Volunteer Tourism supporting Sea Turtle Protection: Insights into the Juara Turtle Project, Malaysia

Daniela Berg, M.Sc.

Institute of Geography | University of Göttingen | Germany | dani-berg89@gmx.de

Dr. Tobias Reeh

Institute of Geography | University of Göttingen | Germany | treeh@gwdg.de

Prof. Dr. Heiko Faust

Institute of Geography | University of Göttingen | Germany | hfaust@gwdg.de

Abstract

This paper aims to evaluate whether volunteer tourism as a sustainable form of tourism can be combined with sea turtle protection. We discuss opportunities and limits of volunteer tourism and give insights into motivations and self-assessments of mostly western volunteers supporting sea turtle protection in Malaysia. Based on a primary qualitative participatory approach the analysis evaluates positive and negative impacts of volunteer tourism along a micro scale case study of the privately run sea turtle conservation organisation in Tioman Island, Malaysia. We show that the organisation depends on volunteer tourism for its successful operation. Volunteers are an important labour force as they help to extend the range of conservation efforts. Further, the involvement and education of volunteers and visitors have immediate positive outcomes for conservation on site, and long-term outcomes in general.

Keywords: Volunteer Tourism; Ecotourism; Sea Turtle Protection; Tioman Island; Malaysia

Volunteer-Tourismus als Unterstützung für den Meeresschildkrötenschutz: Einblicke in das Juara Schildkröten-Projekt, Malaysia

Zusammenfassung

Dieser Aufsatz untersucht den Volunteer-Tourismus als eine nachhaltige Form des Tourismus und geht der Frage nach, ob dieser zur Förderung des Meeresschildkrötenschutzes beitragen kann. Wir diskutieren die Chancen und Grenzen des Volunteer-Tourismus und geben Einblicke in Motive und Selbsteinschätzungen der zumeist westlichen Freiwilligen, die den Meeresschildkrötenschutz in Malaysia unterstützen. Basierend auf einer vorrangig qualitativen partizipativen Fallstudie analysiert dieser Aufsatz positive und negative Auswirkungen des Volunteer-Tourismus in der privat geführten Schutzorganisation für Meeresschildkröten auf der Insel Tioman, Malaysia. Wir zeigen, dass die Organisation für einen erfolgreichen Betrieb auf Volunteer-Tourismus angewiesen ist, denn Freiwillige sind wichtige Arbeitskräfte, um die Schutzbemühungen dauerhaft zu gewährleisten. Es zeigt sich zudem, dass der Einsatz von Freiwilligen und Besuchern nicht nur unmittelbare positive Ergebnisse vor Ort bewirkt, sondern auch langfristige Bewusstseinseffekte im Sinne des Naturschutzes zu erzielen in der Lage ist.

Schlagwörter: Volunteer-Tourismus; Ökotourismus; Meeresschildkrötenschutz; Tioman Insel; Malaysia

1. Introduction

With the continuous growth of the worldwide tourism industry and the touristic saturation of many traditional beach destinations, tourism development has increasingly taken place in tropical coastal areas of developing, semi-peripheral regions. Eco-tourists, backpackers and package tourists alike conquer the last remaining postcard idylls of this planet, which then are confronted with high levels of economic, socio-cultural and environmental change. As such areas often count as biodiverse, fragile ecosystems with a threatened flora and fauna, they are prominent settings for resource use conflicts between tourism stakeholders and conservation advocates. Beaches are increasingly at risk by human-induced and natural processes alike such as erosion, degradation and the global water-level rise. Nonetheless, their use as holiday destinations keeps fuelling the socioeconomic development of many nations. After all, some of these beaches are crucial nesting habitats for some endangered populations of sea turtles that have proven to inherit a great potential for touristic use. They also serve as flagships for the worldwide degradation of marine and coastal ecosystems.

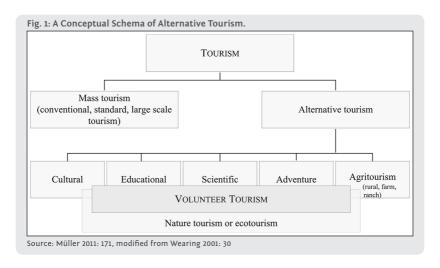
Meanwhile sea turtles have reached a great popularity especially with regard to volunteer tourism projects that are trying to support nature and wildlife conservation issues (Campell/Smith 2006, 2005; Ellis 2003; Bradford 2003; Johnson et al. 1996). "Ellis (2003) suggests that specific attention to people volunteering to work with sea turtles is warranted. In an Internet-based review of volunteer tourism opportunities to work with flora and fauna, Ellis found sea turtles to be the third most popular opportunity (17%), behind marine mammals (29%) and terrestrial fauna (22%). Sea turtles were the most popular single animal group, and the only one for which Ellis developed an animal-specific category" (Campell/Smith 2006: 84). In places where stakeholder groups have managed to coexist together successfully, sea turtles serve as flagships for the great compatibility of tourism with conservation (Bjorndal 1998; Bjorndal et al. 1999; Troëng/Rankin 2005). As a result Ellis (2003) calls for further research. This article is trying to contribute to the call, "and sheds light on the complexity of this particular human–environment relationship" (Campell/Smith 2006: 84).

For this purpose, research was carried out at a privately-run conservation project on Tioman Island, Malaysia. While the country sees high levels of socioeconomic and touristic development, some of its beaches are home to severely threatened sea turtle populations. The case study site is the only beach on Tioman Island where people and sea turtles still coexist. The village has seen increased beachfront development since the late 2000's and conservationists claim that this development makes the beach unsuitable for sea turtle nesting. Disturbances derive from the facilities themselves, but also from the presence of tourists and their partially inappropriate behaviour. It is therefore important to evaluate the chances and

limitations of volunteer tourism to be promoted as a viable alternative to conventional, environmentally less considerate beach tourism. The potential of volunteer tourism to contribute to sea turtle protection at the case study site is examined with regard to general, economic, sociocultural, and ecological aspects of the program. It is further discussed if volunteer tourism can potentially "outcompete" the conventional tourism industry in fragile ecosystems and leave its development redundant.

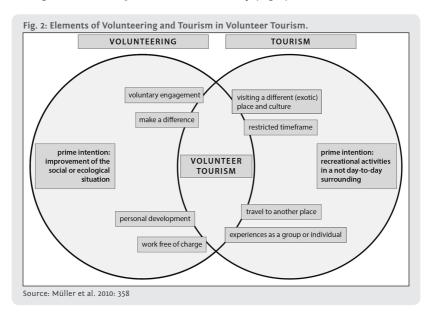
2. Volunteer Tourism - Conceptual Frame

Conventional mass tourism is often criticized as self-centred activity with negative impacts on society and environment. In response or as a "solution" to the conventional tourism industry, the number of individuals seeking alternative tourism experiences has increased discernibly (Wong et al. 2014; Brown/Morrison 2003). One type that may be subsumed under the latter is volunteer tourism (Fig. 1; Barbieri et al. 2012), one of the fastest growing niche tourism markets in the world (Mostafanezhad 2013). Volunteer tourism can be traced back to the missionary movement of the 19th century (Callanan/Thomas 2005), but its current position within the tourism market is disputed. Volunteer tourism may be seen as "expanding tourism niche, an alternative form of tourism, or a sign of major socio-cultural change" (Wearing/McGehee 2013: 120). It may present "merely another tourism niche, another minor blip on the tourism radar screen; [...] an emerging, more sustainable form of tourism; or [...] the potential for a major paradigm shift as a completely decommodified form of tourism" (Wearing/McGehee 2013: 127). Many authors regard volunteer tourism as a form of alternative tourism (Halpenny/Caissie 2003; Lyons/Wearing 2008; McGehee 2002; Singh 2002; Uriely/Reichel/Ron 2003), others see it as an extension of ecotourism (Gray/Campbell 2007; Wearing/Neil 1997). Still others use labels such as new moral, pro poor, social, cultural, charity, ethical, responsible, and goodwill tourism or serious leisure (Butcher/Smith 2010; Callanan/ Thomas 2005; Lyons et al. 2012; Rogerson 2011; Scheyvens 2007; Stebbins 1992; Theerapappisit 2009).



Volunteer tourism, "volunteer vacation" or "voluntourism" (e. g. Grout 2009) describes an amalgamation of volunteering and travel, where people pay to participate in development or conservation projects for part or all of their vacation (Lyons et al. 2012). Participants are mostly young academic westerners from Great Britain, Germany, North America, Australia and New Zealand who travel to developing countries (Reeh/Müller 2012), but the number of Asian and African participants is increasing (Alexander 2012; Lo/Lee 2011). A generally accepted definition has failed to emerge due to the complex nature of the phenomenon and the numerous research perspectives (Taplin et al. 2014; Wearing/McGehee 2013). The most commonly cited definition was coined by Wearing (2001: 1), who uses the term to refer to "those tourist[s] who, for various reasons, volunteer in an organized way to undertake holidays that might involve aiding or alleviating the material poverty of some groups in society, the restoration of certain environments or research into aspects of society or environment." This definition encompasses a wide range of activities, time frames, organisational forms and motivations that epitomise the increasingly diverse nature of the industry (McGehee 2014). However, it should be acknowledged that Wearing's definition places volunteer tourism within the context of holidays. Müller's (2009) framework takes a similar stance and limits the usage of the term to volunteering that does not exceed the time frame of an average annual vacation. Although most authors include gap year volunteers or do not mention any specific time frame (e. g. Butcher/Smith 2010; Callanan/Thomas 2005; Lyons et al. 2012; Simpson 2004), Müller's framework is adopted for the purpose of this study, as the contemporary short term volunteering differs from traditional forms of volunteering in both supply and demand (Müller/Reeh 2010; Reeh/Müller 2012).

Lyons/Wearing (2012: 89) even argue that, instead of trying to place volunteer tourism into the boundaries of a narrow definition, it should simply be "recognize[d] that volunteer tourism cuts across typologies of volunteering and tourism". This may be best exemplified by the motivations of volunteer tourists, who are seeking volunteering and tourism experiences simultaneously (Fig. 2).



In volunteer tourism, the desire for recreational activities in a different surrounding and self-enjoyment is combined with a desire to meliorate the social or ecological situation of the place visited (Callanan/Thomas 2005; Coghlan 2006; Lyons/Wearing 2008; McGehee/Santos 2005; Wearing 2002, 2004). Participants engage in volunteer tourism to "make a difference" (Butcher/Smith 2010: 33), give something back and achieve "something more meaningful than a pleasure-filled, self-indulgent holiday" (Scheyvens 2002: 102).

However, research has identified not only altruistic but also self-centred and hedonistic motives like self-development, the accumulation of intercultural, social and professional skills, aesthetic consumption, self-satisfaction and interaction with like-minded people, the community and the environment (Brown 2005; Callanan/Thomas 2005; Gray/Campbell 2007; Lyons et al. 2012; McGehee/Clemmons 2008; Reeh/Müller 2012; Wearing 2001). This has led to a discussion whether altruism or hedonistic motives are more prevalent in volunteer tourism (Coghlan/Fennel 2009). Instead of discussing the dominating motivation, it should be recognised that volunteers "can adopt any position on the continuum between pure altruism and

pure egotism" (Hustinx 2001: 65) and "are quite able to possess multiple motivations simultaneously" (Wearing/McGehee 2013: 123). Volunteer tourism projects that Callanan/Thomas (2005) classify as 'shallow' tourism projects raise the question about the decommodification and sustainability of the sector. Once hailed as a promising sector of tourism that may benefit both tourists and host communities, the rapid expansion and the increasingly commodified and touristic nature of volunteer tourism has placed the industry under increasing scrutiny in the last decade (Smith/Font 2014; Taplin et al. 2014).

"Initially, most research took an advocacy stance" (Wearing/McGehee 2013: 122), promoting volunteer tourism as form of alternative travel which is potentially beneficial (Guttentag 2009; Wearing/McGehee 2013). Projects receive workforce and funding and provide volunteers with the desired alternative tourism experience and the possibility of self-development (Guttentag 2009). Research focused on the demand-side, on profiling volunteers and on an investigation of their motivations (Butcher/Smith 2010; Wearing/McGehee 2013; Zahra/McGehee 2013). It was conceptualised as a form of tourism, where sustainability, responsibility and education are emphasised (Brown 2005). Further, intercultural interaction (Barbieri et al. 2012), knowledge about development and globalisation is fostered (Brown/Morrison 2003), and post-trip behaviours of the volunteer tourist altered and self-development achieved (Wearing/McGehee 2013). Volunteer tourism was perceived as an activity that has the ability to achieve empowerment and work towards social development (e. g. McGehee/Santos 2005; McIntosh/Zahra 2008).

This "fairly uncritical approach" (Guttentag 2009: 537) of the initial advocacy-based research was criticised by some researchers. A more cautionary platform followed, raising concerns about potential pitfalls and negative impacts on the local community (Wearing/McGehee 2013; Smith/Font 2014). Concerns included neo-colonialism and dependency (e. g. Caton/Santos 2009; Hammersley 2014; Palacios 2010; Raymond/Hall 2008; Tomazos/Butler 2010; Vrasti 2013), issues of power (e. g. Lyons et al. 2012; Simpson 2004), a neglect of locals' interests, a disruption of local economies (e. g. Guttentag 2009), exploitation of the host community, volunteers and environment (Palacios 2010; Theerapappisit 2009), mismanagement of resources (e. g. McGehee 2014), a fortification of stereotypes and consolidation of poverty (e. g. McGehee/Andereck 2008) and a hindering of development (Sin 2009). They maintain that potentially negative outcomes need to be acknowledged and addressed to provide the benefits already ascribed to volunteer tourism and displayed in advertisement (Smith/Font 2014). Recent developments within the industry emphasise this point.

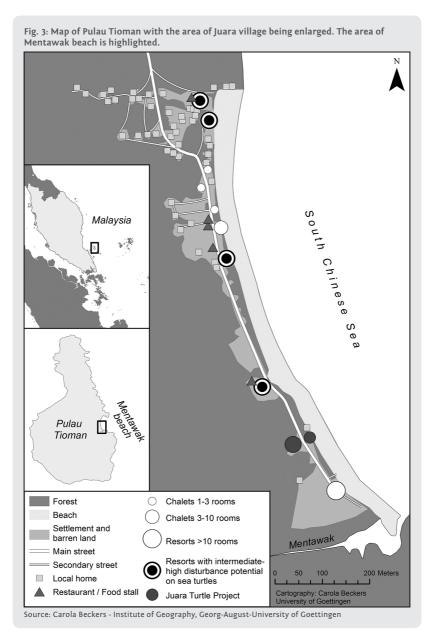
As the sector expands, volunteer tourism is becoming increasingly commodified (Lyons et al. 2012). More and more commercial organisations, which are mainly profit-driven, have entered the market and have changed the face of volunteer

tourism. Wearing/McGehee (2013) and Guttentag (2009) suppose that commercial organisations are more focused on the demands of the volunteers than on potentially negative impacts on the community. Volunteer tourism "becomes more attuned to the experiences that are in demand rather than the needs of the destination's indigenous inhabitants. Over time, best intentions can often be submerged and eclipsed to becoming merely more of what the subjugating tourist desires in conjunction with an organization's desire for profit" (Wearing/McGehee 2013: 124).

As volunteer tourism should first and foremost be relevant to the host communities, a research agenda is needed that places the host community at the centre of research. However, only recently host communities are starting to be the primary subject of research within an adaptancy platform (Wearing/McGehee 2013). In concern whether any form of tourism can be totally sustainable (Smith/Font 2014), most research has focused on the host communities. Possibilities to better manage volunteer tourism, optimise benefits and minimise negative outcomes are explored and recommendations are provided to increase sustainability. To better understand the visitor perspective the current study addresses the way volunteers see themselves and their activities.

3. Study site description

Tioman Island is located off the southern east coast of the Malaysian Peninsular and forms part of a National Marine Park. With its rock outcrops, primary forests, sandy beaches and coral reefs it is a popular holiday spot for domestic and international tourists alike. In 2013, domestic tourists accounted for 70 % of total tourist arrivals while tourists originating from close-by Singapore accounted for 12.3 % of total tourist arrivals, making it the most important foreign source market (Tioman Development Authority, submitted data, June 2014). Tourism facilities range from small-scale, locally-owned budget chalets to a few large-scale, upmarket beach resorts. Juara village is the only village on the east coast of the island. It spreads along a sandy bay of over 2 km length and is divided up into Juara beach in the north and Mentawak beach in the south (Fig. 3).



Tourists can access the village via car from the main port on the west coast since 2003. Before that, it was only accessible via foot or chartered boat. Due to its

semi-remote location, the local tourism industry in Juara grew slowly from the 1980's onwards, concentrating around the village in the north. Tourism on Mentawak beach comprised a few basic facilities which catered predominantly to European travellers and school groups. With improved accessibility and the touristic saturation of the traditional beach destinations on the west coast, tourism development took up speed eventually. 2012 was a turning point when the planning and construction of three new resorts began. These facilities increasingly cater to Asian package tourists and show tendencies of more upmarket, intermediate-scale development. There are now plans of building two large-scale, foreign-owned resorts on the remaining land plots along the beachfront (Berg 2015).

Between March and October each year, Mentawak beach is used as a nesting ground by a very small number of Green and Hawksbill Turtles. Between 10 and 18 nests per season, with an average of 15 nests per season, were recorded over the past few years. Local residents estimate that in the 1980's, three to four nests were laid every night. This suggests that the sea turtle population has suffered a serious decline of 98 % since then. Besides egg collection and fishing by-catch, tourism development is seen as a major threat to sea turtles by the conservationists. Human disturbance, artificial lighting and modifications of the beach can disrupt the nightly nesting process and lower the reproduction success.

Juara Turtle Project is a privately-run conservation organisation founded in 2006. Its primary aim is to protect the local sea turtle population from extinction through nest and habitat protection. Environmental education and awareness programs with volunteers and day-visitors represent another work focus. These programs started in 2009 and have gradually expanded since then. The project is run by a western activist and two marine biologists from Malaysia. Currently, the project's staff tries to expand its work area to include general conservation issues and threatened ecosystems on site such as forests and coral reefs.

4. Research methods

Between 25/04/2014 and 19/07/2014 the first author carried out research on Mentawak beach in Juara village, Pulau Tioman. Former visits in 2009, 2010 and 2012 had revealed the project's strong integration in tourism and issues of resource use conflicts. To cover all aspects of the coexistence and interactions on site, various methods were combined to supplement each other: (1) Twenty volunteers, all of whom participated in the program for more than seven days, were interviewed by using a standardised questionnaire. This aimed at getting an overview over volunteers' motivations, perceptions and their self-assessment. (2) More in-depth, semistandardised interviews were conducted with the main stakeholders, that were chosen through theoretical sampling (Experts/Friends of Juara Turtle Project: n=4; Hotel managers: n=6; Locals: n=5). Apart from a few personalised questions,

interviewees of the same category were asked the same or similar questions. Interviews were held in English or Malay and recorded and transcribed literally or protocolled. (3) Six light assessments were conducted on Mentawak beach between the end of May and end of June 2014, at differing times in the early night during new moon phases. The assessments helped to reveal number, type and intensity of artificial light sources that were visible from the beach and/or illuminated the beach. Vegetation and tourism infrastructure were mapped as well, and the project's experts were asked to draw mental maps displaying infrastructure and negative impacts on turtles (Fig. 3). (4) Finally, the data research included the projects' financial records from 2010 to late-2014, volunteer numbers and nesting data. In addition, day-visitors to the project were counted on seven random days within a one month timeframe and four observations during release and nesting events with tourist attendance could be realised.

The research on site was subject to a few drawbacks and limitations. Most of the interviewees knew the first author from past years and this might have impaired some interview situations. Some interviewees had difficulties to view the first author as a neutral, independent researcher as they associated her with Juara Turtle Project and sea turtle protection. Especially hotel managers and locals might have given seemingly "desirable" answers which reflect the conservationists' point of view rather than their very personal one. Another drawback encountered with local interviewees was the differing educational and cultural background. Many of the initially planned questions turned out to be too complex. Language difficulties added to this, so that most interviews with local residents were short and simplified.

5. Volunteer tourism at Juara Turtle Project

5.1 General aspects

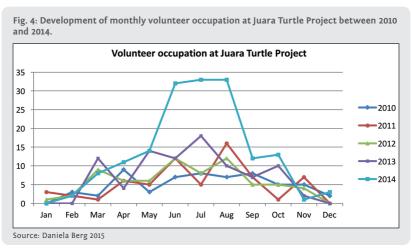
As a non-governmental organisation, Juara Turtle Project is in need for physical and financial support. Volunteers are highly convenient in this regard as they are labor force and funding source in one. They primarily support the project's permanent staff with undertaking nest patrols and giving informational tours to day-visitors, but also help with maintenance and construction jobs around the project site. Other regular work duties include the nest management in the hatchery, cleaning and gardening, enhancing the visitor centre and taking care of a resident Green turtle. Volunteers allow the project to realise more day-visitor tours and to extend the opening hours of the visitor centre. This again helps the project to extend its awareness efforts and receive more donations. However, volunteers bring along some drawbacks as well. As they are mostly young, unskilled workers with high expectations on their involvement and experience, volunteers require a lot of

coordination and guidance. This creates additional work for the permanent staff. Great numbers of volunteers challenge the direct conservation work because they are more difficult to instruct and to supervise. Since turtle activity is limited and hands-on involvement is to be guaranteed, volunteers take frequent turns when handling eggs or sea turtle hatchlings which can result in delays and general harm. On top of that, larger groups socialise more and tend to spend their time with fun activities, parties and relaxation rather than with dedicated work.

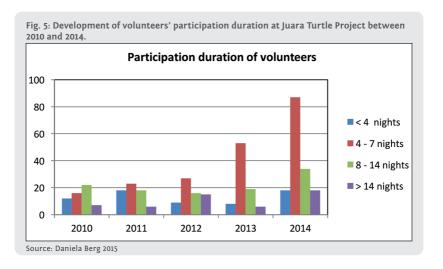
The resident Green turtle forms a central part of the tourism programs at Juara Turtle Project. She was born blind in the project's hatchery in 2006 and initially kept by feelings of compassion. However, she has proven to enhance the positive outcomes of the tourism programs and is now used as a tool for fundraising and education. The animal serves as an attraction for the visitor centre and helps to raise feelings of compassion and appreciation for sea turtles amongst day-visitors and volunteers alike.

Volunteers do not need to apply for a placement as there are no specific requirements set up by the project. They can participate during all times of the year but the great majority comes during the nesting and tourism season between March and October. Volunteers stay in shared accommodation at the project site where they receive breakfast and lunch. They are requested to stay a minimum of four nights; a policy rather untypical in the volunteering industry as many other programs require a minimum stay of one, two or more weeks. The participation fee is 120 RM (= 34 USD) per night or 700 RM per week. Long-term volunteers pay reduced fees and the project also receives two to three interns per season which pay no fees at all.

Volunteer numbers increased rather slightly from 56 in 2010 to 89 in 2013; generated revenues ranged between 48,371 RM and 81,239 RM per year. In 2014, volunteer tourism experienced a boom with 162 participants. In line with this, revenues reached an all-time high of 131,671 RM (= 36,899 USD). The busiest months were June to August with about 33 individuals participating each month (Fig. 4). The maximum number of volunteers at a time was observed to be 15 plus two interns. At this stage, the project was said to be fully booked and no more inquiries were taken. At other times, there were no volunteers and work was carried out by the permanent staff and the interns. Thus, volunteer occupation is not balanced and does not always correspond to the available workload.



Volunteers predominantly stay between four and seven nights. These "extreme" short-term volunteers accounted for 54 % of all volunteers in 2014 and showed a drastic increase over the past two years (Fig. 5). The required minimum stay of four nights was adopted in 2012 after a lot of volunteers had stayed for one or two nights only, which was not welcomed by the permanent staff. With the new regulation, the share of people staying less than four nights was reduced but not minimised. as some volunteers still leave earlier than previously planned. The second biggest share of volunteers stays between eight and 14 nights (e. g. 21 % of all volunteers in 2014). The popularity of short-term volunteer tourism at Juara Turtle Project indicates that the program attracts many people with limited possibilities or a limited willingness to make a major commitment, e. g. employees, families or rather conventional tourists which use the program as an add-on to their holiday. The program thus allows interested people to volunteer during a short holiday and to get first insights into conservation issues. Even though receiving and training such short-term volunteers involves a lot of effort for the permanent staff, it is a good mechanism to increase the project's outreach and build up a diverse network of conservation advocates.



5.2 Volunteer motivation and self-assessment

The interviewed volunteers were, with one exception, between 17 and 27 years old (median age of 21). They originated mostly from Great Britain, Germany and Scandinavia, further from Malaysia, Singapore, USA, Hong Kong, Australia and New Zealand. Two volunteers had participated in sea turtle conservation programs before. Three volunteers stated a special affiliation for sea turtles as a reason to work at a sea turtle conservation project, while 30 % of the respondents had heard about their endangered status and/or wanted to learn more about sea turtles. The remainder of the volunteers did not want to work with sea turtles specifically but had other reasons to choose the program. Half of the volunteers stated a general interest in environmental work, animal work and/or conservation work. Prominent reasons to choose Juara Turtle Project in particular were the recommendation by friends, relatives or colleagues (30 %), the close location to Singapore or Kuala Lumpur (25 %) and a general good impression of the project (20 %). Half of the volunteers chose Juara Turtle Project without comparing it with other volunteering programs. The main vehicle to find out about the program was the word-of-mouth promotion by friends, relatives or colleagues (40 %). Whereas 35 % of the volunteers found the project by searching for conservation or sea turtle volunteer work on the internet. The project's website was mentioned by 45 % of the respondents as an important source for information.

Most volunteers felt useful and needed during their placement as they saw themselves as a helping hand (90 %). 60 % saw themselves as an eco-tourist and 50 % as a financial contribution. Day-visitor tours were mentioned by 85 % of the volunteers as a main work duty during their placement, while only 55 % mentioned

turtle-related work like patrols. Many volunteers acknowledged the importance of guiding day-visitors around, especially as the majority of them were perceived to be less aware of sea turtle issues. The most important aspects of volunteering at Juara Turtle Project were to help the project's conservation efforts (85 %) and to receive knowledge and skills (70 %). Less important aspects were to have unique experiences (55 %), to have contact with sea turtles (45 %) and to develop personally (40 %). These findings suggest that volunteers were primarily focused on their contribution to sea turtle protection and secondly on personal outcomes and their touristic experience.

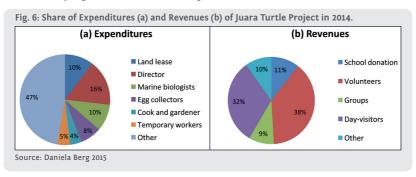
Volunteers were not uniformly against more tourism development on site. While some considered development to be negative for the project's conservation efforts, some saw it as desirable because it brings more day-visitors and the work becomes more important. 80 % of the volunteers agreed that the project should receive more day-visitors. However, only half of the respondents agreed that the project should receive more volunteers. According to some of them, there is not enough organisation and work available to do so. Overall, many volunteers recognised that the workload, especially the hands-on protection work, was limited but rated the relaxed atmosphere and the free, "touristy" time as very positive. Another frequently mentioned positive aspect of the volunteering experience was the received knowledge about sea turtles and the created awareness about general environmental issues.

5.3 Economic aspects

Over the past few years, Juara Turtle Project recorded an increase in both expenditures and revenues; however, the annual financial balances stayed slightly negative. With about 146,800 RM (= 41,213 USD), the pay of the project's permanent and temporary personnel accounted for about 40 % of overall expenditures in 2014. The salaries for the project's director and the two marine biologists accounted for 61 % of these costs. The wages for the egg collectors – two local residents which are hired to help with the egg collection on Mentawak plus two other beaches in the surroundings – accounted for 18 % of the personnel costs. A cook and a gardener are paid 10 % of total personnel costs. The remainder percentage was spent on temporary workers which mainly help with construction jobs and during the volunteer low season. Other expenditures of Juara Turtle Project include the land lease, the purchase of food, construction material and household supplies and other minor or irregular expenses (Fig. 6a).

To cover the costs of operation, Juara Turtle Project is dependent on the revenues from its tourism programs. The participation fees from volunteers alone accounted for about 39 % of the revenues in 2014, making it the biggest single source of revenues. Together with the revenues from occasional group programs (9 %), these are enough to compensate for the personnel costs. The visitor centre generated

32 % of the revenues in 2014, including entrance fees, additional donations, souvenir purchases and nest sponsorships. Over the past years, revenues from day-visitors were either similarly high or higher than the revenues from volunteers. However, with the volunteer boom in 2014, the financial contribution of volunteers gained in importance. This can be seen as an indirect contribution of the volunteers to nature conservation. Other revenues originate from sporadic and regular donations, e. g. by a school in Singapore (Fig. 6b). With their financial support and the tourism programs, Juara Turtle Project is said to be self-sufficient.



The great popularity of Juara Turtle Project's tourism programs could have played a role in fuelling overall tourism development on Mentawak beach. Ecotourism in general holds the risk of 'paving the way' for mass tourism (Wheeller 1991). Tourists are said to acknowledge Juara's natural beauty, the long beach and the quiet, unspoilt, "village-like" atmosphere. By bringing more people and drawing public attention to the location, Juara Turtle Project might have indirectly promoted the place as a holiday destination over the past years and thus accelerated development. This assumption, however, is difficult to prove. The popularity of the volunteer program further inherits the risk that it ultimately turns into some kind of alternative mass tourism itself. With a probably decreasing sea turtle population but expanding facilities and capacities both in terms of volunteers and day-visitors, Juara Turtle Project lies at the risk of becoming a mere tourist destination in the future. The project forms a central part of the local tourism industry already. Its existence constitutes a locational advantage for many tourism facilities around Juara and the visitor centre together with the pet turtle are promoted by local businesses.

5.4 Socio-cultural aspects

According to the director, Juara Turtle Project is generally accepted among the local community. However, the conservation work is not actively supported and residents prefer to not get openly involved in protection issues. In past years, there have been conflicts with some community members. A recently adopted "live and

let live"-strategy by the project's staff has minimised the conflict potential but also the possibilities to undertake drastic protection measures. Maintaining good relations together with providing tangible benefits in the form of income and development options is crucial if a conservation organisation is to persist within a community.

In the general perception of the local residents, Juara Turtle Project is a tourist attraction and profitable business which makes a lot of money. However, people seem to ignore the high amount of expenditures. With the presence of volunteers during most of the year, Juara Turtle Project is furthermore seen as a tourist area. Negative socio-cultural impacts, especially on the young generation of Juara, as well as a feeling of distance towards it are recognised. Nonetheless, the local residents regard the increase in tourist numbers as positive as it means more support for local small-scale businesses. Volunteers tend to use a few specific businesses only, though partially because these are openly promoted by the project's permanent staff. It is criticised that the project does not provide equal benefits to the community. Local residents are not hired to undertake activities with volunteers, whereas conventional tourists hire local guides and book through local businesses. It is suggested that more residents are employed by Juara Turtle Project, also to help with egg collection, and replace part of the volunteers. This, however, seems not feasible, given the low sea turtle activity, daily workload and financial capacity of the project.

As previously outlined, the volunteer payments are highly needed to finance the project's costs of operation, including the employment of professionals and local workers. Due to the limited workload, it is not viable to employ more residents alongside a great number of volunteers. One strategy to overcome this limitation is to expand the project's work area to general conservation issues (as it is currently done already) and to raise the volume of day-visitors and volunteers. In this scenario, Juara Turtle Project turns into the "Juara Environmental Project" with a focus on research, education and involvement programs, as it is suggested by befriended resort owners. With such an extension, the project has the need and financial capacity to hire more local residents to be in charge of the tourists. Besides that, a greater amount of the tourists' spending must be spread among small-scale businesses in the village.

A few drawbacks were observed with regard to the training and coordination of volunteers. Even though volunteers receive an orientation upon arrival, they are not properly trained in the right conservation techniques. Instead, they receive instructions when it is needed during nesting and hatching events. This often generates chaos and stress and creates additional work for the permanent staff who has to be present and vigilant at all times. Due to the high amount of short-term volunteers and their varying dates of arrival, this drawback might be well accepted

though, as the extensive training of each volunteer might cause even more work. For guiding day-visitors around, most volunteers are trained within a half-day or day. As a consequence, volunteers cannot always classify as professional tour guides, especially when they come without prior knowledge of sea turtles and feel uncomfortable or inhibited. The visitor centre is open daily from morning to night and tours take place whenever a new group arrives. Visitor volumes and arrival times cannot be estimated beforehand. Therefore, volunteers who are allocated a shift have to be on call constantly. Hour-long waits alternate with stressful situations and fully occupied days. Moreover, the main building of Juara Turtle Project functions as indoor visitor centre, dining hall and main meeting point for staff and volunteers at the same time. If volunteers are never granted a break from day-visitors, dissatisfaction is likely to increase.

5.5 Ecological aspects

Nowadays, Juara village is at the turning point from an alternative tourism enclave to a conventional beach holiday destination (see Butler 1980). The customer base is changing from alternative travellers and Westerners to "mass backpackers" and package tourists from Asia. As touristic values and desires change in line with the customer base, beach enjoyment and nightly entertainment gain in importance while nature-based and eco-touristic activities become less popular. For the future, Mentawak beach shows tendencies of high-impact development which is likely to exceed the site's carrying capacity and have a negative impact on the remaining sea turtle population.

Compared to the tourism facilities in the surroundings, Juara Turtle Project's facilities can be classified as most "turtle-friendly". This is a term used by the conservationists to express a minimal potential of negative interference with the behaviour, nesting activity and reproduction success of sea turtles. There are many guidelines set up by sea turtle conservation advocates which define turtle-friendly measures for beachfront property owners and beach users (Choi/Eckert 2009; Witherington/Martin 2000). In accordance with these, Juara Turtle Project's facilities are built away from the beachfront (except for the beach hatchery) and any light and noise is blocked by a mostly intact vegetation line. Basic protective measures like turtle-friendly lighting are implemented at some of the conventional facilities as well, but major measures are lacking. Especially the areas around the new, intermediate-scale resorts show comparatively high levels of disturbance potential due to event orientated package tourism. With regard to human activity, it can be assumed that volunteers show a less disruptive, ecologically sound behaviour at all times during their placement. Volunteers are instructed how to patrol the beach, behave in the presence of sea turtles and handle eggs and hatchlings without disturbing or affecting the animals. On top of this, they are usually accompanied and supervised by a permanent staff member or long-term volunteer. Nevertheless, there were incidences where volunteers did not behave in line with the project's ethics, or where these were not enforced by the staff. It can be assumed though that the majority of volunteers are generally more considerate of sea turtles and the local environment than ignorant or careless tourists staying at the conventional facilities. Considering that volunteers also actively support the project and help with the daily direct and indirect conservation efforts, Juara Turtle Project's volunteer program can be classified as highly compatible with sea turtle conservation.

Volunteer tourism, after all, increases infrastructure levels and general human activity on Mentawak beach, thus contributes to the ongoing tourism development. However, it is seen as the "better" form of development by the conservationists as it is more turtle-friendly than the recently emerged forms of tourism in the surroundings. For an environmental impact balance of volunteer tourism at Juara Turtle Project, all negative impacts (e.g. modifications of the environment, transportation, resource use...) would need to be added up to weigh them against the positive ones. The project's director recognises that volunteers have a negative impact on the environment like every other individual but believes that their overall impact balance is less negative than for conventional tourists. This is due to the effects of the carried out work, the more appropriate behaviour during their stay and the given environmental education. However, these positive impacts are either difficult to measure or not visible yet. In terms of the work effects, a potential recovery of the sea turtle population will only be visible from 2030 onwards when the first protected sea turtle hatchlings reach sexual maturity and return to their area of origin.

6. Discussion

The previously outlined characteristics of volunteer tourism at Juara Turtle Project suggest that it meets the basic principles of ecotourism which were set up by Honey in 1999. These are: travel to natural, pristine and usually protected areas (even though it is questionable for how much longer Juara counts as "pristine"), impact minimisation, environmental education and creation of awareness, direct financial contribution to conservation, creation of benefits for local communities (even though they are rather indirect and the potential is not fully exhausted), and respect of the local culture and support of human rights (however, these last principles may be subject to further discussion). All in all, volunteer tourism at Juara Turtle Project supports the project's conservation goals and represents a successful coexistence between sea turtle conservation and tourism. There are various direct and indirect mechanisms for volunteer tourism to enhance sea turtle conservation on site. Volunteers are required by the organisation as a reliable source of revenues as well as a cheap source of labour. They can furthermore classify as

considerate, educated tourists who show environmentally appropriate behaviour during their placement and for much longer in the best case. Volunteer tourism can lead to increased public awareness of sea turtle issues, a higher acceptance of the organisation among local stakeholders and advocacy of ecotourism and sustainable practices on site. The extent and efficiency of the indirect mechanisms remain questionable, but volunteer tourism possibly has positive long-term outcomes for conservation.

The volunteer program at Juara Turtle Project is mostly used by gap year students and young foreign travellers but has a great potential to attract a variety of people of different nationalities, ages and backgrounds. Moreover, the program is not only appealing to people who like sea turtles specifically but who have a general interest in conservation, animals and nature. At last, the short minimum stay allows people with limited time, money or an initially lower interest in volunteering to become involved as well. This enables Juara Turtle Project to reach and affect a wide range of eco-minded tourists, which might be a first step in building up a diverse network of environmentalists and conservation advocates. Volunteer satisfaction was found to be generally high. Volunteers recognised that the amount of direct protection work is limited but they still felt needed and helpful, mainly in the role as visitor guides. They claimed to be primarily focused on altruistic outcomes and secondly on non-altruistic outcomes of their volunteering experience. Many volunteers appreciated the received knowledge about sea turtles and the usually great amount of free time.

The volunteer and day-visitor programs at Juara Turtle Project can be classified as "integrated tourism programs". This means that they are compatible with the conservation practices and ethics of the organisation and supportive of the conservation goals. As a consequence, they are directly promoted by the organisation. Contrasting the project is the conventional tourism industry in the surroundings which is not firmly tied to sea turtle conservation, and thus can be classified as "detached tourism". The project's work focus on volunteers and day-visitors has developed in response to the great demand and because low sea turtle activity limits the amount of direct conservation work. Instead, the amount of indirect conservation work in terms of environmental education and involvement increases. Juara Turtle Project is characterised by increasingly high human activity and continuous expansion. This, however, implies the risk that the project becomes a mere tourist facility and loses its genuine reputation as a conservation project.

There are various best practice examples around the world which show successful coexistences of sea turtle conservation programs with tourism (Chan 2013; de Vasconcellos Pegas et al. 2013; Eckert/Hemphill 2005; Tisdell/Wilson 2001). Potentials to establish such profitable sea turtle ecotourism industries were found to be amongst others: High chance of direct encounters with sea turtles (e. g. watching

tours or captive sea turtles), low potential of the destination for conventional tourism (e. g. limited accessibility), eco-minded customer base, enforced, legal protection of sea turtles and their habitats, promotion of sea turtle ecotourism by government agencies, tourism and conservation stakeholders, involvement of local communities in sea turtle protection and ecotourism, support by powerful players (e. g. academic institutions), and early presence of the organisation. The following limitations were identified at the case study site: On-going conventional tourism development, change of the customer base towards less eco-minded tourists, limited legal protection of sea turtles and their habitats, limited involvement of the conventional tourism industry ("detached tourism"), moderate potential for tourism stakeholders to use sea turtles as a promotional vehicle and to benefit from Juara Turtle Project's existence, limited involvement of the local community, and no support by powerful players.

The low sea turtle activity on Mentawak beach is a crucial factor which determines most other limitations. It determines that sea turtle ecotourism stays a less profitable business and receives less public support and interest than conventional tourism. Tourism stakeholders are less willing to implement or accept turtle-friendly measures because the utility and need of such measures are deemed minimal. The lack of possible benefits for stakeholders results in a lack of incentive to support sea turtle conservation and ecotourism.

Apart from these site-specific limitations, there are general limitations to the implementation of volunteer ecotourism as an alternative to conventional tourism practices. Volunteer tourism is portrayed as a phenomenon of young academics from developed countries which look for meaningful travel experiences and a variety of altruistic and egoistic outcomes. Meanwhile, it is not that popular among other customer bases, e. g. people who are less eco-minded, older, wish higher standards for their vacations or have limited time. In addition to this, volunteer tourism at privately run organisations is expensive as the payments include donations. A volunteer placement often costs more than staying in a cheap hotel in the surroundings. Thus, volunteer programs might be unappealing and/or unaffordable to the great majority of tourists. With ever increasing tourist numbers worldwide, it furthermore seems difficult for tourism stakeholders to work with limits on development – which is a major feature of good-practice ecotourism. This is especially true for countries which are in need for tourism revenues to drive their economic development. Hence, the small potential customer base for volunteering programs and the ever increasing volume of holidaymakers worldwide put great limits to a wideranged implementation of volunteer ecotourism.

7. Conclusion

Integrated tourism programs such as volunteer tourism are known to offer several advantages to both the demand and the supply side, constituting a "win-win" situation. This paper discussed the advantages, drawbacks and limitations of volunteer tourism at privately run sea turtle conservation organisations such as Juara Turtle Project. It was demonstrated that the organisation is dependent on its tourism programs for its successful existence and operation. By providing regular revenues, such programs enable the organisation to reach self-sufficiency and to not be dependent on corporate sponsors or sporadic donations. Besides this, the aspects of involvement and education are said to have immediate positive outcomes for conservation on site, and further potential long-term outcomes for conservation in general. Volunteers are an important labour force as they help extend the range of possible conservation efforts, especially when organisations cannot afford to employ external workers. After all, a prosperous volunteer tourism industry can bring wealth to affected communities and other local and regional stakeholders. If it does so, it can increase the regional acceptance and support of the interlinked conservation efforts.

Nowadays, Mentawak beach is the focus for tourism development on Tioman Island. Areas with such a high touristic potential are unlikely to receive legal protection by wealth-striving governments, especially if their conservational value is deemed comparably low. Therefore, it must be assured that tourism practices are ecologically sound and considerate of the remnant sea turtle population. Most of the tourism development on Mentawak beach, however, has happened detached from sea turtle conservation. Future prospects raise even more serious concerns among stakeholders on site. The example of Juara Turtle Project demonstrates the impotence of a privately run conservation effort against a booming tourism industry in a newly industrialising country. Nevertheless, the project has been successful in terms of integrated tourism. Its extensive outreach with day-visitors, volunteers, school groups and other groups — a big part of which are Malay and other Asians — is believed to have increased public awareness of sea turtles and marine conservation. The popularity of the programs demonstrates the touristic value of sea turtles to people on Tioman Island.

All in all, volunteer tourism acts as a proof for the great compatibility of sea turtle conservation with tourism, but carries many risks and limiting features. Its potential to "outcompete" conventional tourism practices is minimal in areas which do not feature the above-mentioned facilitating prerequisites for the establishment of a profitable sea turtle ecotourism industry. Besides this, volunteer ecotourism might happen in addition to conventional tourism and not in place of it, and could even trigger tourism development in the surroundings. A further risk of volunteer ecotourism is that suppliers become increasingly profit-oriented while conservation

targets take a back seat and bad practice is well tolerated. Ultimately, volunteer tourism can only serve a small fraction of the world's tourists. For all these reasons, it cannot leave the development of conventional tourism redundant. It remains important for suppliers to promote volunteer ecotourism as a viable alternative to conventional beach tourism in sensitive, threatened ecosystems. But besides this, conventional tourism itself must be made more sustainable, ecologically sound and turtle-friendly. It should be one primary goal of both conservation and tourism stakeholders to successfully coexist and collaborate with each other. This is a major challenge when certain prerequisites limit the potential for such a coexistence, as it was found to be the case in Juara.

Mentawak beach is one of four remaining nesting habitats for a seriously declined sea turtle population on Tioman Island. As the only inhabited beach of these four, it is a good case example for resource use conflicts between tourism and conservation stakeholders in tropical coastal areas. It demonstrates the importance of habitat protection, which — in the absence of legal protection — is best achieved by a collaboration of all involved stakeholder groups. While the success of Juara Turtle Project's efforts in terms of sea turtle population recovery remains unknown to date, the island's sea turtles seem to keep moving around the verge of extinction.

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