Abstract

This paper examines Langkawi’s local community’s views on their appreciation of the geopark as a tool for heritage conservation. Data were collected through qualitative method using interviews with key village informants and local residents. The results of this study are presented according to the five core values established in a newly developed framework: knowledge and understanding, shared values, benefit and opportunities, role and responsibilities, and empowerment. The conclusions point to the needs for public education programmes, and awareness initiatives aimed not only at ensuring community engagement within the development of Langkawi Geopark but also at generating stewardship actions from the community.

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Keywords: Public education; Adult education; Non formal education; Heritage conservation; Sustainable development

1. Introduction

Education plays a major role in shaping human behaviour and therefore helps in developing individuals who can behave in desirable ways and ultimately assume responsible citizenship. One of the key success factors for sustainable conservation is the level of awareness and appreciation on the heritage value of the resources by stakeholders, particularly the local communities. An informed society or community will make wise decisions about protecting and preserving resources that define the very essence of their culture and society (Norzaini Azman, Sharina Abdul Halim & Ibrahim Komoo, 2009).

The success of Geopark development and heritage conservation mainly depends on two factors which are the stakeholders’ awareness, participation and appreciation towards heritage values and its economic potential; and the public education programmes designed for various stakeholders.

In order to achieve effective conservation and sustainable resource utilisation, innovative public education programmes, promotional activities and capacity-building initiatives need to be formulated. These conservation educational initiatives can serve as a vital links between scientific work occurring in the field and the people living in the region or community. Educating the community, school children and key decision makers on the conservation...
challenges may enhance their ability to achieve long lasting and effective conservation and sustainability programmes (Norzaini Azman, Sharina Abdul Halim & Ibrahim Komoo, 2009).

The basic premise of the research reported in this paper is that public education can be developed in different settings for different audience and purposes with a variety of method and resources. However, we acknowledged that there is scarcity of educational opportunities and programmes in Langkawi Geopark regarding conservation issues. Thus, this research group aims to initiate and advance the public education missions of geopark in tandem with the development of the economy and infrastructure of Langkawi geopark. The outcome anticipated from the research includes educational tools, mechanism and opportunities that will enable the public to understand and to act effectively, as well as empower the community to become lifelong conservationist (Norzaini Azman, Sharina Abdul Halim & Ibrahim Komoo, 2009).

One of the key success factors for sustainable conservation is the level of awareness and appreciation on the heritage value of the resources by stakeholders, particularly the local communities (Norzaini Azman, Sharina Abdul Halim & Ibrahim Komoo, 2009). Over the past two decades, the importance of understanding local communities’ attitudes, needs and aspirations has been widely acknowledged by researchers, donors, conservation agencies and protected area authorities. This acknowledgement comes from the recognition of local communities as the key factor for the success of any development and conservation agenda (Baldus, Kibonde & Siege, 2003). Numerous empirical studies have been conducted to evaluate local community’s understanding, acceptance, level of knowledge as well as awareness of issues related to conservation and sustainable development as it becomes more apparent that public acceptance and education are critical to the success of conservation and sustainable development objectives. This paper, based on one such study, presents the views of the local communities in the Langkawi Global Geopark on their appreciation of the geopark as heritage and their interpretation of shared values, the benefits and opportunities afforded by the geopark, and the extent of their involvement in the implementation of geopark activities.

2. What is a Geopark?

A geopark is defined as a territory with a particular geological heritage of international significance, rarity or aesthetic appeal, which is developed as part of an integrated concept of conservation, education and local economic development (UNESCO, Global Geoparks Network, 2006). A geopark is designated with a focus on three main components: protection and conservation; tourism-related infrastructural development; and socio-economic development using a sustainable territorial development strategy. This concept is consistent with the trend of integrating science and culture whilst recognizing the importance of preserving the uniqueness of the physical landscape. Heritage sites within the geopark can be related not only to geology, but also to archaeology, ecology, history and culture. All these sites in the geopark constitute thematic parks and must be linked in a network with routes, trails and sections that should be protected and managed. Uniting conservation with tourism can not only lead to the protection of unique geoheritage features, but will also engender scientific research, broad environmental education and enhancement of local tourism-based economic development (Ibrahim Komoo, 2000).

The ultimate aim of a Global Geopark is to generate employment opportunities for the local community. It utilizes a holistic approach to conservation where all aspects of natural and cultural heritage are valued, conserved and promoted under the auspices of its geopark status. Promoting heritage sites through geoparks is carried out through education and conservation efforts aimed at increasing the knowledge and value of geological heritage, cultural heritage and biological heritage. Local community participation in the decision-making process of the development and management of geoparks and geotourism will improve the livelihood of the people, and strengthen their appreciation of the value of their geological and cultural heritage.

Geoheritage sites in a geopark provide a real-world classroom where children and adults, local people and visitors can learn about the history, nature and culture of an area. Other than the opportunity for education and experiential learning, heritage sites have additional potential for increased awareness and understanding of geocultural. Thus, geotourism can be tied into the notion of sustainability. The creation of geotourism attractions using the existing heritage negates the need for the building of new facilities, allowing the communities to benefit from geopark development.

3. The Research Framework and Context

Enhancing public education on heritage conservation involves developing core values that build capacity and appreciation of all stakeholders. This research utilizes a theoretical framework of public education for heritage
conservation that was developed to guide the authors in the research on public education of the Langkawi Geopark (Figure 1). The framework is constructed from the perceptions that different stakeholders have of conservation, heritage and development. These concepts are differently understood and supported, so it would be counterproductive to impose a one-size-fits-all set of conceptions, understanding, practices, systems, or learning processes.

![Figure 1: Framework for Public Education for Heritage Conservation (Norzaini Azman, Ibrahim Komoo & Sharina Abdul Halim, 2010)](image)

**Note:**
1. Knowledge and Understanding
2. Shared Values
3. Roles and Responsibilities
4. Benefits and Opportunities
5. Empowerment and Corporate Responsibility

The framework was developed based on five core values derived from the perspectives of heritage development and conservation: knowledge and understanding; shared values; roles and responsibilities; benefits and opportunities; and empowerment and corporate social responsibility (Norzaini Azman, Ibrahim Komoo & Sharina Abdul Halim, 2010). The framework emphasizes readiness of the stakeholder, namely, the local community, to appreciate all the core values that are considered essential to their sustainable livelihood. Consequently, the framework offers a more rigorous foundation upon which researchers and practitioners can build a coherent set of principles for curriculum development and good pedagogic practice in public education for heritage conservation.

The study was conducted between January and September 2009. Data were collected through qualitative method using interviews with key village informants and local residents. Personal interviews involving 10 key village informants, and focus group discussions were carried out with selected community groups consisting of men and women from two villages situated in Padang Mat Sirat and Kilim. These villages are situated close to the geopark conservation areas, namely Machinchang Geoforest Parks and Kilim Karst Geoforest Parks. The sampling approach was progressive, evolving as the researchers became more familiar with the environment and were able to assess the number of individuals who could be approached. The personal interviews combined questions of a more quantitative, closed-ended nature with more qualitatively oriented, open-ended questions. In reporting the results, we attempted to derive the important themes and key ideas obtained from the interviews as well as focus group discussions.

The analysis was guided by the constructs and interview questions. Coding and interpretation of the results consisted of reading and re-reading the narratives and noting emerging patterns related to local community understanding, experience as well as perceptions. The researchers reviewed the narrative summaries contributing to the reliability of the assertions made from the narratives.
3.1 Views of the local community

The results of this study are presented according to how they reflect each of the five core values established in the framework of the research: knowledge and understanding, shared values, benefit and opportunities, roles and responsibilities, and empowerment.

3.2 Knowledge and understanding of Langkawi Geopark

When asked what first came to their minds about the meaning of Geopark, all the respondents answered ‘rocks and rock formations’. They had visited the three geoforest parks situated in Kilim, Dayang Bunting, and Machinchang. However, when asked to identify Langkawi Geopark, most of them identified Kilim (where there is big signage ‘Kilim Geoforest Park’ placed on the face of the rock landscape).

Most of the respondents reported that they had little understanding of Langkawi Geopark. They all said that Radio Langkawi FM was a major source of information on Langkawi Geopark, particularly when it played the geopark song during the morning airtime show. They said signage that was displayed at strategic locations (road sides and tourist site-specific areas) on the main island of Langkawi helped to remind them of Langkawi’s status as a geopark. However, these local respondents could not relate the geopark concept to their everyday lives in terms of socio-economic activities.

A community member of Padang Mat Sirat, reflects on his own knowledge and understanding of geopark:

I (as a fisherman) have heard of it; however, I am not sure… not many of us understand the meaning of it, what more to relate geopark to our daily activities. The promotions for Langkawi Geopark have been carried out in such a manner - we are overwhelmed by it. We are not sure what it is all about - Langkawi Geopark.

This reflection conveys an important message that any strategy for engaging the public starts with the knowledge of who is being engaged and what they already know and do not know (Novacek, 2008). Studies have also shown that acquired knowledge of a subject has a heavy influence on subsequent attitudes and behaviour (Kaiser & Fuhrer, 2003). It was found in this study that respondents living in Kilim were more aware of Langkawi being a geopark due to its vicinity to Kilim Karst Geoforest Park. Respondents from the Fishermen’s Economic Association of Kilim (referred to as KEN) said that the geopark had helped them to diversify their traditional fishing activities to include commercial activities, such as providing boat services to tourists for a cruise around the islands and to other tourist spots.

In the course of encouraging traditional fishermen in Kilim to venture into tourism-based activities, the fishermen’s committee received significant training in relation to geoheritage of their area as well as obtaining skills and information on managing geoforest park activities. The following quote illustrates the impact of geopark on their livelihood:

We are thankful that since Langkawi became recognized as geopark in 2008, it has encouraged more tourists to Kilim. This has enabled more traditional fishermen to work part-time as boatmen bringing tourists around the mangroves. Each boatman gets extra commission from the floating mangrove restaurants as they bring tourists to these eating places. At least this helps to improve our incomes.

Unlike the Kilim fishermen, most of the local respondents in Padang Mat Sirat said they had not attended any dialogues or workshops on Langkawi Geopark organized by the Langkawi Development Authority (LADA) or Universiti Kebangsaan Malaysia (UKM). Only two respondents, a local village headman in Padang Mat Sirat and the Chairwoman of the Women’s Economic Group, said they had attended some form of dialogue and participated in helping out during the Langkawi Geopark assessment by UNESCO experts in 2007. Hence, it should be noted that continuous efforts to enhance local community knowledge and understanding are crucial in building a sense of belonging to the heritage site. As (Levine, Britt & Delle, 2005) suggested, people’s understanding of heritage is pertinent in creating a sense of belonging and in shaping a common identity, and the knowledge of heritage can empower people and their communities. Instilling a sense of belonging and ownership of the Langkawi geopark in the local community is crucial to ensuring sustainability. For example, when asked on ways to promote and enhance understanding among locals on geopark, one village headman suggested activities such as ‘gotong-royong’, road
show campaigns, community initiatives like the Fishermen’s Economic Group and the Women’s Economic Group, and short announcements in the mosques (especially at Friday prayers).

3.3 Shared values

This study found that local respondents feel that having the geopark status is a way to jump-start a new cycle of revitalization in their villages, both through the creation of jobs through geopark-based activities as well as by the presumed increase in tourist dollars from both international and national visitors that may flow into the island. Most of the respondents agreed that the geopark would bring added value for the local people and Langkawi as a whole, particularly those involved in tourism-based activities, namely, taxi drivers, food stall owners and souvenir shop owners. A member of the women’s economic group further elaborates:

I am proud to know that my hometown is recognized internationally. The geopark status will encourage more opportunities and bring in more tourists. We all can benefit if we get a chance. We can revitalize our heritage for example, through our woven handicraft, traditional cakes, and by showcasing our traditional fishing methods.

 Nonetheless, there is still some misconception among the respondents as they constantly refer to geopark as a brand. The labelling or branding of Langkawi Geopark to them means a new tourism product to attract more tourists to the island which would indirectly boost the local economy. It was observed during the focus group discussions that most respondents were not aware that geopark was not just a brand; and that rather, it is a development tool that promotes conservation and sustainable economic development. This misconception is exacerbated with the frequent changing of labels for Langkawi. As one of the respondents noted:

Some people ask me what is Langkawi Geopark and I said I am not sure. This is mainly because Langkawi is called by many names, from being a ‘Duty-free island’, to ‘99 islands’, to ‘Tourist City’, to ‘Langkawi Geopark’, and the latest, to ‘Langkawi, Jewel of Kedah’. This frequent changing of labels for Langkawi has occurred without public consultation and is based on reactive measures. If you ask me, it’s like ‘branding without a soul’.

This misconception clearly impedes the cultivation of a sense of concern and stewardship for heritage conservation. However, there is also evidence that the local community is prepared and motivated to be better-informed about the importance of geopark and heritage conservation. For example, members of the fishermen’s group expressed their concern on the sustainability of their resources for their livelihoods. They seem to favour the geopark inclusive approach (as opposed to National Parks) because it promotes sustainable resource utilization.

3.4 Roles and responsibility

With the exception of the local headman of Padang Mat Sirat and the chairwoman of the Women’s Economic Group, the respondents were not directly involved in the planning and development of Langkawi Geopark. The local headman and the chairwoman helped to organize a ‘gotong-royong’ (community cooperative effort) during the Geopark assessment by UNESCO experts. Several locals from three villages at the fringe of Machinchang Geoforest Park, namely Kg Batu Ara, Kuala Teriang and Kuala Melaka in Padang Mat Sirat, participated in the ‘gotong-royong’.

The inception of Langkawi as the 52nd member of UNESCO Global Geoparks Network was in June 2007, but many local people are still not aware of the implications of its full potential as a (global) geopark and how they could play a role in the development of Langkawi Geopark. During the planning and implementation process, there were limited opportunities for the locals to participate. Planning and implementation of the geopark is still based on a ‘top-down’ approach. A group of fishermen responded in the following way:

‘The truth is that when we heard about geopark, in our mind geopark is for whom. The locals were not consulted but some of us attended briefing only on what was about to happen to us in the island. We are not against it (geopark). Perhaps it is a matter of time for local people to catch on. We are not sure how to play our roles towards geopark’.
The view above suggests that many locals, particularly traditional fishermen, are not opposed to geopark development in general but are dissatisfied with insufficient communication and lack of consultation of local stakeholders during the process in obtaining the status. This may help explain the poorly shared value on geopark as expressed earlier by respondents. Although many programmes were carried out to increase local awareness such as Dialogue on Development of Langkawi (April 2006), Symposium on What is Langkawi Geopark? (August 2006) and the First Regional Conference on Asia Pacific Geoparks and Business Dialogues (November 2007), they seem to have been insufficient. A special brochure explaining Langkawi Geopark (Apa itu Geopark?) was prepared by the Langkawi Development Authority (LADA) and distributed to local villagers. Although these efforts were made by local authorities to increase local awareness, the views expressed by locals indicated that the information dissemination and impact of these efforts was not widespread.

3.5 Benefits and opportunities for the people of Langkawi

According to a food stall owner in Padang Mat Sirat, ‘Geopark only benefits locals in Kilim and not elsewhere’. In fact, the majority of the respondents believed that the trickle down effect of Langkawi Geopark is still at its infancy. There is clearly a need for more education and awareness on ways to tap the economic opportunities provided by the geopark for the local people. At the same time, most respondents, welcomed the geopark concept and were happy to be part of Langkawi Geopark. Even though they were not exactly sure how the geopark would affect their lives, they still favoured the concept, as indicated by comments similar to the following:

\[\text{We shall have to protect Langkawi’s natural resources as these could increase tourism activities and generate socio-economic activities for us.}\]

Evidently, the geopark concept is still a recent phenomenon in the hearts and minds of the local people. Gaining their support and creating a sense of ownership would be an important first step to the protection of Langkawi’s resources. These findings show that those dependent upon natural resources for a living have particularly welcomed the geopark status. It is also clear that respondents in Kilim are proactive towards geopark initiatives as they have benefited from the recognition of their area as one of the geopark conservation areas that promote sustainable geotourism and socio-economic development. As two villagers in Kilim commented:

\[\text{People from other states now know about Kilim because we have been chosen to represent the Northern Region in the Visionary Village Movement (Gerakan Desa Wawasan) Competition at national level.}\]

\[\text{Since 2008, we have won many Langkawi tourism awards, such as for Outstanding Eco Attraction Product and Outstanding Boat Operator. These achievements are incentives that boost our confidence and motivate us in our efforts to sustainably manage our mangroves while improving our income through geotourism activities.}\]

He emphasized that how the local community benefits from opportunities provided by the Langkawi Geopark varies and depends on many factors, one of which is motivation. This sentiment was echoed by a group of local women in economic co-operatives involved in making fish-based snacks. As the Chairperson of the Women’s Economic Co-operatives explained:

\[\text{The opportunities brought by geopark must be clear to the locals. Apart from economic incentives, those villagers who participate towards developing geopark could be given some form of recognition to encourage them, for instance Best Local Food Stall or Best Local Product awards. It is just like they have awards for Kampung Tercantik (Beautiful Village) dan Rumah Terbersih (Cleanest House).}\]

Indeed, the challenge is to create motivation that builds awareness and conviction rather than just making people do something to gain some benefits in return (Burkey, 1993). Thus, the basis for increasing knowledge and understanding of geopark lies in developing sound, practical and achievable public education programmes. These programmes must provide opportunities for local communities to work in partnership with responsible agencies. We do not claim that geopark will solve all the economic woes of rural communities. However, we do suggest that it
provides latent opportunities that will help, and in the process, foster wider appreciation of heritage and conservation.

This study represents one of the first attempts at developing an understanding of the educational needs of the local communities who live in the geopark area through an exploration of their perspectives. The sample size of local communities was admittedly small, and it is recommended that future studies should make use of a larger sample size to improve the representation of the sample.

4. Implication and Conclusion

The findings reveal that the local community in general has minimal understanding of the geopark concept, particularly with regards to Langkawi as a Global Geopark. Their awareness and understanding is dependent on the degree of their engagement in geopark activities. Considering the relatively low level of knowledge and awareness of geopark, there is clearly a need for more education and extension support to spread the message amongst the communities about the development and conservation of geopark. In view of these findings, innovative socio-economic activities need to be designed and created with the intention of enhancing the capacity of Langkawi Geopark to generate benefits for local people and thus contribute to the geoheritage conservation efforts and sustainable economic development of the island.

A large proportion of the communities agreed that Langkawi Geopark does offer some form of advantage or benefit to business or to themselves. This finding supports the hypothesis that communities which receive more benefits are more likely to support management and development efforts. In addition to ensuring access to resources, the positive attitude toward the protected areas among the communities may be enhanced by regular contact with the authorities. This observation concurs with our findings and from findings of other research that increased personal contact carried out in good faith was a critical factor to the development of understanding and trust between conservation management staff and local residents (Hackel, 1999). This underscores the need for genuine participation of the key stakeholders in pursuing the conservation strategies likely to affect people’s livelihoods. In this process, the needs and interests of the local community should receive adequate priority. Through participation, alternative livelihood strategies should be developed to overcome the sanctions that conservation strategies will impose on local people in terms of access to resources.

The findings of the present study suggest that more awareness programmes and dialogues as well as workshops could be organized by relevant authorities so as to increase better understanding of the geopark concept, and to encourage local participation in geopark-based activities. Capacity-building workshops, such as training for local guides and utilizing local resources to build innovative knowledge-based tourism products would indirectly empower the local community to be proactive in participating in geopark-based activities.

The findings also reveal that education and communication activities involving the local communities were rather fragmented and disorganized, perhaps due to the lack of resources and personnel on non-formal education and training. In addition, general information published for the public was hardly available. Although programmes and materials are needed to build public awareness of the community, a long-term investment in staff and resources to work directly with the target audience is needed for effective communication at the community level. Taking the needs analysis of target groups into account would also ensure optimal effectiveness for any public education work and the best return for programmes and resources that are invested.

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