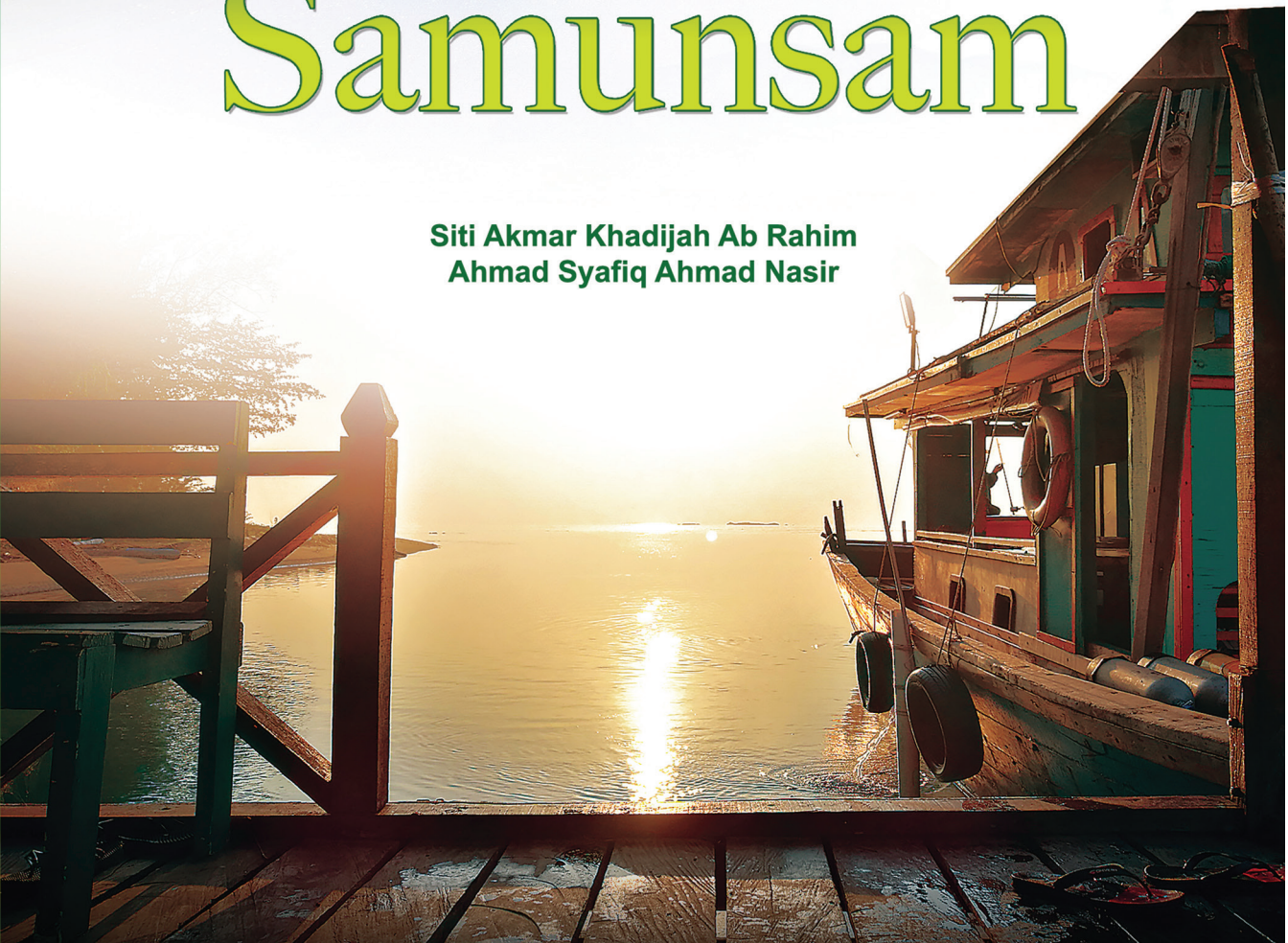


Proceeding of  
Aquatic Science Colloquium 2019 (AQUAColl 2019)  
Experience Sharing in Aquatic Science Research V

# Tanjung Datu — National Park — to Samunsam

Siti Akmar Khadijah Ab Rahim  
Ahmad Syafiq Ahmad Nasir





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# Tanjung Datu

National Park

# to Samunsam

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# Preface

The articles published in this proceeding are the research outcome of a joint scientific expedition in 2018 between the Programme of Aquatic Resource Science and Management, Faculty of Resource Science and Technology, Universiti Malaysia Sarawak (UNIMAS) and Sarawak Forestry Corporation Sdn Bhd (SFCSB) entitled Tanjung Datu National Park – Samunsam Wildlife Sanctuary Marine and Coastal Resources Expedition: Biodiversity Conservation and Sustainable Utilization’. The expedition was the second research collaboration between UNIMAS and SFCSB after the first ‘Pulau Sampadi Marine Life Expedition’ in 2012. The objectives of this expedition are: (1) to collect information and establish baseline data on the aquatic environments and its available resources from Tanjung Datu National Park to Samunsam Wildlife Sanctuary areas; (2) to contribute to the development of Sarawak Marine and Coastal Conservation Master Plan and also (3) to identify and recommend potential sustainable economic activities for the local communities.

This expedition’s findings were presented during the Aquatic Science Colloquium 2019 (AQUAColl 2019) which is the fifth series of a biennial academic event that acts as a scientific platform for researchers to update, exchange and sharing of research information and findings explicitly obtained from the scientific expedition.

This AQUAColl 2019 proceeding comprises 18 research papers which reflect the aquatic and terrestrial biodiversity, physical oceanography, the status of marine pollution and socio-economic activities occurring inside or surrounding the Tanjung Datu National Park – Samunsam Wildlife Sanctuary. It is hoped that these scientific data may provide important baseline information and be beneficial towards future fisheries, oceanographic surveys and ecotourism activities in these areas.

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UNIMAS



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Last but not least, we thank everyone for their hard work and dedication, and we look forward to future continuous collaboration. Well done and thank you to SFC and UNIMAS!



# Local Communities' Involvement in Ecotourism around Tanjung Datu National Park: Potentials and Challenges

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## Abstract

*The aim of this paper is to explore the potentials and challenges of local communities' involvement in ecotourism around Tanjung Datu National Park (TDNP). Using three separate interviews, this qualitative study involved three major entities participated in ecotourism activities around TDNP. Interviews were conducted among the local communities (17 participants) and business owners (7 participants) from two villages located at the vicinity of TDNP namely Kg. Telok Serabang*

*and Kg. Telok Melano, as well as both local and international tourists (19 participants) who visited TDNP. The preliminary findings indicate that ecotourism around TDNP has indirectly contributed to livelihoods of local communities. There are potentials and challenges in terms of communities' involvement for the tourism-based economy to sustain itself.*

*Keywords:* national park, communities, sustainability, ecotourism, tourists

## **Introduction**

The establishment of national parks has not only been perceived as natural reserves for conservation, but past studies have shown that these national parks can also contribute positively to the growth of local economy through ecotourism (Gandariasbeitia, 2010; Nana and Tchamadeu, 2014; Mika *et al.*, 2015). Bjork (2000) defines ecotourism as the activities that enable tourists to travel to an area of interest to appreciate, study, and adore nature and culture without exploiting resources but promoting the sustainable development from the synergy between the authorities, tourism industry, tourists and local people. However, little is known about the contribution of Tanjung Datu National Park (TDNP), among the smallest national park in Sarawak which has rich coastal marine resources to the livelihoods of local communities. Thus far, not much research had been carried out by looking at the different perspectives using interviews to explore the involvement of the local communities in ecotourism around TDNP. The central aims of the present study were to identify the potentials and challenges of ecotourism for TDNP whilst gaining understanding on how ecotourism activities can fit together through supportive interaction between the national park and the local communities and make positive impacts on the local economy.

### ***Tanjung Datu National Park Profile***

TDNP has been gazetted in 1994 and described as a hidden tourism jewel or “Heaven of Borneo”. With the size of below 14sq km, this national park in Sarawak is teeming with various species of flora and fauna especially *Rafflesia*, *putat*, palms, figs, sea turtles, hornbills and primates. This less accessible national park is a gift from nature with diverse natural resources such as beaches, pristine blue waters, reef corals, mixed dipterocarp forest, hills, caves, waterfalls, and rivers. Its seclusion is one of the attractions that brings about many tourists to TDNP especially from overseas. In addition, this national park is located at

the south-western tip of Sarawak on the Datu Peninsula which is just next to Kg. Telok Melano, the 0km mark of stretch – the Lower Tip of Borneo or beginning of Pan Borneo Highway Sarawak. The Telok Melano – Sematan (TMS) stretch has been officially open to public on 26th January 2019 with the road length of 32.770km across six bridges. Thus, the park is accessible by land as well as water transportation. It can be reached in 15 minutes by speedboat boat from Kg. Telok Melano or approximately one hour from Sematan, the nearest town and 2.5 hours on foot via Telok Melano – Telok Upas – Tanjung Datu Headquarters Trail. The accessibility of TDNP now becomes convenient, quick and cheap. The national park also provides basic facilities to the tourists for instance, forest huts, a camp site, and walking trails but the forest hostel is no longer available since May 2019. Visitors to TDNP can go camping, swimming, diving, snorkeling, jungle trekking, studying the nature of the park or taking a boat for sightseeing and if they are fortunate, they may watch turtles that come ashore to lay eggs or may experience releasing baby turtles at the turtle hatchery site. Those who are staying at the park especially the international tourists guided by tour operators have opportunity for stop-over in Kg. Telok Serabang and Kg. Telok Melano.

### ***Kg. Telok Serabang and Kg. Telok Melano Profile***

Kg. Telok Serabang and Kg. Telok Melano are situated in the remote and rural areas on the West Kalimantan, Indonesia border. Kg. Telok Serabang has been established earlier than Kg. Telok Melano and formerly only Kg. Telok Serabang was captured in the map. Kg. Telok Serabang and Kg. Telok Melano are home to around 100 families (approximately 400 people – low population density). These villages are fringed by white sand beaches with crystal clear waters. Their small settlements are hardly and costly accessed by local and international tourists until the launch of Pan Borneo Highway Sarawak in 2019. These traditional Malay fishing villages can be reached in 30 minutes via highway from Sematan or approximately 45 minutes by speedboat from Sematan. Apart from camping, swimming, snorkeling, or taking a boat for sightseeing, visitors to Kg. Telok Serabang and Kg. Telok Melano can also go for picnic, fishing and learn local values and culture as well. Thus, these villages have their own attractions in terms of ecotourism especially tourists from West Kalimantan who visited the villages on Saturday and Sunday.

## **Methodology**

This study focused on profiling data of the TDNP as a coastal marine park and exploring the possible impacts of ecotourism for local people. The study employed a qualitative study and involved three main interviews namely community interview, business interview, and tourist interview. The development of these data collection instruments considered existing research (see Saayman *et al.*, 2009; Oberholzer *et al.*, 2010). Pilot interview had been conducted especially with the knowledgeable elders in the community to establish rapport with the local communities and to have general understanding about the areas before the actual study took place. The actual data collection was separately carried out in 2018 (Business interview and tourist interview – August and September 2018, and community interview – November 2018) and thus, the findings of the study are subject to the data collected during this study period. A total of two villages located at the vicinity of TDNP were included in the study – Kg. Telok Serabang and Kg. Telok Melano. This study involved semi-structured interviews with local communities who reside or work at the villages, small-scale business owners, local and international tourists to explore the potentials and challenges of ecotourism for TDNP.

### ***Community Interview***

The community interview was conducted with the local people from two villages located at the vicinity of TDNP namely Kg. Telok Serabang and Kg. Telok Melano. A total of 17 participants were involved in the community interview. Table 1 presents the demographic profiles of the participants from the community interview covering gender, age, education level, and occupation of the participants.



**Table 1** : Demographic characteristics of community interview participants.

Demographic characteristic	Kg. Telok Serabang (n = 7)	Kg. Telok Melano (n = 10)	Total (N = 17)
Gender:			
Female	4	6	10
Male	3	4	7
Age:			
40 and below	3	2	5
41 and above	4	8	12
Education level:			
No school	1	1	2
Primary school	4	2	6
Secondary school	2	7	9
Occupation:			
Homemaker	1	2	3
Farmer	3	4	7
Fisherman	2	0	2
Civil service	0	2	2
Owner of small-scale business ( <i>*warung</i> )	1	0	1
Other occupations	0	2	2

\*Note: Warung – small-scale business selling groceries and foodstuff

### ***Business Interview***

There were seven participants who owned small-scale business involved in the interview sessions. Out of seven participants, only one participant is from Kg. Telok Serabang and six participants are from Kg. Telok Melano. Table 2 summarised the information on the small-scale business at Kg. Telok Serabang and Kg. Telok Melano of the participants.

The study found that four out of seven participants agreed that majority of their customers were the local people (90%) and only 10% were the international visitors. The participants revealed that the TDNP ecotourism activities influence the small business set up in Kg. Telok Serabang and Kg. Telok Melano. For the homestay, they provide one to four rooms to the tourists for accommodation. The tourists were either staying with the owners or on their own. Furthermore, the study also found that the cottage industry such as snacks processing and handicrafts can be further developed in this area. This can help the villagers especially the housewives to increase their income and involve in entrepreneurship activities (Teoh and Chong, 2014). Furthermore, some villagers involve in the small-scale agricultural activities such as pepper planting and fruit orchards which have a potential to be developed as the agrotourism activities. Henderson (2009) defines the agrotourism as the farm tourism where the attractions and facilities were related to agriculture. The agrotourism in the context of Kg. Telok Serabang and Kg. Telok Melano can be expanded into farming, fishing, and forestry practices activities that could bring interesting experiences to the visitors.

**Table 2 :** Demographic characteristics of business interview participants.

Demographic characteristic	Kg. Telok Serabang (n = 1)	Kg. Telok Melano (n = 6)	Total (N = 7)
Gender:			
Female	1	4	5
Male	0	2	2
*Category of business:			
Boat operation	0	3	3
Warung	1	6	7
Homestay	0	3	3
Other businesses	0	1	1
Length of business:			
Minimum		0.4 year	
Average		9.3 years	
Maximum		38 years	
Average number of worker(s):			
Family		2 workers	
Non-family		1 worker	
Business capital:			
Minimum		MYR 2,000	
Maximum		MYR 28,000	
Average monthly income		MYR 2,585.71	

\*Note: Some participants have multiple businesses

### *Tourist Interview*

Tourist interview was conducted with both the local and the international visitors that came to the TNDP in August and September 2018. A total of 19 participants were involved in the tourist interview. Table 3 presents the demographic profiles of the participants associated to their gender, age, marital status, country of origin, country of residence, education level and occupation.

### *Data analyses*

The qualitative data from the interviews were transformed into notes and analysed via a thematic approach. The guidelines suggested by Braun and Clarke (2006) – familiarisation with the data; generation of initial codes; searching for themes; reviewing themes; defining and naming themes; and reporting – were employed. The rigor of the approach was its flexibility to move backward and forward within the three data sets and making decisions along the way. The community interview, business interview, and tourist interview were prioritised equally and kept independent during analysis with the findings then mixed during overall interpretation. Thus, integration of data occurred at the data analysis stage.

**Table 3 :** Demographic characteristics of tourist interview participants.

Demographic characteristic	Local (n = 11)	International (n = 8 )	Total (N = 19)
Gender:			
Female	9	4	13
Male	2	4	6
Country of origin:			
Malaysia	9	0	9
*UK	2	2	4
Belgium	0	4	4
New Zealand	0	2	2
Country of residence:			
Malaysia	11	0	11
UK	0	2	2
Belgium	0	4	4
New Zealand	0	2	2
Age:			
40 and below	8	4	12
41 and above	3	4	7
Marital status:			
Single	7	0	7
Married	4	8	12
Education level:			
Tertiary	11	8	19
Occupation:			
Professional	5	6	11
Non-Professional	3	0	3
Other occupations	3	2	5

\*Note: Participants are originally from UK but they are a resident of Malaysia thus they are categorised as local visitors

## **Results and Discussion**

According to the preliminary findings, the park has indirectly contributed to the livelihoods of the local communities through its potentials since the villages have their own attractions. Despite its indirect contribution to the local people's livelihoods, the park also acts as a challenge.

### ***Potentials***

#### ***a) Geographical location***

TDNP is located near other national parks such as Talang-Satang and Gunung Pueh. Thus, this may attract more tourists because they can also visit other nearby national parks. Besides, its location on the West Kalimantan, Indonesia border can attract people from Indonesia in the future to visit the park including both villages accessibly compared to the local tourists because of its geographical location. This will lead to placement of communities on the global spotlight.

#### ***b) Willingness of local communities to involve in ecotourism***

Ecotourism activities had been developed at TDNP many years ago and they have brought positive impacts to Kg. Telok Serabang and Kg. Telok Melano villagers. The establishment of national parks required synergy involvement between the national park authorities and the communities living nearby. For the tourism-based economy to sustain itself in local economy, the local people must be willing to involve directly or indirectly supporting the activities. In addition, the local people were also aware about their responsibility in protecting and preserving the TDNP and at the same time practicing the sustainable ecotourism activities.

#### ***c) Potentials of small-scale business, agrotourism and cottage industry***

The existence of Pan Borneo coastal road connecting Kg. Telok Serabang and Kg. Telok Melano from Sematan will significantly increase the number of visitors coming to the villages and TDNP. Thus, the current small-scale business activities (homestays, boat operation, and *warung*) are expected to be expanding in the future in which will also place tour services in demand. Other potential tourism led activities in these villages are

agrotourism and cottage industry. The agrotourism activities that have potential to be further developed near to TDNP area are fishing, diving and snorkelling activities, fruit and pepper harvesting, and jungle trekking. In terms of cottage industry, the community especially the housewives can involve in the handicraft production and local snacks processing. Cottage industry is defined as part time productions at home level that trade for an unknown market location that sell to the wholesaler who accumulates a stock (Prentice, 1983).

***d) Receiving strong support from the government and other community agencies***

The strong support towards the establishment of the TDNP by the state government of Sarawak as reflected in its Ordinance on National Parks and Nature Reserves, 1998 had paved the way for further realising the potential of the park as one of the attractive tourist destinations in Sarawak. In addition, the state government is not working alone to conserve the nature but with the strong interests of the community. Besides, the non-governmental organisations (NGOs) would join collectively to uplift the status of the TDNP as one of tourist attractions in Sarawak.

***e) Gaining popularity amongst local and international tourists and tour operators***

Despite lacking of promotion, the uniqueness of the park particularly its lovely beaches and forest scenery had managed to attract many nature lovers from across the globe. Thanks to advancement in the digital technology today that had enabled tourists to find TDNP via the internet. The national park has also become one of the attractive destinations recommended by the local tour operators in their tour packages for Sarawak.

***f) Offering employment opportunities***

The park offers employment opportunities to the local people. A few are employed as rangers and watchmen among other positions in the park which improve their livelihoods. Local residents can also provide guiding services for tourists who visit the park to the best of their knowledge and they can also work with the community small-scale entrepreneurs.

### ***g) Preserving values and culture of local communities***

Interaction between local communities and tourists has increased awareness and respect for local values and culture. The traditional festivals and ceremonies also can sustain through this interaction.

### ***h) Improving quality of life***

TDNP gives positive impacts to the local residents in many forms but it is termed as an indirect contribution of the park to the livelihoods of the local people. This includes infrastructural development such as construction of Pan Borneo Highway, rehabilitation of certain infrastructure such as feeder roads and community facilities.

### ***i) Promoting sustainability practices - enhancing awareness on conservation and preservation***

Tourists regardless local or international are willing to get involved in conserving and preserving natural resources. The establishment of TDNP not only increased awareness and support of local people for conservation and preservation practices but also led to better appreciation of nature. The park also motivates the local communities' involvement in the sustainability activities such as a regular *gotong royong* (mutual aid or cooperation) at their villages to clean the beach and this has led to a well living place in the undisturbed environment.

## ***Challenges***

### ***a) A low number of local settlements***

A low number of local settlements act as a constraint to fulfil the growing demand and the potential of ecotourism, agrotourism and cottage industry development in Kg. Telok Serabang and Kg. Telok Melano in the future. The migration of the villagers to the nearest town or city for a better income and living facilities contributes to the challenges. Thus, if more people especially the youth in the community can be attracted to live in the villages, support for the tourism-based economy to sustain itself would be greater.



***b) Inadequate management capacity and capability***

With its precious flora and fauna, the TDNP has no doubt offered interesting ecotourism activities to both the local and international tourists. However, maximising the national park potential as an attractive ecotourism destination in Sarawak requires well coordination between various parties and agencies involved in ecotourism activities coupled with adequate capacity building effort to ensure the success of the programmes. For example, by providing adequate tour guide training and engaging the local people living within the vicinity of TDNP particularly those youth of Kg. Telok Serabang and Kg. Telok Melano. The local tour guides who are rich with traditional knowledge would complement the existing tourist guide force to the national park, hence able to draw attraction to the national park.

***c) Lack of infrastructure***

The improvement of the telecommunication facilities, electricity and clean water supply to the villages are needed in assisting the growing tourism activities in Kg. Telok Serabang, Kg. Telok Melano, and TDNP. The study found that during the dry seasons, the villages are constantly facing clean water supply problem. In dry season, volume of water stored in mountain reservoir is naturally reduced, leading to limited water supply for the villages; therefore, becomes a crucial constraint to the homestays' operators. The solar panels as source of electricity provide a very limited voltage of electricity for business activities. Furthermore, in TDNP, certain walking trails need to be improved to ensure safety of the trekkers. In addition, more garbage bins are needed to be placed along the trails to ensure the cleanliness of national park.

***d) Lack of promotion by various entities***

Although the TDNP has many nature attractions to offer, the promotion of this national park to local tourists is lacking; many potential local tourists have not heard about this beautiful national park. At present, initiatives to promote the national park are mainly focusing on foreign tourists. The promotions are carried out by the Sarawak state government agencies such as Sarawak Forestry Corporation (SFC), the state government agency that manages the national parks in Sarawak, Sarawak Tourism Board (STB) and tour operators surrounding Kuching. It is possible that high cost for boat rental between Sematan to TDNP (prior to completion of Pan Borneo Highway), coupled with accessibility factor

(either 15 minutes using speed boat from Kg. Telok Melano or 2.5 hours on foot via Telok Melano – Telok Upas – Tanjung Datu Headquarters Trail) had hindered local tourists to visit TDNP.

***e) Lack of community participation towards the planning and management of the park***

Interaction between the communities and the park operators is lacking thus causing very minimal participation among local communities towards the planning and management of the park. If the opportunity is given to them to express their views, they may suggest changes to the best of their knowledge as they grew up with the park.

***f) Limited financial resources to fund ecotourism projects***

Most business owners used their own savings as capital to start up their business. Thus, it is difficult for them to expand their business. They are aware about the small-scale business financial assistance opportunity such as *IAZAM*<sup>1</sup> programme. However, due to the geographical factor (the long distance from the villages to the nearby administrative offices especially before the construction of Pan Borneo Highway), lengthy and complicated procedures (from villagers' point of view) and relatively slim chance of success, the local people are reluctant to apply this financial assistant scheme.

***g) Shifting from fishing to small-scale farming***

Small-scale fishers were used to catch fish at Tanjung Datu coastal waters but after the place has been gazetted as a national park, they became small-scale farmers. To market local produce is a challenge for the villages as there is limited road network (before the road construction) to the cities and towns.

***h) Other issues***

Tourists' vehicular movement has been increased especially on weekends. However, the area is not really ready to receive large number of vehicles as there is no proper parking facilities at Kg. Telok Melano. The visitors tend to park their vehicles wherever they liked, exerting pressure on the feeder road network which passes through the settlements. Tourists

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<sup>1</sup> IAZAM is a government programme for low income households in income generation through economic activities such as business, sewing, farming and small-scale agriculture.

also degrade the environment by generating waste and littering especially during jungle or village trekking. This behaviour is depriving the park potential of its natural look and the rubbish thrown randomly may kill some animals because the wastes might contain toxins.

### **Summary**


TDNP ecotourism is promoting the business potential and income opportunity to the locals particularly through homestay, boat operation, tour services and small-scale business such as *warung*. With the increase of international tourists and local visitors' arrival to Kg. Telok Serabang and Kg. Telok Melano, cottage industry could grow further and become a potential for income generation for local people. The factors such as geographical aspect, cross border relationships, beautiful flora and fauna, great scenic natural landscape and marine resources will assist in the expansion and diversification of tourism activities in the area. The challenges faced should be addressed in a proper manner because this will enable the tourism-based economy to sustain itself in the local economy to benefit the local communities.

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Tanjung Datu  
— National Park —  
to  
Samunsam

This proceeding contains an overview of inventory works performed at Tanjung Datu National Park to Samunsam Sanctuary in the year 2018 to 2019, encompassing the organisms of terrestrial and aquatic ecosystems. Simultaneously, the status of local ecotourism, fisheries and pollution were also reported. This wide coverage of findings is very useful to complement the current and future development of the Tanjung Datu – Santubong Marine and Coastal Conservation Master Plan. With the construction of the Pan Borneo coastal highway, the impacts on marine environment and socio-economic are very important to be monitored. Thus, this book can be used as the main reference for future research in that area by scientists, policymakers and stakeholders, especially the relevant state and federal agencies in Sarawak. Environmental consultancy companies can also use the baseline data for Environmental Impact Assessment purposes.



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