorts attract overseas visitors. This is illustrated in the case of the dive ecotourism operation, which has built a base specifi-

cally for the park rangers in close proximity to the resort. It is possible that local communities affected by the more rigorous application of park rules could become alienated from the principles of marine conservation and less likely to participate or collaborate with park management in the future. Furthermore, the question is raised as to whether the activities of small-scale fishermen are the main threat facing the biodiversity of the park, which also experiences incursions of trawlers and larger fishing vessels based outside the marine park. These cause considerable damage both to reefs and to fish stocks.

A final area of concern relates to the establishment of no-fishing zones that are now present over the fringing reefs adjacent to both ecotour resorts. These zones, as noted earlier, generate negative opinions in the case of the dive ecotourism resort. However, opposition to the zones has not yet become apparent with regard to the research ecotourism operation, primarily because the operator adopted a process of ongoing consultation and dialogue with local communities concerning the nature of enforceable restrictions. Aside from effects on the local fishing community near to the dive ecotourism resort, there are wider management implications which need to be addressed. The designation of no-fishing zones by ecotour operators amounts to an assumption of the role of the Ministry of Forestry, which under national law is responsible for allocating resource use within protected areas. It is therefore apparent that the authority of the legally empowered institution in this area is being undermined to some extent by foreign-owned organisations that are not accountable to local communities. Furthermore, no-fishing zones should theoretically be imposed where intensive fish spawning takes place in order to protect stocks (McClanahan and Kaunda-Arara 1996). It is therefore quite likely that the current location of these no-fishing zones reflects the interests of ecotourism more than those of marine environmental management. Finally, the exclusion of fishermen from one area often results in increased fishing effort being directed elsewhere, which could cause a decline in fish stocks in other locations. The provision of alternative income-generating activities such as seaweed farming or fish farming would help alleviate this situation. However, given the lack of funds available for management, it is likely that the responsibility for this would fall to the ecotour operator, again raising the question as to whether such duties should remain with the ecotourism industry.

Given the current political and financial situation of Indonesia, it is unlikely that funding of protected areas will change significantly in

the near future. Meanwhile, the growth in the ecotourism market is likely to strengthen the ability of ecotour operators to influence park management in the ways described above. Park managers may avoid implementing decisions opposed by the ecotour operators. This could therefore lead to a situation where management decisions increasingly reflect the interests of ecotourism rather than local communities, leading to the disempowerment of local communities in terms of their ability to contribute to the management of protected areas.

Conclusions

This case study has utilised a development-oriented perspective to analyse the impacts of two forms of ecotourism operating within a newly established marine national park in Indonesia. It has demonstrated that despite the similar labelling of these two activities, they are associated with contrasting economic and social impacts with regard to local communities. These impacts reflect the philosophy of the ecotour operator as well as the nature of the ecotourism activity. They underline the need for a critical analysis of differing forms of ecotourism in order to aid planning of those activities that can most benefit local communities. It is apparent that activities classified as 'research ecotourism' in this study offer considerable potential and could well serve as a model for future developments, particularly in remote locations suited to the needs of this sector of the market. The present study has also highlighted that economic benefits can be equitably distributed amongst local communities with relative ease, but that increased integration between the local economy and the ecotourism industry can lead to a range of potential problems. The study has also demonstrated the value of assessing how ecotour operators present local communities to their potential market, as this will reflect the emphasis placed by the ecotour operator on generating significant lasting financial benefits within local communities. Because of the difficulties experienced by government authorities responsible for the management of Indonesia's protected areas, attention has also been drawn to the increasing influence of ecotourist operators in this respect and its significance with regard to the future role of local communities. These findings highlight the need for planners and managers to ensure an appropriate mix of ecotourism activities is promoted within protected areas in order to generate benefits to local communities whilst maintaining a range of attrac-

tions to the visitor market. It also underlines the need for a code of conduct to be developed which will ensure the ecotourism industry can be held accountable for its actions. This is particularly important in light of the increasing attention paid in the literature to principles of co-management of protected areas, which are intended to address the issue of lack of managerial capacity through a sharing of responsibility between managers and local communities (Christie and White 1997). The influence of ecotour operators on park management merits attention in this debate in order to design appropriate models that facilitate the distribution of management responsibilities between park authorities, local communities and ecotourist organisations.

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