

## Achieving Sustainable Community-Based Tourism in Rural Myanmar: The Case of River Ayeyarwaddy Dolphin Tourism

*John Walsh*<sup>\*</sup>  
*Khin Kyi Zin*<sup>\*\*</sup>

**Abstract:** *Community-based tourism is recognised as being a potentially important means by which economic development can take place in rural Myanmar. One particular project in this vein is the dolphin-based tourism organized at six villages on the River Ayeyarwaddy in the northern Mandalay division. Qualitative research featuring personal interviewing of international tourists and service providers in the region indicated the potential for this project but also the formidable problems of poor connectivity and service provision that will need to be overcome to achieve success. The threats to the dolphins concerned and the indifference with which they are treated by many community members suggest real threats to the sustainability of the project as a whole.*

**Keywords:** community-based tourism; dolphin tourism; Myanmar; wildlife-based tourism

**JEL Classification:**

### Introduction

Myanmar's tourism industry has increased greatly in size and value since the return to democratic rule in 2011, with many new flights into the international airports of Yangon and Mandalay, with a smaller number to the capital Nay Pyi Taw's airport, and numerous hotel construction projects breaking ground. Although the country has a number of tourist attractions, many of these are not very well known to visitors and the industry as a whole suffers considerably from lack of infrastructure and human resources lacking in education and international experience. The outrage of the forced removal of the Rohingya people from Rakhine State has, in addition, damaged the country's reputation and negatively affected tourist arrivals. To try to

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\* John Walsh is at RMIT International University Hanoi, Hanoi VIETNAM.

\*\* Khin Kyi Zin is at School of Management, Shinawatra University.

address at least some of these issues, the Ministry of Hotels and Tourism issued the Myanmar Tourism Master Plan 2013-20, which outlined a comprehensive framework for improving the industry in every aspect (Ministry of Hotels and Tourism, 2013). Within this plan, emphasis has been placed on the development of community-based tourism (CBT) not only for its own sake but to enhance governance of the country in often remote areas and enhancing resilience in those communities against the external threats of natural disasters and global climate change. Specific locations were identified for CBT enhancement and evaluation and these were: Indawgyi Lake in Kachin State; Thandaunggyi in Kayin State; Pa-O Self-Administered Zone in Shan State; Myaing Township in Magwe Region and the Ayeyarwaddy (Irrawaddy) Dolphin Conservation Centre based in six villages in the Mandalay Region and Kyaukmyaung in Sagaing Region. These areas were selected on the basis of geographical diversity and with an eye to more equitable development priorities in those regions which had strongly supported the incoming National League for Democracy (NLD). In addition, they were selected so as to meet the priority areas identified in the Master Plan as cultural and creative tourism, nature-based activities, adventure and experiential tourism, cruise tourism and yachting and MICE tourism (*ibid.*:30). Tourism in Myanmar has been increasing rapidly in recent years after the opening of the country following the 2011 election and the opening of various air routes, including the presence of budget air carriers to link the country with Thailand, Singapore, China and other countries. The value of tourism reached US\$584,000 million in 2016, when international arrivals reached 2.9 million, which was a decrease from the high of 4.7 million the previous year, which indicates the volatility of the sector (CEIC, n.d.). Motivations for tourists include the novelty of visiting a place it was not easily possible to visit before, historical and religious sites and the natural world.

Commercial CBT is quite a new concept for Myanmar and few people are aware of its meaning and appropriate practice. In the case of the Ayeyarwaddy Dolphin Conservation Centre, the proposition put to tourists is to view the dolphins first-hand and up-close and watch their interactions with the male fishermen in the river, in what is an activity that is gender specific. However, reaching the area is quite difficult and organizing the various other activities (e.g. home stay, catering) is complex and expensive – the dolphin excursion is several times more expensive than any other tour locally available. This paper reports on qualitative research conducted in the Ayeyarwaddy region aiming to determine the actual conditions involving the dolphin tourism sector and ancillary services and identify means by which this might be improved. In doing so, the paper considers the nature of CBT in the context of Myanmar and the extent to which it might be brought into being using the currently understood model. In particular, it deals with dolphin tourism, which is defined here as a form of tourism which is centred on the attempt to view and interact with dolphins in their natural environment. There are likely to be other elements involved in dolphin tourism, such as local homestays and observing local traditions and practices. As a new

form of tourism, dolphin tourism brings into contact with national and international tourist local people and communities which may have had only limited experience with the outside world previously. There is likely to be a service gap, therefore, between what is expected and what can be provided and it is possible that the local environment might be vulnerable to damage in remote areas where there may be little accountability for commercial tourist organizations.

The paper proceeds with a literature review of relevant concepts with the purpose of highlighting the gaps in existing knowledge that might be addressed by the qualitative research approach described in the third section. This is then followed by a description of findings and then a discussion of the meaning of those findings in the light of the attempt to contribute to academic knowledge. A conclusion completes the paper.

## **Literature Review**

### *Community-Based Tourism*

CBT is a comparatively recent phenomenon within the overall tourism sector. It fulfils three specific criteria: "... it should have the support and participation of local people; as much of its economic benefit as possible should go to people living at or near to the destination; and the act of tourism must protect local people's cultural identity and natural environment (Russell, 2000)." The meaning and practical implementation of many of these terms is contested, not least because of epistemological differences relating to the relationship between people and environment are evident in different parts of the world. Nevertheless, participation is taken here as the mechanism by which people may participate in activities that might lead to improvements in their quality of life as defined by the specific field of action concerned (Zakus & Lysack, 1998).

This form of participation may have additional benefits, such as the more equitable distribution of benefits and costs of tourist development (Arnstein, 1969) and the transformation of the learning process which will lead to community self-development (Connell, 1997). In the viewpoint of Okazaki (2008), these approaches are all moot because the possible value of CBT cannot be properly assessed without making a comprehensive and accurate assessment of the current level of community preparedness before initiatives are introduced. Blackstock (2005) further argues that the common conception of the CBT model is naïve because it tends to ignore the structural forces that inhibit meaningful social change and the tendency to treat all members of the local community as homogenous actors when, in reality, they should be recognised as heterogeneous in nature and potentially in conflict with each other or, at least, with contrasting motivations (ibid.). This work builds upon an existing

stream of thought (e.g. Wearing & McDonald, 2002), which introduces Foucauldian concepts of power and knowledge into the understanding of how different community members relate to each other.

It would be wrong to imagine that this means that there is a single type of community involvement and attendant forms of organization, since there is considerable diversity in the possible arrangements involving different community, governmental and private sector agencies in the way that local tourist activities are managed (Zapata et al., 2011). In some cases, at least, there is reason to believe that CBT can contribute to poverty alleviation in addition to other forms of community development. Institutional arrangements and successful partnerships as important components of success in this regard (Harrison & Schipani, 2007; Hiwasaki, 2006). It is important for generated income to be retained in the local economy so that linkages may be formed (Lapeyre, 2010), although issues of scale and seasonality mitigate widespread implementation and distribution of benefits (Trejos & Chiang, 2009).

In short, CBT is believed to offer some benefits in terms of community development and poverty alleviation but this is far from guaranteed to be successful and, even when it is, there are likely to be location-specific and time-aspected factors that should be taken into account. The extent to which individual instances of CBT follow circumstances which can be generalised or which must be treated as unique is not clear. More recent research has addressed issues such as the complexity of the term 'community' and the difficulties that term entails when communities in real life may be fragmentary or divided (Iorio & Casale, 2014) and the sometimes contradictory nature of stakeholder responses to it (Tolkach & King, 2015). It has also been found that for success to be achieved, in addition to the rational factors that might be predicted, there is an important role for luck (Kontogeorgopoulos, Churyen & Duangsaeng, 2014). The focus increasingly has been on the location-specific factors that might have an impact on the CBT model in actual circumstances. No canonical answers have been found to date for the determination of success.

### *Wildlife Tourism*

Wildlife tourism can take a wide range of different models and approaches, some of which are more desirable than others. For example, consumption of endangered wild animals in whole or in part is always likely to be unsustainable and undesirable (e.g. Drury, 2011). However, there are many more ways in which wildlife phenomena can be incorporated into tourism on a more sustainable basis. These include conversion of natural habitats into managed habitats, remote or virtual viewing, sustainable harvesting of consumable products and expansion of knowledge-based tourism products. The benefits that can be derived include direct economic stimulus and job creation and, also, awareness of conservation issues and, possibly, mobilisation of the political

will to become involved with conservation when the direct effects have become evident (Wilson & Tisdell, 2003). There are other issues that might be manifested as a result of the development of this form of tourism, such as ambiguities over land use and land ownership which previously might be considered dormant issues (Sindiga, 1995).

There are various elements of the relationship between people and the environment in which they live that become evident through highlighting the importance of wildlife in that environment. This does not always show people in a good light. For example, instances of firefly-based tourism in Thailand saw benefits kept by tour agencies and not shared sufficiently with local communities where the insects had their habitats and the people were inconvenienced by noise at night time. They responded by destroying the firefly habitat (Cohen, 2009). There is a need, therefore, to incorporate appropriate features of CBT into wildlife-based tourism.

### *On Dolphins*

Around the world, there are 44 different species of dolphin, of which 39 are marine animals and five are river dolphins. The river dolphins are the boto of the River Amazon, the baiji or Chinese river dolphin (functionally extinct), the River Ganges dolphin, the La Plata dolphin and the River Indus dolphin (Dolphins-World, 2013). The Ayeyarwaddy dolphin, *Orcaella brevirostris*, is considered to be a marine dolphin and is found in coastal areas of South and Southeast Asia as well as the Rivers Mekong and Mahakam in Indonesian Borneo (WWF, 2018). These dolphins have bulging foreheads, short beaks and 12-19 teeth on each side of both jaws (ibid.). A recent census shows that there are 92 known individuals in the stretch of the River Mekong through both Cambodia and Lao PDR where the dolphins reside. Conservation efforts have ensured that this number has increased from 80 two years ago (WWF (Cambodia), 2018). Both Khmer and Lao people are said to consider the dolphins to be sacred. There are two sites where they may be viewed: Chiteal pool on the border between Cambodia and Lao PDR and Kampi pool in Cambodia's Kratie province (Beasley et al., 2009). There is also a small and critically endangered pod in Songkhla Lake in Thailand, where the animals are being killed by fishing nets (Pakkawan, 2018).

River dolphins generally eat crabs, fish and small turtles. They tend to suffer from diminishing eyesight because of the presence of particles in the water. They are vulnerable to environmental degradation, pollution and fishing or hunting and, in the case of the boto at least, from the spread of dolphin-feeding tourism because the botos will push, ram and bite each other in order to be fed first (Alves et al., 2011).

The rise in dolphin and whale-watching around the world reflects to some extent changing attitudes towards animals and their welfare among many countries.

Although Japan persists with catching whales under the guise of scientific research, other countries such as Taiwan have abandoned the practice and embraced a new approach to its natural environment (Chen, 2011). However, such activities are not risk-free as some research indicates that it can cause changes in behaviour by the animals (Constantine, Brunton & Dennis, 2004) and may lead eventually to fewer numbers being available (Bejdar et al., 2006).

Dolphins are portrayed in different ways to tourists to enhance the desirability of tourism. It has been argued that, in New Zealand, dolphins are presented somewhat contradictorily as being simultaneously 'sexy beasts' and 'devoted mums (Besio, Johnston & Longhurst, 2008)'. Such personifications add to the long and complex relationship between humans and dolphins as described in various forms of literature and other media. Fraser et al. (2006) describe four variations of the basic relationship: dolphin as peer to humans with equal intelligence; dolphin as representation of ideal freedom; dolphin as innocent creature needing protection and dolphin as superior and more intelligent creature (ibid.). Many cultures have myths about dolphins, often featuring a dolphin rescuing stranded people and carrying them to safety on their backs. In archaic Greek poetry, dolphins transporting a body were obvious indicators of divine intervention. It was believed that when the body of the deceased poet Hesiod was taken away by dolphins, this was taken to be evidence of the displeasure of the gods at those who had killed him (Koning, 2010:135).

It is arguable that no other real life animal, certainly no marine animal, has attracted the freight of meaning that dolphins have. Yet dolphins in reality are more complex in their behaviour, since each has a unique whistle that acts as a personal name and which can be remembered by other dolphins over many years. Yet there are also examples having been witnessed of dolphins committing acts of sexual harassment and even murder (Nicholls, 2016). When shown themselves in the mirror, dolphins can exhibit disturbingly human responses: "... in calm silence, one of them would hang vertically within the narrow sliver of the mirror and repeatedly rock his body from side to side. Or he would move his head in wide arcs and circular movements close to the mirror, repeatedly and exaggerating nodding from left to right or up and down (Reiss, 2011:157)." One of the research questions explored in this project is the nature of the relationship between Myanmar people and the Ayeyarwaddy dolphins and the extent, if any, to which this relationship resembles those found in other parts of the world.

## **Methodology**

This paper reports on qualitative research conducted to try to understand the opinions of tourists and service providers related to a group of tourists on one of the trips to view the dolphins and used semi-structured question agendas to help shape

conversations with the tourists and service providers at convenient moments. The semi-structured agenda had been created beforehand based on consultation with existing literature on CBT and wildlife-related tourism, while taking into account location-specific factors. Interviews were recorded where possible or else extensive note-taking was done and then transcribed as soon thereafter as possible. Interviews with tourists were conducted in English and interviews with service providers were conducted in Myanmar. Research was conducted on several occasions during 2018. Approximately 80 tourists were interviewed, some at more length than others and this represented the total population of tourists who were involved on the occasions when surveying took place. Some twenty service providers were also interviewed.

Researchers were encouraged to record any thoughts or observations they might have during the process in research journals. At some stages, ethnographic-style observation was also possible. The contents of the research journal, the interview transcripts and the relevant secondary literature were entered into a database and these contents were interrogated according to a recognised form of content analysis.

The tourists sampled were part of a single group and so there is a possible limitation of homogeneity within the research sample. There may also have been some language issues as many people involved were speaking English not as their first language.

## **Findings**

### *Tourism Organization*

The dolphin tourism activity in Myanmar is managed jointly by the Department of Fisheries and the Wildlife Conservation Society, which have promoted CBT in the Ayeyarwaddy Dolphin Protected Area (ADPA) through observation of the dolphin fishing cooperation, local culture and other natural phenomena, such as observing migratory water birds. In addition, tours to the ADPA also incorporate visiting cottage industry handicrafts, local festivals and observing agricultural practices. The tour itinerary for international tourists involved a four day visit, involving flying first to Yangon, then to Mandalay and transfer to Shamemaka town (a two-hour drive) followed by a one-hour boat trip to the actual villages involved. They return to Mandalay for the night and then there is a full-day of sightseeing in that city and one morning of sightseeing in Yangon before leaving the country. The cost of this package ranges from US\$761 per person for a six person group up to US\$1040 per person for a group of two people.

For the purposes of comparison, a description of the dolphin tourism programme provided in Cambodia is now offered. This is based in the province of Kratie and the specific site is Kampi village through which the River Mekong passes. The dol-

phin-viewing portion of this tour is similar to the structure of the tour in Kratie. Tourists are transferred by remok (a local version of the tuk tuk) or motor bike to the village of Kampi. Along the way, they have the chance to sample the local delicacy of krolan, which is sticky rice packed in bamboo tubes and eaten with nhem, which is pickled raw fish kept in banana leaves. Unlike the Ayeyarwaddy experience, viewing is guaranteed and the boat will bring the tourists very close to where the dolphins happen to be swimming. There is no cooperative fishing here.

It is clear that these programmes do not fully match the criteria for CBT outlined previously. In particular, more efforts could be made to ensure that more money remains in the areas and that local people and communities could be more fully involved in the activities scheduled. However, the potential service providers are not currently able to provide services to the level of quality required. For example, it was judged that tourists would not be satisfied with the type of catering currently available in local houses and the poor state of transportation infrastructure meant that no local people had vehicles that could be used to meet the stated schedule while providing an appropriate amount of comfort. There is, therefore, a need to develop service provision for tourism at all levels, including production of higher value and more attractive handicrafts, locally produced snacks and beverages of an acceptable level of quality, hygiene and safety and home stay facilities. It seems likely that some external support, whether in the private or public sectors, will be needed to help to organize and develop the local people and services. More reliable car rental services would facilitate travellers willing to move about on their own. However, it is also important that the APDA is not over-developed or made so popular that the sheer weight of traffic places unsupportable strain on the system as a whole.

In recent years, the penetration of mobile telephones and the internet throughout the country has become extremely high. Research (Khaing & Walsh, 2018) has shown that people in general are using these tools in quite basic ways to keep in touch with family members and friends. However, there is, of course, considerable scope to use these means so that community members can educate themselves as to how to improve the services they might provide, the levels of quality that they should provide and the opportunities that might emerge from the growing tourism industry.

The tourists themselves were reasonably satisfied with the arrangements for dolphin viewing and were appreciative of the fact that interactions with living creatures in the wild cannot be fully predicted. They were generally aware of the fact that they would be considered to be among the more sophisticated groups of tourists and had no doubts about tourists with less experience might be more boisterous in their interactions and might, unwittingly, destroy the tourism opportunity for everybody. Tourists also were concerned about the length of the journey involved and the quality of the food and accommodation provided, which were both thought to be at the low end of acceptable. While they understood the issues involved, they nevertheless considered it an area where improvements would be most welcome.



### *Relationships with the Dolphins*

According to villagers, the dolphins may still be found in many other villages in addition to those identified by the CBT project. It was claimed that there were still 60 other villages where dolphins may be spotted but there is no evidence to support this claim and the villages mentioned are quite remote and difficult to access.

It is evident that the local villagers form powerful emotional bonds with the dolphins, in both positive and negative manners. The distinction between positive and negative sentiments among villagers was entirely dependent upon gender and upon the roles that people are expected to play in society and the household dependent upon their gender. For men, the relationship was very warm. The dolphins are considered to be partners in fishing and active participants in doing so, not just lucky omens or luck-bringers. One respondent noted that when a dolphin died "... it is like my mother passed away."

Fishermen respondents claimed that they had learned methods of communication with the dolphins from their fathers or grandfathers. They tap their paddles on the water or else take a stick to the side of the boat in which they are fishing. The dolphins then swim around the boat and then dive below the surface; the spot where the dolphin's tail finally disappears into the water is the place where the fisherman should cast his net. In return, the dolphin gets to eat any of the fish that fall out of the net while it is being drawn into the boat.

This is very different for the women. For the period when dolphins visit, the women will stay in their homes and not come to the river at all. They consider the dolphins to be a genuine and persistent threat to themselves and to their children. The women believe that if dolphins come to the river bank then they would bring bad luck to the whole village and they would drive them off if they could.

It is not clear why there is such a difference between men and women in this regard, even given the quite well-established knowledge of gender-based labour distinctions in Myanmar society, especially in rural areas. Gender discrimination in Myanmar is a well-known phenomenon (Win & Walsh, 2017) and menstruating women are considered unclean and possible sources of pollution. It might seem rational, especially for men, to keep such women away from the river and the dolphins within it for fear that the dolphins might be negatively affected. That there is some element of control involved in the situation seems to be unavoidable. The tourists interviewed were aware of the some ambivalence on the part of some members of the community with respect to the dolphins but tended not to have the background knowledge necessary for them really to appreciate the situation. There is a possibility here for greater levels of explanation for future groups to be able to appreciate the situation more deeply.

### *Environmental Impact*

It was evident that the dolphins were under threat from increased use of the river. Not only was there the danger of collisions with the greater number of boats passing by but those boats also had a tendency to leak oil into the water, thereby endangering all riverine life. Another form of pollution results from agricultural run-off, since many Myanmar farmers have adopted the habit of using extensive amounts of chemical fertilisers and pesticides. Upstream gold mining might also be having an impact in this case because this activity is not properly regulated. In addition, not all methods of fishing in the Ayeyarwaddy are sustainable, since some people use trawler nets which indiscriminately drag in the catch. Perhaps worse are those fishermen who use car batteries or high-voltage transformers to shock and kill everything within range in the water.

In terms of dolphin tourism, it is clear that much more could be done to increase the experience of interaction with the animals since, although this is thrilling in its own right, it now occurs in something of an information vacuum. The experience could become more immersive – even when the dolphins themselves are not cooperative – if more context were provided and a more appreciative understanding of community life were possible and this might substitute for the presence of the dolphins where necessary. Since some steps are taken to try to ensure that the dolphins are not directly disturbed by the tourism process, it is not thought that a specific ethical focus on the dolphin tourism is required for the foreseeable future. Instead, a utilitarian approach that incorporates welfare of the animals and their habitat will be sufficient (Dobson, 2011).

The crucial issue in organizing a successful and sustainable dolphin tourism in this example of CBT is to ensure a strong relationship between the fishing communities and the dolphins themselves. This is why emphasis has been placed on this relationship in the research reported on in this paper. To a certain extent, this involves fostering such a relationship where it did not exist before and this will only be possible when the community members both feel that they will benefit from the venture as a whole and can point to tangible benefits that have already been received. For success to be achieved, this will need to be an iterative process.

### **Discussion**

To achieve a successful and sustainable CBT project, it is necessary to start somewhere and it can hardly be expected that all stakeholders will be able to perform as they are required to do when the concept is being introduced. However, there is a threshold that must be achieved before success can be expected. This threshold has not yet been met in the case of dolphin-based tourism in the River Ayeyarwaddy. The

poor side of transport infrastructure in the areas poses a particular problem because it makes it much more difficult to make the improvements needed elsewhere to begin the process of upgrading service providers cannot receive training and development and private and public sector representatives have difficulties in obtaining access to perform their functions. There is some scope for innovative approaches to solve this problem but this is not going to suit everybody. The spread of mobile telecommunications and the internet provide a means by which stakeholders might receive information and assistance in upgrading their services but this is unlikely to be a satisfactory method in the absence of face-to-face interactions and, in any case, it will be necessary to introduce some physical goods at various stages. Consequently, implementation of a CBT programme should probably be considered a multi-stage process, depending on the initial conditions to be found at the site where the programme is to be implemented and the conditions of any intervening regions between the site and any more developed urban region. Building good roads might short-circuit this problem and make distant tourism sites just as much candidates for development along CBT lines that those in closer proximity to the urban centre. Even so, more development at the provincial level will be required before tourism development can be conducted on a decentralized basis with the benefits that this can provide (Tosun & Jenkins, 1996). In the case of Myanmar, this is likely to remain problematic for the foreseeable future because of the longstanding resistance to central rule by ethnic minority people in so many different parts of the country. The antagonistic relations caused by the activities of the Myanmar army over the decades are unlikely to be improved significantly in the short term and numerous confidence-building measures will be required, even under the conditions of democratic rule that now prevail.

In a similar way to the Myanmar approach to agriculture in rural areas, tourism resources are most commonly viewed by people as being opportunities for income generation. People are not necessarily uninterested in the concept of sustainable development so much as the pressing need for many in the short term will lead people into a situation resembling the tragedy of the commons. There is not at any step an irrational decision that brings people into this decision but it leads to the inevitable destruction of the resource anyway.

In recent years, in particular, the emphasis in Myanmar concerning the environment has been on damage that might have been done to it and the negative impacts of development upon it (e.g. Myint, 2007). This includes the building of dams and land clearances for the construction of special economic zones, as well as the deleterious impacts of poorly regulated industrial activities such as gold and jade mining (Connette et al., 2016). Given the large numbers of internally displaced people in different parts of the country and the ways in which Rohingya people were driven across the border into Bangladesh, it might appear that Myanmar people are opposed to and by their physical environment. However, research shows that careful management can bring about changes in perception in a positive manner (Allendorf, Aung & Songer, 2012).

The research reported on in this paper indicates somewhat nuanced relationships between the fishing communities and their environment, as manifested by the dolphins. Those men who do the fishing can have formed sophisticated and important relationships with those dolphins who become involved with the cooperative fishing activity. However, the women in those communities fear and reject the dolphins and keep away from them as much as possible. Meanwhile, those other people not involved as fishing families, whether male or female, are indifferent to the presence of the animals and may not even know that they are present. This rather suggests that the relationship people have with the environment is transactional in nature. If this is the case then it may be that people have become alienated from their environment because the history of Myanmar people, whether majority Burman or the minority ethnic groups, is for a close animist-mediated relationship with an environment that is considered to be living and willing and able to interact with human beings. Those people who are Buddhists might be expected to embrace all living creatures because of the workings of karma and reincarnation. However, these relationships seem to have eroded as commodification of the environment has started to take place. Indeed, the apparent indifference of many members of the fishing communities to the dolphins suggests that the entire venture might quite easily be destroyed or rendered unusable. This might occur through simple neglect, which would see individual dolphins die and the group be reduced to such a small size that it cannot remain together. It is also possible that some malicious acts bring about this result so as to facilitate alternative lifestyle opportunities. As mentioned previously, not all stakeholders can be expected to have the same attitude towards an instance of CBT and not every community can be expected to behave in a consistent and unified manner when disruptive activities such as tourism are concerned. Unquantifiable factors should be incorporated into the discussion of potential success that can only be considered 'luck.'

In the Myanmar context, there is an absence of effective local government and oversight of the tourism experience, especially in the relatively remote areas in which dolphin tourism takes place. Consequently, it is inevitable that development of CBT in this respect should be undertaken primarily by the private sector, perhaps with support from civil society as a means of sourcing additional support for local communities and for the dolphins. Although there is a risk that the venture will prove to be unsustainable overall, it is not inevitable that this should be the case. With careful husbanding, the number of dolphins might increase instead of decrease and there are examples of such success from other parts of the world. Best practice from around the world should be incorporated into local practice and tourists themselves encouraged to enter long-term relationships with the CBT project. This will provide a greater likelihood of success for the venture as a whole.

## Conclusion

Wildlife-based tourism offers a potentially important economic activity to Myanmar as it continues to open up to the outside world. This will be particularly true if the tenets of CBT are adopted, so that more of the benefits of tourism will be retained within the communities in which the income is generated. The dolphin-based tourism of the River Ayeyarwaddy offer some hints as to how this might be achieved but, more notably, how many difficulties remain to be overcome. Poor infrastructure and connectivity make remote areas difficult and expensive to reach and this adds considerably to the problems involved with trying to improve service provision. There is also the issue of the transactional nature of the relationship between the people and the dolphins and the sustainability of their existence at all given enhanced methods of fishing that enable short-term gains with little consideration of future needs. It is evident that more research is required both laterally to determine the nature of similar relationships in other communities in the country and longitudinally to monitor how the situation changes, if at all, in the future.

The research is limited in that it relies on a qualitative analysis of a specific project that depends, to some extent, on the time and place in which the sample was drawn. The research must be exploratory in nature because so little is known about this activity and the people involved with it. It may be that future research will qualify or even contradict the findings presented here.

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