

An Application of Backcasting Approach to Sustainable Tourism Development: A Case Study of Nakorn Chum, Thailand

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Abstract—The paper presents the analysis of the sustainable tourism development strategies in Nakorn Chum Sub-district, Kamphaeng Phet Province, Thailand. The backcasting approach has been used as a framework to seek for the desirable image of the future for the community in terms of tourism development along with the preservation of fundamental resources and cultural assets of the community. This community is composed of historical sites and antiquities with well-preserved traditional arts and cultures. However, the community is situated in remote and isolated area which is lack of maintenance and limited precise directions. This creates major problems in developing effective and sustainable tourism development to the community. The findings of this paper show the analysis and development scenario of the community's future perspective and goals. The proposed framework of this paper is called Sustainable Nakorn Chum Model (SNC Model). This SNC Model focuses mainly on supporting the community to survive and be self-sufficient by using the fundamental resources that they already have yet, preserving the traditional charm and uniqueness of the community. This framework is not only for meeting the present, but also future generations' needs. Therefore, the SNC Model can be applicable to other community-based tourism development areas in long-term planning.

Index Terms— Backcasting, community-based study, sustainable tourism.

I. INTRODUCTION

Tourism industry is expanding rapidly in Thailand as it embraces a rich diversity of cultures and traditions. With its proud history, tropical climate, and renowned hospitality, Thailand offers a great potential for the development of tourism in various areas of the country [1]. Both government and private sectors play prominent roles in supporting and promoting tourist attractions in Thailand. However, some of the tourist attractions are in remote and isolated areas and lacks of maintenance and limited precise directions lead to major problems in developing effective and sustainable tourism development. Thailand has large opportunities to develop community-based tourism areas. Nakorn Chum, for example, is a small community situated in the rural area to the west bank of the Ping River in

Kamphaeng Phet Province, the lower northern province of Thailand and 350 kilometers away from Bangkok (see, Fig. 1). Nakorn Chum has a long and interesting history. The familiarly known history of Nakorn Chum dates back about a century, when Nakorn Chum was the center of commerce and junction of water transportation, because the city was built along the river and canal: Ping River and Klong Suan-Maak canal. Thus, Nakorn Chum was most prosperous for 200 years (around 1200-1400) after that people moved to the opposite side of the Ping River (Kamphaeng Phet Province at present). This is due to the effect of river bank erosion that collapsed the Nakorn Chum city's wall. Then, Nakorn Chum city became a small city with subjected to the Ayuttaya's monarch [2]. Also, Nakorn Chum is a small community with plenty of natural resources which are suitable for settlement.



Fig. 1. Nakorn Chum Sub-district and the surrounding area.

Consequently, people from different parts and diverse ethnicities such as Karen, Tai, Mon and Chinese migrated to Nakorn Chum. These diverse groups have brought their distinctive cultures and exotic ways of life to the community, including the Burmese style stupa, the art, architectures and traditional food and dessert. As a result, Nakorn Chum features natural resources, historical sites, cultural heritage, unique traditional wooden houses, and attractive tourist attractions.

One of the obvious strengths of Nakorn Chum is the harmony of the people in the community and the mutual attempt to build up the prosperity and the sustainability among the community by using the existing resources that they have locally in terms of cultural heritage and local wisdom. Besides, the community has been trying to launch projects and initiatives to promote tourism within the community. One of the officially known events is called the “Nakorn Chum Retro Market”, as shown in Fig. 2. .

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The event has been held once a month along Nakorn Chum Walking Street (see, Fig. 3). This event aims to display their cultural heritage by having local people dress up in the traditional Thai style costumes, selling the traditional food and handicrafts surrounded by the ancient Thai-styled wooden houses in the area to create a feeling of nostalgic sentiment and to draw the tourist's attention in order to increase the income for the community by using the existing resources of that community.



Fig. 2. Nakorn chum retro market.



Fig. 3. The walking street with local food stalls during the Nakorn Chum retro market week.

In practice, this whole idea is not yet successful enough for the local people to earn more income and number of tourists visiting Nakorn Chum are still less than the local people within the community itself. Furthermore, Nakorn Chum is situated deep inside the province and is quite far away from the city center. Also, there is limited public transportation in the community, so it can be accessible mainly by private cars and motorcycles.

Against the above background, this paper aims to apply the Backcasting approach to community-based sustainable tourism development in order to 1) identify the changes that would need to be made to the current situation of the community 2) create sustainable development strategies to achieve a desirable visions for the future, and 3) develop an image of the future of Nakorn Chum to construct an alternative model for a community-based study in a sustainable development context.

II. METHODOLOGY

A. Future Planning

Futures studies help to organize and plan to achieve the desired alternative scenarios as well as to guide for development. In this case study, Nakorn Chum needs future directions to help set preferable future state in order to support the community to survive and be self-sufficient in terms of sustainable tourism development whereas using the resources that they already have yet, preserving the traditional charm and uniqueness of the community.

Hence, any long term research approach is needed not only for meeting the present, but also future generations' needs by taking advantage of the strengths and opportunities among the community itself. The answer to the problems regarding the creation of the development strategy under the umbrella of futures studies is the foresight technique..

The foresight studies are defined as an equivalent set of systematic efforts to look into the future and make the most efficient choice [3]. At the same time, foresight assumes that there is no one single future, depending on the actions or lack of actions in the present, many variants of the future are possible, but only one of them will occur [4].

The future scenario can be divided into three areas: what will happen (trend extrapolation), what could happen (forecasting), and what should happen (e.g., backcasting and normative scenarios) [5-6]. These can also be termed as: probable, possible, and preferable futures [7].

In this paper, the backcasting approach has been used to seek solutions for the community and people inside the community to survive and support tourism within the community and to help the decision which way the community will go. The approach helps to set goals to manage the resources wisely and effectively in order to meet the sustainability in the long-term planning.

B. Using Backcasting in Sustainable Tourism Development

The backcasting approach was applied to a case study: Nakorn Chum Sub-district, Kamphaeng Phet Province, Thailand in order to develop a broad understanding and creation of sustainable tourism and enable the development of visions for the future.

In order to have a broad understanding and creation of sustainable tourism development, backcasting is an established approach that can be used to assess the feasibility and impacts of alternative futures [8-9] with a focus on discovery, rather than justification [10]. In addition, backcasting approach is about defining the desirable future and then strategizing and planning how to get there [11].

The backcasting approach is traditionally based on one normative vision, but multiple visions can also be used to explore different future alternatives [6]. The backcasting approach has also been applied to various aspects in many countries, such as [5], [7], [11] to define visions for future development. The visions can be both quantitative and qualitative.

The first backcasting approach was introduced in the 1970s; it was then known as "backward looking analysis" and dealt with energy consumption and optimization strategies [12]. In

Sweden, the backcasting approach has been applied to various aspects of sustainable development for instance, the use of backcasting approach to investigate the development of sustainable water supplied, cities, mobility systems, and households [7], [11].

Also the use of backcasting approach has been proposed for strategic sustainable development in the “Natural Step” project [13]. This project aimed at the “*transition of existing structures and organizations in society towards sustainability and to help the new things that are always being created be sustainable from the start*” (see, Fig. 4).

In order to conduct the backcasting approach, scenarios need to be developed of what a desired future might include, challenges and opportunities, and how best to mitigate against uncertainties [14], [15].

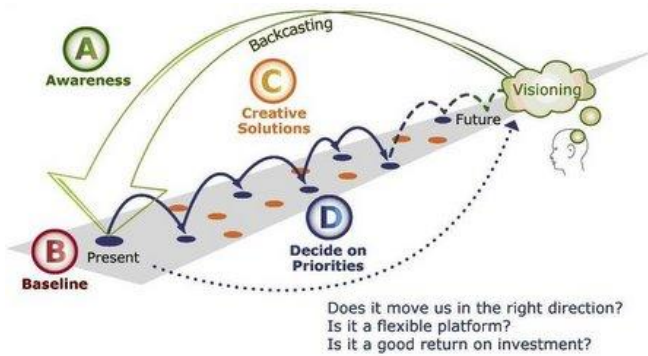


Fig. 4. The ABCD model for developing visions. Source: www.thenaturalstep.org.

C. Data Collection

With the limitations and obstructions that Nakhorn Chum is facing in terms of the decline in the number of tourists and the lack of precise directions to develop sustainable tourism inside the community, investigations of these major problems is the major focus of this paper.

The research methodology used in this paper was in-depth interviews with people in the community which included tourism strategists, representatives of administration, entrepreneurs in the tourism sector, representatives of non-governmental organizations and local residents. Participants were interviewed based on their background and specialization asked for their points of view towards the case study area. Questions are shown in Table 1.

The interview was conducted under the mutual perspectives of how tourism inside the community should be developed and what the image of future development would be while maintaining the quality of people’s life in the long term. The following are 3-step processes of the data collection.

Step 1: A current situation exploration – An initial observation to evaluate a current situation of the community as a tourist destination happened in this stage. The observation included the local people’s way of life, the average number of tourists and the overall problems and limitations that the community has encountered.

Step 2: An internal meeting – This stage was the workshop with local people in the community to ensure that they realize the importance of sustainable tourism and have a better understanding about strengths and weaknesses that the community has and is proud of. In this stage the strengths of

the community have been raised including the existing resources and cultural heritage that the community agrees to be promoted as the prominent features of tourist destination. The preferable future goals and directions of the community were also discussed in this stage.

TABLE I: THE INTERVIEWED QUESTIONS USED FOR DATA COLLECTION

Item	Question
1	What is your opinion towards Nakorn Chum nowadays?
2	What are the strengths of Nakorn Chum from the tourists’ point of view?
3	What are the major income areas of the people in the community?
4	Compared with Nakorn Chum in the past, what are the differences in the community at present?
5	Are there any opportunities to promote Nakorn Chum to be a popular tourist destination?
6	What are the main obstacles in developing Nakorn Chum to be a popular tourist destination?
7	What are the proposed directions to promote Nakorn Chum to be one of the popular tourist destinations?
8	What do you wish Nakorn Chum to be in the future?
9	How would you like the government sectors to support the development of Nakorn Chum?
10	Any other suggestions or comments?

Step 3: Scenario creation – The third stage was the official in-depth interview with tourism strategists, representatives of administration, entrepreneurs in the tourism sector, representatives of non-governmental organizations and local residents to imagine about what would happen in the future and establish the scenarios and goals that the community needs to achieve in the long-term planning.

The overall backcasting methodology used in this paper (see Fig. 5) consists of three steps: 1) description of the present and trend analysis, 2) developing images of the future and 3) analysis of how to reach the images.

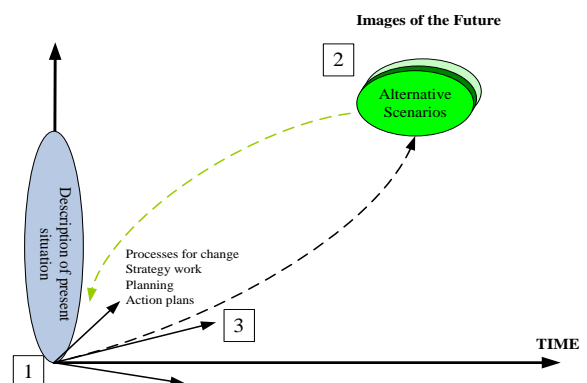


Fig. 5. The overall backcasting approach used in the research Source: Adapted from [11].

III. FINDINGS

The answers from the interview were recorded, compiled, and analyzed. The analysis does not assign the statements to any particular interviewee but aim to provide an overview of the situation and analyze the solution for the case study area.

The current state of Nakorn Chum is a community which is composed of historical sites and antiquities with well-preserved traditional arts and cultures. The long and interesting history of the community leads to the attractive cultural tourist attractions that tourists can visit daily along with the prosper areas for enhancing people to earn income from plenty choices of exquisite traditional food and desserts.

In terms of the strengths of Nakorn Chum, tourists who come to visit Nakorn Chum are able to set up their own travelling itinerary inside the community with the help of local people for instance, the tour to admire the arts and cultures of the community, the historical sites, the taste of traditional food and desserts and gaining knowledge from learning resources inside the community.

Another major strength of Nakorn Chum is its unique character as well as its identity because Nakorn Chum is a well-functioning community itself without any need of modern decoration, i.e. the temple with Buddha's relics, the ancient Thai-styled wooden houses in all areas and the remarkable history of a visit of King Chulalongkorn to the famous canal namely Klong Suan Mak.

However, there are some weaknesses and limitations that create the major problem in developing tourism of the community. Undoubtedly, the main obstacle of Nakorn Chum is the lack of budget to support the development of the community. Secondly, the key persons in developing the tourism are mainly aging people working as unofficial group. Hence, the community should have the collaboration from different generations to help create the tourism promotion for some challenging future options and preserve the community heritage.

Also, some of the local people do not realize the importance of the sustainable tourism development and still do not have a clear idea about the history of the community, so a local tour guide training course and a youth tour guide is urgently needed in the first place to welcome tourists and give correct information about the history and the cultural heritage of the community to the tourists.

Along with the tour guide training course, people inside the community need to be trained about being good hosts and educated to foresee the advantages of sustainable tourism and the long-term benefits for the community while maintaining the fundamental resources that they have and to remind the community of the nostalgic sentiment that has been passed from generation to generation.

Another possible direction is to set up profit making events and activities in order to support the community development. A public relation campaign that enhances interaction among the people inside the community is another potential way to promote itself to be perceived as a famous tourist destination.

Furthermore, there must be an official organization launched to be responsible for the tourism management and development of the community. An association with other

tourism sectors outside the community is also suggested for future collaboration.

Besides, in order to maintain the strengths and opportunities of the community, the environmental responsibility and cultural assets are the crucial points that the community needs to concern in every resource's exploitation.

An ideal settlement design would involve the prosperity and solidarity among people of the community in every aspect, including the maintenance of the ancient Thai-styled wooden houses instead of the modern buildings, an increasing number of Nakorn Chum trading centers in the community together with the strong harmony of local people and the sense of having great hosts of local people to create a calm and peaceful but attractive tourist destination from the visitors' point of view.

As a result, the people of Nakorn Chum community need to have a mutual understanding about an effective direction to reach the image of the future and also a mutual approach to promote Nakorn Chum to be the so-called "Sustainable Nakorn Chum Model (SNC Model)".

IV. CONCLUSION

It would be difficult to cope with the risk of unsustainable development in terms of tourism within the small community if there is no long-term planning to take advantage of the strengths and opportunities that the community has. Therefore, the community needs to build up the sustainable tourism development context within the community to create a more qualitative future for its population.

In this paper, the backcasting approach has been used for a case study of Nakorn Chum Sub-district, Kamphaeng Phet Province, Thailand. This approach enables the community to have the image of the future that leads to SNC Model. This model can be particularly applicable to other community-based tourism development areas in long-term planning. Preferably, the SNC Model can provide value support for sustainable tourism development that can be taken to reach a desirable future or to be used as a decision making tool to prioritize the stages of community development that need to be taken and reached in the long term.

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