

The formulation of guidelines to develop crab bank as a core tourist attraction: A case study of community-based tourism in Tambon Bang Toey, Amphur Muang, Changwat PhangNga

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Abstract

The aim of study was to investigate the existing tourist attraction attributes and potential of crab bank and explore the possibility for crab bank to be developed as a core tourist attraction by employing a quantitative research. Questionnaires were used to collect data from tourists visiting Changwat PhangNga. The study results revealed that the crab bank does not possess good attraction attributes to attract tourists. This attraction gains less attention and there was less number of activities for releasing crab to the crab bank. In contrast, restaurants providing seafood and the number of tourists were considerably increasing. In addition, activities which could gain more attention were to stay at homestay and to plant mangroves. However, an additional improvement is necessary for seafood restaurant, security in homestay, restroom, tourist information, transportation, and public telephone in order to provide guidelines on development of crab bank to be a tourist attraction of community located in Tambon Bang Toey, Changwat PhangNga.

Keywords: crab bank, community-based tourism, a core tourist attraction

1. Introduction

Changwat Phang Nga, located in the South of Thailand, has employed tourism as one of lucrative mechanisms to overcome an economic disparity and to improve the well-being of local population. Currently, Changwat Phang Nga possesses the various and fertile resources for tourism promotion in terms of nature and culture.

From the past decade, the growth rate of tourism in Changwat Phang Nga is continually increasing. Similar to other tourist destinations, Changwat Phang Nga has attempted to increase its competitiveness of tourism industry. Under the support of the OSM Andaman (The Office of Strategy Management for Southern Province Cluster), the local government has formulated the tourism strategies in order to expand the product lines and increase their values to strengthen the image position of Changwat Phang Nga as a hub of nature-based tourism. Tourism activities in this region are mainly emphasized upon the nature-based tourism, and often related to the cultural context of the area, namely agro-tourism, ecotourism, adventure tourism and community-based tourism.

In 1997, the local population in Tambon Bang Toey, Changwat Phang Nga established the crab bank under the support of Department of Fisheries to conserve and maintain crab varieties and restore the ecological systems. After Her Majesty the Queen Sirikit visited the village this year and initiated the principles to conserve crab varieties and maintain the natural resources of community for the present and future use of next generation. Not surprisingly, the crab bank has become one well-known attraction of Phang Nga, owed to the fresh seafood, pristine environment and location, fertility of mangrove forest and the local ways. Tourism growth in this village is gradually increasing, judging by number of

domestic and international tourists. However, the villagers still lack of knowledge, clear direction and proper management to arrange the tourism activities and maintain its potential resources. As a result, the community-based tourism lacks visible achievement towards the sustainable tourism development which is the ultimate goal of development.

Based on the afore-mentioned information, it is interesting to investigate the existing tourist attraction attributes and potential of crab bank and explore the possibility for crab bank to be promoted as a core tourist attraction of community-based tourism in Tambon Bang Toey, Changwat Phang Nga that response to a special need at the local level. The recommended guidelines from this study could be a benefit for the local villagers if they are motivated by net tourism benefits and given the appropriate supports.

2. Literature review

2.1 Concept of crab bank

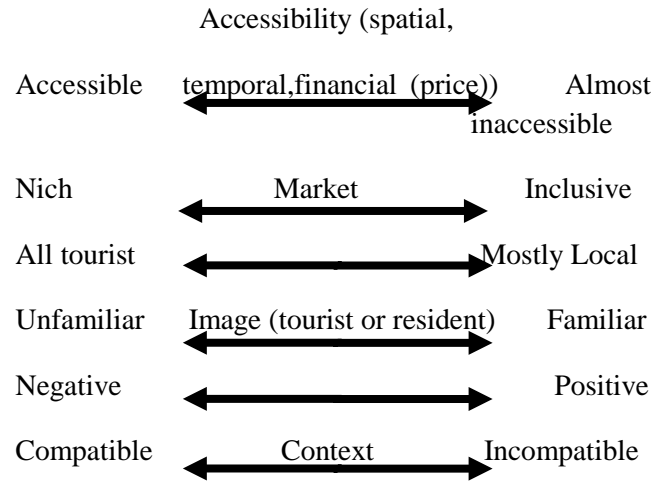
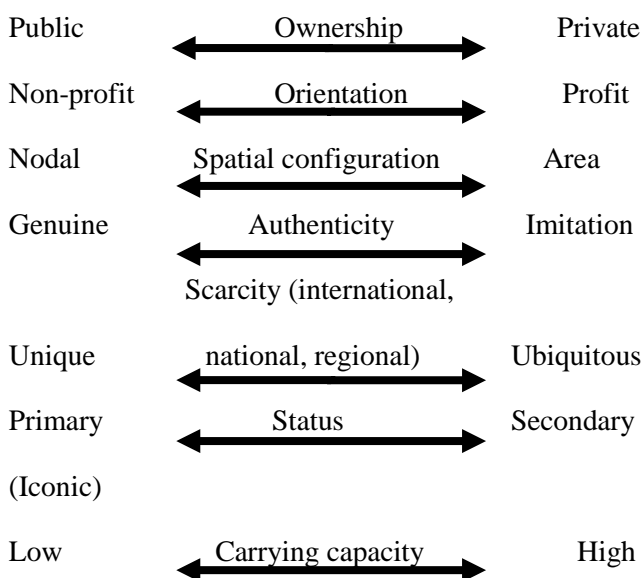
Waharak (2012) quoted initially, the local population gathered to establish nursery farm which is called "Crab Bank" being under the support of the Department of Fisheries, aiming to conserve and maintain crab varieties and also restore the ecological system. The farm consists of two floating baskets with 3 meters in width and 3 meters in length each, containing approximately 1,000 mother crabs in the farm. Those mother crabs are donated by the local population and quantity of crabs donated will be recorded on a board. After baby crabs are released, the local population is able to sell those mother crabs to others and collect money obtained as the fund of crab bank. In addition, a conservation area of 50 Rai (approximate of 80,000 square meters) is established for crab nursery and preventing others from catching

marine resources. The crab bank is declared as one of the Royal Development Project after Her Majesty the Queen Sirikit visited the village and provided the principles to conserve crab varieties and maintain them for the future use of next generation.

2.2 Concept of attraction attributes

Weaver & Lawton (2006) define the tourist attraction attributes that should be initially collected and investigated in order to process an effective management of the tourism sector. To list and categorize them are not adequate, so the status of them must also periodically assessed across all relevant attraction attributes to demonstrate an appropriate planning and management decisions (Figure 1). A spectrum is employed in each case to reflect the continuous nature of the variables. Hence, each attraction attribute will be considered, with no order of importance implied by the sequence of presentation.

Figure 1: Tourist attraction attributes



Source: Weaver & Lawton 2006

2.3 Concept of attraction potential assessment

Esichaikul (2001) suggested the measures to assessing potentiality of tourism resources. Ranking is identified as an analysis to discover strength of resources existing in a tourist attraction so that suitability of setting up a guideline of tour itinerary can be analyzed. The processes are described as follows:

Prior to analysis of tourism resources, an authorized person should firstly survey information relating to tourism resources in that area and then utilize the information for setting directions of tourism management. To inspect the tourist attraction, it must be known what tourism resources exist in the area, what type of tourism resources are, and what condition of tourism resources are.

The tourism resources obtained from the survey possess various attributes and suitability depending on potentiality of the tourist attraction. Hence, the tourist attraction with highest level of potentiality should be managed in an appropriate way. However, the tourist attraction with lowest level of potentiality should be considered in terms of its characteristic and management in order to improve the provision of tourism

appropriately for the tourist attraction and also to have the management which is beneficial to the country and meets the requirement of the country as a whole.

Ranking assessment of potentiality and provision of tourism resources in tourist attraction consists of the important methods as the following:

1. To specify indicators for realizing the potentiality of tourist attraction by setting scores from 5 to 1, highest score to lowest score, as sample indicators are demonstrated below.

a) Type of tourist attraction: It is to consider general conditions of tourist attraction, relation of ecological system existing in the area, and opportunity of tour itinerary arrangement, for example, to score 5 for the tourist attraction possessing unspoiled nature or culture and tourist attraction slightly required some improvement of its area for promoting tourism will be scored 4.

b) Characteristic of tourist attraction: Three factors relating to general condition of the tourist attraction which are ecological system in the tourist attraction, identity and uniqueness, and various elements will be considered, for example, a natural tourist attraction with ancient remains having suitable resources for arranging tour itinerary will be scored 5.

2. To assess the potentiality of tourist attraction is to increase weighted score to tourist attraction based on value and its importance. Value scores are set from 15 to 5, highest score to lowest score, for example,

Indicator 1: Type of tourist attraction holds value score of 15.

Indicator 2.1: Condition of ecological system of tourist attraction holds value score of 15.

Indicator 2.2: Identity holds value score of 10.

Indicator 2.3: Having additional elements holds value score of 5.

As value scores multiply by highest score (5) until lowest score (1), those tourist attractions are likely to have the highest total scores of 225 ($15 \times 5 + 15 \times 5 + 10 \times 5 + 5 \times 5$) and the lowest total scores of 45 ($15 + 15 + 10 + 5$). Therefore, the potentiality is categorized into 5 groups or 5 levels which are group A, B, C, D, and E containing the highest score until the lowest score respectively as the following:

Group A contains score from 170 or above.

Group B contains score from 145 to 165.

Group C contains score from 125 to 140.

Group D contains score from 95 to 120.

Group E contains score from 90 or lower.

3. Methodology

This study was conducted by applying quantitative methodologies. The aim was to investigate the existing tourist attraction attributes and potential of crab bank to be promoted as a core tourist attraction of community-based tourism in Tambon Bang Toey, ChangwatPhangNga. The study area was emphasized mainly on Tambon Bang Toey, Changwat PhangNga. The population of the study was Thai tourists visiting Changwat PhangNga.

The researcher employed the Taro Yamane formula (Yamane, 1967) to calculate a sample size. 400 samples were selected by using convenience sampling technique. The instrument of this study was questionnaire constructing based on literature review and relating to the objectives. To test the content validity and the reliability of the research instrument, the pilot test of 20 questionnaires

were conducted. The study employed a cross-sectional approach to collect the primary data from April to May 2012. Later, the data gathered from the questionnaires was analyzed by applying a statistical analysis program as a tool.

4. Finding

It was found that 37% of tourists were males and 63% of them were females. The tourists aged between 26-40 years old was amounted to 48% and approximate of 30% were tourists aged 18-25 years old. Tourists with age of 41-55 years old was amounted to 14.2% and 7.8% of tourists were 50 years old or above. For education level, it was stated that tourists who graduated the bachelor's degree were amounted to 45.8%. 27.3% and 10.3% were tourists graduated from secondary school and vocation diploma, respectively. 43% of tourists had their own business and 18.3% of tourists were students. Lastly, 13.3% of tourists worked as government officer or in the state enterprise. In terms of income, it was found that 50% of tourists had income of 9,501 baht or higher and 19% of tourists earned 5,500 baht or lower. 10.5% of tourists had income between 7,501-8,500 baht.

Table 1 Demographic profile of respondents

Personal Demographic Characteristic		F	%
Gender	Male	148	37
	Female	252	63
Age	18-25	120	30
	26-40	192	48
	41-55	57	14.2
	Over 55	31	7.8
Education Level	Primary School	28	7
	Secondary School	109	27.3
	Vacation Diploma	41	10.3
	Bachelor's Degree	183	45.8

	Master's Degree	32	8
	Other	7	1.8
Occupation	Government Officer/State Enterprise	53	13.3
	Commercial Personnel	172	43
	Company Officer/Employee	49	12.3
	Worker/Labor	7	1.8
	Student	73	18.3
	Unemployed/Retired	12	3
	Fisherman/Agriculturist	21	5.3
	Other	13	3.3
Personal Monthly Income	5,500 Baht or Lower	76	19
	5,501-6,500 Baht	28	7
	6,501-7,500 Baht	24	6
	7,501-8,500 Baht	42	10.5
	8,501-9,500 Baht	30	7.5
	9,501 Baht or Higher	200	50
Total		400	100

As mentioned in Table 2, it illustrated the result after an analysis of variance applying method one-way ANOVA of tourists by agebased on attraction attributes. It was shown that age of tourists affected on assessment of priority of attraction attributes with statistical significance in these issues: quality and cleanliness of restaurant at crab bank (P-value=0.004), quality of food (P-value=0.00), facilities in Bang Toey community such as souvenir shop and supermarket (P-value=0.01), number and cleanliness of rest room in community (P-value=0.05), convenience of transportation to community (P-value=0.01) and information such as traveling, tourist attraction and accommodation (P-value=0.01).

Table 2 Analysis of Attraction Attributes by Age

No.	Attraction Attributes	Mean				Std. Deviation				ANOVA	
		18-25	26-40	41-55	Over 55	18-25	26-40	41-55	Over 55	F-value	P-value
1.	Dominant physical construction of Crab Bank	3.84	3.82	3.89	4.00	.622	.696	.363	.000	.922	.430
2.	Location of Crab Bank	4.03	3.88	4.05	4.00	.533	.648	.294	.000	2.670	.047
3.	Floating Basket	3.93	3.79	3.93	4.00	.742	.708	.495	.000	1.802	.146
4.	Statistic deposit and releasing crab on board	3.91	3.68	3.93	3.94	.961	.772	.371	.250	3.299	.020
5.	Tourism activities such as releasing crab, growing tree forest and side seeing the community way of life	4.01	3.82	3.91	4.13	.558	.766	.342	.341	3.398	0.18
6.	Quality and interesting of Crab Bank tourism program	3.99	3.82	4.04	3.97	.750	.679	.499	.407	2.461	0.62
7.	Home stay activity	4.09	3.94	4.07	3.81	.778	.624	.495	.402	2.458	.063
8.	Fertileness of mangrove forest	4.64	4.66	4.81	4.61	.482	.548	.398	.667	1.606	.187
9.	Quality and cleanliness of restaurant at Crab Bank	4.22	4.01	3.96	4.03	.611	.551	.421	.180	4.586	.004*
10.	Quality of food	4.40	4.16	4.11	4.26	.525	.518	.409	.445	7.201	.000*
11.	Safety of tourism attractions in community	4.07	3.98	4.05	4.10	.645	.506	.350	.301	.887	.448
12.	Safety of Home stay	3.83	3.95	3.96	3.97	.631	.549	.325	.407	1.607	.187
13.	Qualities of local roads and walkways	3.77	3.83	3.84	4.06	.786	.642	.492	.250	1.728	.161
14.	Quality of bridge	3.90	3.92	3.96	4.06	.749	.578	.462	.250	.684	.562
15.	Sign of Crab Bank	3.76	3.71	3.96	4.00	.840	.722	.462	.000	3.030	.029
16.	Facilities in Bang Toey community such as souvenir shop and supermarket	3.70	3.64	3.93	4.03	.751	.633	.417	.180	5.927	.001*
17.	Number of public telephone in community	2.41	2.40	2.19	2.03	.855	.752	.581	.795	3.020	.030
18.	Number and cleanliness of rest room in community	3.17	2.87	3.05	3.00	.853	.744	.479	.258	4.290	.005*
19.	Convenience of transportation to community	3.71	3.54	3.84	3.94	.715	.730	.492	.250	5.526	.001*
20.	Information such as traveling, tourist attraction and accommodation	3.90	3.69	3.93	4.00	.586	.684	.495	.000	5.317	.001*

Remark *=P<0.05

The variance analysis of tourists by occupation-based on attraction attributes was demonstrated in Table 3. The study revealed that occupation of tourists influenced in assessment of priority of attraction attributes with statistical significance in these issues: dominant physical construction of crab bank (P-value=0.04), location of crab bank (P-value=0.01), tourism activities such as crab donation, growing tree forest and side seeing the community way of life (P-value=0.00), quality of food (P-value=0.00), safety of home stay (P-value=0.01), facilities in Bang Toey community such as souvenir shop and supermarket (P-value=0.01), number of public telephone in community (P-value=0.00), number and cleanliness of rest room in community (P-value=0.05), convenience of

transportation to community (P-value=0.04) and information such as traveling, tourist attraction and accommodation (P-value=0.00).

Regarding the variance analysis of tourists by income-based on attraction attributes (Table 4), it was found that income of tourists influenced in assessment of priority of attraction attributes with statistical significance in these issues: facilities in Bang Toey community such as souvenir shop and supermarket (P-value=0.01), number and cleanliness of rest room in community (P-value=0.01), convenience of transportation to community (P-value=0.00), and information such as traveling, tourist attraction and accommodation (P-value=0.04).

Table 3 Analysis of Attraction Attributes and Potential of Crab Bank by Occupation

No.	Attraction Attributes	Mean								Std. Deviation								ANOVA	
		Government Officer	Commercial Personnel	Company Officer	Worker/Labor	Student	Unemployed/Retired	Fishery/Agriculture	Other	Government Officer	Commercial Personnel	Company Officer	Worker/Labor	Student	Unemployed/Retired	Fishery/Agriculture	Other	F-value	P-value
1.	Dominant physical construction of Crab Bank	3.60	3.92	4.00	3.89	3.79	3.67	4.00	3.54	.817	.507	.677	.378	.552	.651	.000	.967	3.066	.004*
2.	Location of Crab Bank	3.79	3.98	4.12	3.86	3.95	3.50	4.00	4.31	.743	.358	.726	.378	.524	1.000	.000	.751	3.461	.001*
3.	Floating Basket	3.77	3.91	3.98	4.00	3.88	3.50	3.86	3.62	.847	.499	.803	.000	.725	.905	.359	1.044	1.269	.264
4.	Statistic deposit and releasing crab on board	3.60	3.86	3.88	3.71	3.89	3.50	3.62	3.69	1.13 2	.596	.807	.488	.774	1.000	.498	1.109	1.324	.237
5.	Tourism activities such as releasing crab, growing tree forest and side seeing the community way of life	3.58	4.01	3.98	4.00	3.96	3.42	4.00	3.85	.887	.535	.750	.000	.512	.996	.000	.689	3.964	.000*
6.	Quality and interesting of Crab Bank tourism program	3.77	3.91	4.12	4.00	3.99	3.69	3.90	3.69	.800	.550	.666	.000	.697	1.087	.301	1.109	2.067	.046
7.	Home stay activity	4.02	3.98	4.18	4.00	3.93	3.67	4.05	3.92	.909	.546	.697	.000	.673	.651	.498	.641	1.197	.303
8.	Fertileness of mangrove forest	4.68	4.74	4.65	5.00	4.58	4.67	4.52	4.38	.471	.537	.481	.000	.498	.492	.512	.768	2.004	.054

9.	Quality and cleanliness of restaurant at Crab Bank	3.92	4.05	4.20	3.86	4.15	4.17	4.00	4.00	.583	.449	.707	.389	.616	.389	.000	.816	1.534	.154
10.	Quality of food	4.06	4.18	4.39	4.00	4.41	4.42	4.00	4.31	.633	.429	.606	.000	.495	.515	.000	.751	4.381	.000*
11.	Safety of tourism attractions in community	3.83	4.06	4.12	4.00	4.01	4.08	4.00	4.08	.580	.392	.726	.000	.634	.515	.000	.641	1.501	.165
12.	Safety of Home stay	3.92	4.01	3.98	4.00	3.66	4.00	3.86	3.85	.646	.412	.692	.000	.558	.603	.359	.801	3.418	.001*
13.	Qualities of local roads and walkways	3.75	3.83	3.96	3.71	3.88	3.33	4.00	3.77	.731	.596	.763	.488	.666	.888	.000	.725	1.695	.109
14.	Quality of bridge	3.81	3.96	4.00	4.00	4.00	3.42	4.00	3.77	.735	.511	.677	.000	.667	.793	.000	.725	2.049	.048
15.	Sign of Crab Bank	3.62	3.88	3.69	4.00	3.74	3.58	4.00	3.38	.882	.601	.918	.000	.688	.900	.000	.768	2.179	.035
16.	Facilities in Bang Toey community such as souvenir shop and supermarket	3.51	3.83	3.53	3.86	3.78	3.75	3.90	3.31	.750	.593	.616	.378	.583	.866	.301	.855	3.528	.001*
17.	Number of public telephone in community	2.17	2.22	2.47	2.00	2.60	2.92	2.10	2.85	.727	.688	.892	.000	.924	.793	.301	.376	4.86	.000*
18.	Number and cleanliness of rest room in community	2.83	2.95	3.06	2.86	3.26	2.83	3.14	2.54	.849	.660	.689	.690	.866	.718	.359	.519	2.974	.005*
19.	Convenience of transportation to community	3.66	3.74	3.49	3.71	3.64	3.58	3.90	3.00	.758	.566	.794	.488	.788	.900	.301	.577	3.808	.004*
20.	Information such as traveling, tourist attraction and accommodation	3.68	3.93	3.57	3.86	3.86	3.58	3.90	3.38	.803	.153	.645	.378	.713	.900	.301	.506	3.824	.000*

Remark *=P<0.05

Table 4 Analysis of Attraction Attributes and Potential by Monthly Personnel Income

No.	Attraction Attributes	Mean						Std. Deviation						ANOVA	
		5,500 Baht or Lower	5,501-6,500 Baht	6,501-7,500 Baht	7,501-8,500 Baht	8,501-9,500Baht	9,501 Baht or Higher	5,500 Baht or Lower	5,501-6,500 Baht	6,501-7,500 Baht	7,501-8,500 Baht	8,501-9,500Baht	9,501 Baht or Higher	F-value	P-value
1.	Dominant physical construction of Crab Bank	3.95	3.82	3.88	4.00	3.97	3.77	.278	.548	.612	.442	.669	.709	1.954	.085
2.	Location of Crab Bank	4.09	4.00	3.92	4.00	4.13	3.88	.406	.385	.504	.442	.730	.601	2.568	.027
3.	Floating Basket	4.07	3.96	3.92	3.81	4.03	3.77	.298	.429	.504	.594	.765	.783	2.939	.013
4.	Statistic deposit and releasing crab on board	3.91	4.00	3.92	3.76	3.73	3.74	.636	.385	.717	.656	.740	.887	1.082	.370
5.	Tourism activities such as releasing crab, growing tree forest and side seeing the community way of life	4.04	3.96	4.08	4.12	3.83	3.81	.381	.429	.504	.395	.699	.759	3.051	.010
6.	Quality and interesting of Crab Bank tourism program	4.03	3.79	4.04	3.90	4.13	3.85	.601	.686	.464	.431	.629	.737	1.918	.090
7.	Home stay activity	3.97	3.93	3.96	4.10	4.17	3.97	.541	.716	.908	.617	.747	.633	.768	.573
8.	Fertileness of mangrove forest	4.66	4.71	4.58	4.79	4.57	4.67	.478	.460	.504	.415	.504	.568	.829	.530
9.	Quality and cleanliness of restaurant at Crab Bank	4.12	4.11	4.04	4.02	4.13	4.05	.431	.629	.690	.468	.730	.533	.384	.860
10.	Quality of food	4.13	4.43	4.50	4.17	4.30	4.21	.340	.504	.590	.377	.596	.554	3.114	.009
11.	Safety of tourism attractions in community	3.99	4.14	3.88	4.10	4.07	4.03	.476	.591	.797	.484	.691	.464	.951	.448

12.	Safety of Home stay	3.84	3.89	3.75	3.90	4.00	3.96	.434	.629	.737	.431	.643	.543	1.100	.360
13.	Qualities of local roads and walkways	3.93	3.96	3.92	3.74	3.90	3.78	.442	.576	.929	.497	.759	.698	1.233	.293
14.	Quality of bridge	4.00	4.11	4.04	3.90	4.03	3.86	.400	.629	.690	.297	.718	.680	1.592	.161
15.	Sign of Crab Bank	3.92	3.89	3.79	4.00	3.63	3.69	.510	.416	.721	.541	.928	.779	2.506	.030
16.	Facilities in Bang Toey community such as souvenir shop and supermarket	3.88	3.86	3.33	3.93	3.63	3.67	.431	.356	.565	.463	.615	.737	4.454	.001*
17.	Number of public telephone in community	2.32	2.68	2.29	2.19	2.53	2.32	.637	.945	.690	.505	.860	.830	1.861	.100
18.	Number and cleanliness of rest room in community	3.18	3.39	2.92	3.00	3.07	2.87	.559	.832	1.248	.663	.740	.678	4.203	.001*
19.	Convenience of transportation to community	3.93	3.46	3.50	3.57	3.37	3.67	.471	.508	1.063	.668	.809	.666	4.648	.000*
20.	Information such as traveling, tourist attraction and accommodation	3.99	3.79	3.54	3.81	3.53	3.82	.346	.630	.658	.552	.629	.671	3.544	.004*

Remark *=P<0.05

5. Discussion and Conclusion

As the result shown, it was stated that the crab bank in Tambon Bang Toey, Changwat PhangNga in general was still lack of a complete attraction attributes. There was suddenly increasing number of tourists. Hence, it affected on a readiness of tourist attraction and potentiality to provide sufficient capacity for tourists who visit the community.

The crab bank is currently constructed and its location is easily seen by tourists. However, it gains less attention from tourists and fewer activities of donating crabs to the crab bank are done because of less crabs causing insufficient number of them for tourists. Although activities, for example, releasing crabs, growing mangroves, and sightseeing in the community in order to learn way of life can gain attention of tourists, there is no guide providing for them and villagers have no skills on guiding tourists or providing tourism information. It is very interesting to note that seafood restaurants in the community can gain more interest from tourists causing them to be the first goal of tourists while visiting this area. Significantly, quality of fresh seafood and sanitary must be improved for supporting the increasing number of tourists at any level. Previously, only tourists from nearby provinces always visit this area, but tourists from all around Thailand are currently visiting this place and eating seafood. The facilities in the community are quite important for tourists. Therefore, the number of restrooms and their sanitary must be improved and developed in order to support better tourist attraction. In addition, souvenir shops should offer a variety of products as well as its quality. Besides, information relating to transportation, accommodation, and tourist attraction is not available for tourists. Another problem is that

no public transportation to reach the attraction and public telephone. Those are like obstacles for tourists who want to visit this village.

Once crab bank has been succeeded by receiving award of excellent community in 2008 and mangrove forest in 2011. There are many interesting activities provided such as releasing crabs to crab bank, sightseeing mangrove forest by boat, and visiting the community in order to learn villagers' way of life. In addition, tourists can have fresh seafood and learn local cultures and customs. Besides, home stay is able to meet the need of tourists who like it. If there is a guideline for crab bank development and improvement of tourist attraction as well as an availability of tourist information, the crab bank must possibly become a core tourist attraction of Tambon Bang Toey, Changwat PhangNga in the future.

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