

# INDICATORS OF SUSTAINABLE COMMUNITY BASED RURAL TOURISM: A REVIEW

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**ABSTRACT** *When it comes to examining the uncertain world with a concern for sustainable development, it is obviously important to know if such actions, however marginal, might create positive and/or negative impacts in terms of meeting sustainability goals. In the context of sustainable community based rural tourism (CBRT) programmes, these impacts could involve changes in the physical environment of rural areas and/or associated social and economic aspects of their inhabitants. The decisions on planning and development of sustainable CBRT programmes made either by government or by local stakeholders are intended to overcome the current problems faced by rural communities. In this light, putting plans or programmes into reality is important, to achieve the stated goal of positive implications, and more importantly, to ensure that the implementation of such programmes should not impose new problems or undesirable living conditions for rural communities. Therefore, as one of management tools, indicators are needed to make rational policy choices on sustainable CBRT programmes and as one way of assessing the contribution of CBRT towards sustainable rural development. This paper includes a review on the concept of sustainability indicators, beginning with explanations on the need for indicators and current practices in deriving sustainability indicators based on experiences from three South East Asian countries. The review concludes with discussion of challenges in sustainability indicators work especially in dealing with the planning for an uncertain future.*

**KEYWORDS** indicators, sustainability, community based rural tourism, Malaysia

## INTRODUCTION

Sustainable CBRT is arguably one vital strategy to improve the economic condition of rural communities and to maintain rural resources (natural and cultural) for present and future use (Kamarudin, 2013). In order to do so, the planning and development of sustainable CBRT should coincide with monitoring and assessment strategy to meet the criteria for sustainable tourism development (STD) (Kamarudin, 2013). This is because, when it comes to examining the uncertain world with a concern for sustainable development, it is obviously important to know if such actions, however marginal, might create positive and/or negative impacts in terms of meeting the sustainability goals. These impacts could involve changes in the physical environment of the rural areas and/or associated social and economic aspects of their inhabitants. The decisions on planning and development of sustainable CBRT programs made either by government or by local stakeholders are intended to overcome the current problems faced by rural communities.

However, putting plans or programs into reality is far more important, to achieve the stated goal of positive implications, i.e. should not create further new problems or undesirable living conditions for rural communities. The use of indicators is recommended as a way to make rational policy choices on the sustainable CBRT programs and as one way of assessing the contribution of sustainable CBRT towards STD agenda. In this regard, Strange and Bayley (2008: 98) assert:

“Meeting today’s and tomorrow’s needs requires knowing what we have, what we consume, what will remain and what can be regenerated or replaced. Accurate

measurements and accounting of our natural, social and economic capital are essential to moving forward on a sustainable path.”

The statement by Strange and Bayley provides useful insight for sustainable CBRT researchers, suggesting that whether the scale of tourism is small or relatively large, the activities might still consume and exploit the rural resources such as forest areas, water catchment areas, agriculture land and human capital. The absence of proper monitoring (e.g. measures with certain types of indicators) could potentially affect and divert the communities from the path of sustainable development. This paper reviews the concept of sustainability indicators, beginning with explanations of the need for indicators and current practices for deriving sustainability indicators based on experiences from three South East Asian countries. The review continues with discussion of challenges in sustainability indicators work especially in dealing with the planning for an uncertain future.

## NEEDS FOR INDICATORS

### *Definitions and context*

Agenda 21 and the National Physical Plan (NPP) require conservation of resources by utilizing in "a sustainable manner all natural resources to the greatest benefit in perpetuity for present and future generations" (FDTCP, 2007; IUCN/UNEP/WWF, 1991). The use of indicators of sustainable development has been acknowledged and recommended by the United Nation's Commission for Sustainable Development (CSD) as important tools for use in measuring the status of management toward sustainable development (Bell and Morse, 2008).

A review of the literature on indicators reveals various definitions of what is an indicator. Roberts and Tribe (2008), Strange and Bayley (2008) and Muhammad (2001) assert that definition of sustainability indicators varies to reflect the multi-disciplinary or ideological perspectives of the researchers, and the intended application of the indicators. A generic definition of an indicator has been given by Gallopin (1997; cited in Roberts and Tribe, 2008: 577) which states that an indicator is “a sign – something that points out, or stands for something else”. A car’s fuel gauge (located in front on the driver’s dashboard) for example; the fuel meter reading will “point out” how much “resources” (fuel) remains, which informs the driver how much fuel the car has consumed.

Hart (1999; cited in Glasson, 2005: 43) provides a more comprehensive explanation of indicators:

“An indicator is something that helps you understand where you are, which way you are going and how far you are from where you want to be. A good indicator alerts you to a problem before it gets too bad, and helps you to recognize what needs to be done to fix the problem.”

Strange and Bayley (2008: 101) seem to agree with Hart’s definition of an indicator, but place specific attention on the need for a timeframe in defining indicators. With this regard, they assert that:

“An indicator is a summary measure that provides information on the state of, or change in, a system. An indicator gives us a snapshot of how we are doing at the given point in time relative to what we’ve decided is important.”

The definitions by both Hart and Strange and Bayley have demonstrated the importance of an element of “direction” (i.e. moving from the current stage to another). Using the same example of a car’s fuel indication, but from a different perspective, the element of direction could assist the driver in decision making – “where” and “when” the car fuel tank needs to be refilled. In addition, with the remaining fuel the driver should have some idea of “choosing the best route” to reach its destination before the car runs out of petrol.

An indicator also can be identified based on the communicative quality (Roberts and Tribe, 2008; Ceron and Dubois, 2003). One classic example of an indicator was offered by Ott (1978; cited in Mitchell, 1996: 2) that defined an indicator as “a means devised to reduce a large quantity of data down to its simplest form, retaining essential meaning for the questions that are being asked of the data”. In other words, by reducing the quantity of data into short and simple indicators, the communication complexity between scientists (formulators) and decision-makers and with the public (users) could be improved. Expanding on Ott’s definition, Ceron and Dubois (2003) and Jasch (2000) view an indicator as a means to help in summarizing or simplifying relevant information which in turn, make visible certain phenomena of interest, and also highlight problem areas.

#### *The basis and need for indicators*

The United Nations Conference for Environment and Development (UNCED) conference in Rio de Janeiro, 1992’ established the Rio Earth Summit’s agenda on environment and development (Rogers *et al.*, 2008; Strange and Bayley, 2008). According to Strange and Bayley (2008), some of the issues on the agenda for the conference included:

- 1) The interrelationship between environment and development;
- 2) Conservation and management of biological diversity;
- 3) Strengthening the role of major groups such as women, local governments and NGOs;
- 4) Integrating economic and social needs of the community, such as combating poverty, improving the public awareness of environmental problems;
- 5) Developing tools for implementation and promotion of the sustainable development agenda.

One of the major outcomes of this conference was an agreement on adoption of an action program for sustainable development called Agenda 21 (agenda for the 21<sup>st</sup> century) (Rogers *et al.*, 2008; Strange and Bayley, 2008).

Agenda 21 is a comprehensive program of action for countries of the world to achieve a more sustainable pattern of development for the next century (Strange and Bayley, 2008; Mitchell *et al.*, 1995). In order to put into practice various programs of action inside Agenda 21, the United Nations was given the mandate to establish a set of indicators of sustainable development to help to assess and monitor changes and to track progress towards sustainable development (Bell and Morse, 2008; Roberts and Tribe, 2008). Sustainability indicators are vital components in any overall assessment of the progress towards sustainable development.

A strong assertion on the need for sustainability indicators for tourism is made by Butler (1999; cited in Schianetz and Kavanagh, 2008: 604). Butler indicates that:

“Without measures or indicators for tourism development the use of the term “sustainable” is meaningless and becomes hyperbole and advertising jargon.”

Despite the popularity gained by the concept of sustainable development, it still remains a contested concept and open to criticisms. Fortune and Hungen (1997; cited in Bell and Morse, 2008: 3) argue that “[sustainability] is an empty concept, lacking firm substance and containing embedded ideological positions that are, under the best interpretation, condescending and paternalistic”. Nevertheless, the concept also comes with a strong and convincing theme, which has been receiving positive reaction from decision-makers, politicians and scientists (Bell and Morse, 2008). Introduction of indicators to the concept of sustainable development could provide the much-needed understanding of what is the current situations of natural, social and economic capital and whether the current generations are moving forward and/or future generations will remain on a sustainability path.

As the world population rapidly growing, which undeniably will significantly affect the availability of the world’s natural resources, planners need to devise solutions for explaining and understanding the causality of these changes. However in reality, according to Muhammad (2001), many of the phenomena and processes of development (either in urban or rural areas) continue to be poorly documented and understood, which has led to unsuccessful efforts to alleviate the problems. A serious problem faced by policy-makers has been lack of appropriate information at the local authorities’ level. As noted by Glasson (2005), often the best indicators for sustainability indicators are those for which there are no data, while the indicators for which there are data are those least able to measure sustainability.

Data are required for policy-making, to provide objective measures of conditions and trends, to avoid or to correct mistakes, and to rethink ineffective policy (Twining-Ward, 2007; Muhammad, 2001). The problem is that, while enormous amounts of data are being generated at very high costs, they are understood very poorly and are often inappropriate, inaccurate or not generated for specific policy purposes. Indicators must be considered as tools to communicate information to decision-makers (Jasch, 2000). Information that is offered in its raw form is normally difficult to judge and to act upon. Indicators however, provide simpler forms of information than complex statistical data and permit comparisons over time and between different places.

The function of indicators is to help assess past performance and to determine what should be done to ensure a sustainable future (Strange and Bayley, 2008). However, there are still continuous debates on how sustainability indicators should be effectively formulated and implemented by various agencies. Moldan and Billharz (1997) urged the need for a set of universal standards for measuring progress toward sustainability. The measurements should be general, yet comprehensive enough to cover the main pillars of sustainable development (economic, social and environmental).

#### DISCUSSIONS OF CURRENT PRACTICES IN THE DEVELOPMENT OF SUSTAINABLE CBRT INDICATORS

The United Nations Conference on Environment and Development (UNCED) in 1992, brought to the fore the importance of sustainable development indicators (SDIs) as tools to convert data into useful information for management, policy development and goal attainment towards sustainability (Bell and Morse, 2008; Peterson, 2006; Othman and Pereira, 2005). Since then, many agencies and researchers have sought to develop SDIs.

People from different administrative levels, however, may approach indicators very differently depending upon the purpose and audience, as well as the issues and questions asked. As a result, many types of SDIs (and sustainable CBRT indicators in this context) have been proposed, formulated, and developed. The following section reviews current practices for deriving sustainability indicators based on experiences both from international countries and from Malaysia.

#### *Interest in developing indicators*

According to the World Tourism Organisation (WTO, 2001), the formulation of indicators for sustainable tourism can assist decision-makers to measure; (1) changes in tourism's own structure and internal factors, (2) changes in external factors which affect tourism, and (3) the impacts caused by tourism. Indicators also function by using inputs of both quantitative and qualitative information (WTO, 2001). Using indicators for monitoring on a regular basis can also provide up to date information and inputs which are vital to decision-makers to determine the sustainability of a destination, its assets, and ultimately, the viability of the tourism activities (Blackstock, 2005; WTO, 2001). Therefore, from a planning point of view, indicators should be included as part of a vital component of an overall assessment process of sustainable CBT (Blackstock *et al.*, 2006; WTO, 2001).

From various sources in the literature review, two main categories of institution in establishing sustainability tourism indicators can be identified, namely:

1. The efforts of independent research bodies or “think tanks” that support policies, programs and projects to promote sustainable tourism: for example, the works of the SNV (Netherlands Development Organization), a nonprofit, international development organization that delivers capacity building advisory services in 33 countries in Africa, Asia, Latin America and the Balkans (Twining-Ward, 2007). Another example is the works of REST (Responsible Ecological Social Tours), a non-governmental organization established by a local charity, Thailand Volunteer Service (TVS) (Arunotai, 2004). Both organizations advocate collaboration between tourism experts and academics in sustainable tourism research programs, while working collaboratively with local tourism representatives.
2. The works of government or international agencies: for example, the works carried out by Ministry of Tourism of Malaysia (MOTOUR) including designing policies, development plans and strategies for sustainable tourism development in Malaysia (Hamzah, 2004). Another example is the work carried out by the World Tourism Organization (WTO), a primary agency at international level, responsible for searching at new strategies, methodologies and approaches for sustainable tourism, and to some extent, working collaboratively with government agencies both in developed and developing counties to promote new discoveries in the field of sustainable tourism (WTO, 2001).

Generally, between these two categories, it is difficult to differentiate or to separate between the works of the NGOs and the works of governmental or international agencies. The possible link between these two parties could be the government of the country employing or sponsoring research work to be carried out by NGOs and independent think tanks to formulate indicators for sustainable CBT programmes (Ceron and Dubois, 2003). This is mainly because the government agency itself is lacking in qualified and experienced officials to carry out the research internally. The agency in turn, has allocated certain amount

of funding for the research of sustainable tourism and CBT to be carried out by external research consultants (Kamarudin, 2013).

Even though the need to establish a specific set of indicators for sustainable tourism was not included in the UN indicators of sustainable development (United Nations, 1996), however, in response to the need of the Chapter 40 of Agenda 21 (information for decision-making), work to establish sets of a “core indicators” of sustainable tourism (including CBRT in this context) has been taken into considerations both by governments, international agencies for tourism, and NGOs (Hassan *et al.*, 2006). As a result, numerous sets of indicators for measuring the sustainability of tourism and CBT have been formulated and proposed by various agencies. The proposed indicators for sustainable tourism are also useful as a platform of information to decision-makers in tourism who need to know the real performance of the tourism programmes and also whether the indicators themselves are capable of being implemented for particular regions or areas (WTO, 2001). The subsequent section provides examples of sets of indicators developed for sustainable rural tourism and CBT.

*Examples of sustainable rural tourism and CBT indicators in three South East Asian Countries*

The research has briefly reviewed three study cases from the Twining-Ward research on CBT projects in South East Asia, in Indonesia, Laos and Thailand. For each case, the 302 indicators merely functioned as a guidance or reference list for a group of decision-makers involved. Using the key issue worksheet (refer to original report by Twining-Ward for details), all the long list indicators then were compared against a community’s specific key issues in order to assess their relevance in addressing the particular issues and concerns. This stress the importance of tailoring indicator sets to meet local needs.

**i. Indonesia: Community Based Tourism Development, Central Java**

The community-based tourism (CBT) program involves three sites of Candi Rejo Borobudur, Central Java and Old Banten. The program was prepared with collaboration between the United Nations World Tourism Organization (UNWTO) and the Ministry of Culture and Tourism of Indonesia. The program was aiming to reduce the level of poverty of the rural communities by increasing the level of income generated from tourism activities and to promote the sustainable development agenda for tourism at the local communities’ level.

Using the key issue worksheet, the research revealed four major issues related with the CBT programs namely: planning, training and education, health and sanitation, and income generation from the programs (Table 1).

Table 1: A set of potential indicators suggested for CBT development of Central Java, Indonesia

<b>Issues</b>	<b>Potential indicators</b>
Planning	1. Existence of national and regional tourism plan. 2. Number of villages that have drawn up their own tourism plan. 3. Level of participation in tourism decision-making.
Training and Education	4. Number of local residents who have attended tourism

	awareness workshops. 5. Number of local residents who have been trained in the provision of tourism goods and services.
Health and Sanitation	6. Change in percentage of households with access to clean running water. 7. Change in percentage of households connected to local sewage treatment system. 8. Numbers of tourists and local residents reporting incidents of food poisoning and water borne illnesses.
Income Generation	9. Change in number of people employed in tourism. 10. Percentage of local income generation from tourism businesses. 11. Number of new tourism businesses established annually.

Source: adopted from Twining-Ward (2007: 65-66)

ii. Laos: Community Based Tourism, Muangngoi Communities, Luang Prabang Province

The CBT program is initiated by various government agencies such as the Laos National Tourism Administration and the Mekong Tourism Development Project. The agencies work collectively with provincial tourism offices, sub-district offices and local communities. The program took place in the Muangngoi communities of the Luang Prabang province with the aim of developing tourism for economic benefits from income generation, thus reducing the poverty of the local communities and surrounding villages.

As shown in Table 2, the following four key issues were identified: planning, income generation, poverty reduction and product development. Using the key issue worksheet, each issue was compared with the long list of 302 indicators. As a result, thirteen site-specific indicators were identified and selected to be included for a monitoring process.

Table 2: A set of potential indicators suggested for CBT development of Luang Prabang Province, Laos

Issues	Potential indicators
Planning	1. Existence of tourism plan. 2. Percentage of activities in tourism plan completed on schedule. 3. Diversity and level of stakeholder involvement in planning process.
Income Generation	4. Annual income generated by the community. 5. Ratio of income attributable to tourism versus traditional income generating activities. 6. Total number of SMEs operating in the community. 7. Annual financial contribution by tourism to community projects.
Poverty Reduction	8. Ratio of income attributable to tourism versus traditional income generating activities. 9. Ratio of time dedicated to tourism versus traditional income generating activities. 10. Ratio of top to the lowest paid local tourism worker.
Product Development	11. Satisfaction level of visitors to the village. 12. Level of use of new information centres. 13. Change in number of activities for tourists available

	through the information centre.
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Source: adopted from Twining-Ward (2007: 64)

iii. **Thailand: Community Based Tourism, Klong Khwang Communities, Nakhon Ratchasima**

The CBT program of the Klong Khwang communities of Nakhon Ratchasima was prepared with collaboration between the Canadian Universities Consortium Urban Environmental Management Project and the Tourism Authority of Thailand, sub-district offices, and was funded by the Canadian International Development Agency (CIDA). The program strives to bring the economic benefit of income from tourism to ease poverty in the villages and its surrounding areas.

As depicted in Table 3, three key issues of the CBT program were identified during the consultation process namely; planning issues, marketing and impacts of tourism towards local tourism carrying capacity. Each issue was then compared with the long list of indicators and as a result, twelve site-specific indicators were identified and included for the future monitoring process.

Table 3: A set of potential indicators suggested for CBT development of Nakhon Ratchasima, Thailand

<b>Issues</b>	<b>Potential indicators</b>
Planning	<ol style="list-style-type: none"> <li>1. Number of stakeholder groups who participate in the preparation of the tourism plan.</li> <li>2. Representation of diverse stakeholder interest on tourism decision-making bodies.</li> <li>3. Percentage of households satisfied with their role in tourism developments in their village.</li> </ol>
Marketing	<ol style="list-style-type: none"> <li>4. Change in numbers of visitors to the village annually.</li> <li>5. Change in satisfaction level of visitors.</li> <li>6. Percentage of visitors who think the site is too crowded.</li> <li>7. Change in number of groups visiting the village as part of an organised tour.</li> </ol>
Impacts	<ol style="list-style-type: none"> <li>8. Number of days per year carrying capacity is exceeded.</li> <li>9. Percentage of tourism accommodation facilities with access to sewage treatment.</li> <li>10. Percentage of tourism accommodation facilities making efforts to reduce and recycle waste.</li> <li>11. Percentage of local residents who feel there are too many visitors.</li> <li>12. Percentage of local residents who feel tourism is negatively affecting the local culture and lifestyle.</li> </ol>

Source: adopted from Twining-Ward (2007: 58-59)

A comparative analysis was conducted to determine any influential factors that might affect the process in establishing and utilizing sustainability indicators between these three study cases. In general, each study case/place utilized different set of indicators. These phenomena are contributed by a number of factors which includes:

- There are wide ranges of organizations that participated and/or collaborated with CBT key stakeholders in setting-up the programs in all three cases. These organizations generally have their own visions and interpretation of CBT development, which then



determine the requirement of indicators for monitoring and assessment of progress. With exception of “planning issue”, which emerged in all study cases, different study cases however, shown different sets of key issues. For example, the CBT community in Thailand had included marketing strategies to sell tourism products more effectively. Key stakeholders have indicated the element of marketing as one of the key issue, therefore; relevant indicators of CBT marketing are addressed and selected. This also applies to Laos and Indonesia cases.

- Each study case emphasized the importance of linkages between objectives, activities and expected outcomes of CBT programs. Even though in general all study cases have highlighted similar objectives, i.e. strengthening the local economy and eradicating poverty among rural communities through jobs creation and offering alternative form of incomes, the nature of every community at local level, however, very complex and diversified. The ability of each community to utilize a set of indicators and take on the monitoring process were determined by various factors which include:
  - i. Local communities’ socio-economic status and culture and work ethics among local stakeholders and donor agencies.
  - ii. Level of CBT development and local tourism organizations readiness to adopt the indicators in monitoring the progress.
  - iii. Level of education, training and understanding of CBT among key stakeholders.

These findings not only show the important roles of indicators for the monitoring of CBT progress, but also the need to recognize other factors such as location setting, vision and objectives of the program, condition of the communities, and so on, which could influence the process to select and use of indicators. As shown by Twining-Ward study, every CBT site has adopted different sets of indicators (also known as site-specific indicators). Twining-ward’s study also stressed on the importance of long-list indicators (set of 302 indicators) with multi-dimensional elements including economic, socio-culture, environment, institutional. The long-list indicators acted as a database, and every CBT site should identify and select the most appropriate and effective indicators to be used based on the key issues, visions setting-up for CBT programs and extensive consideration by the communities and their stakeholders who involved in the monitoring process.

#### KEY CHALLENGES IN DEVELOPING AND USE OF SUSTAINABILITY INDICATORS

There are various challenges relating to the development of sustainability indicators. The review of literature indicates that one of the key challenges is lack of a clear and simple framework in developing and presenting the indicators (Krank, *et al.*, 2010; Hilden and Rosenstrom, 2008; Twining-Ward, 2007). When the basis for the development is not clear, or rather contested, it may bring more confusion not only to the responsible agencies that carried out the development agendas, but also may be difficult and complicated for target groups to implement (Ngah *et al.*, 2010; Bell and Morse, 2008). Therefore, the assessment of strengths and weaknesses of indicators, as well as the effectiveness of presenting the indicators to the targeted users was important in the process of selecting the best indicators (Hilden and Rosenstrom, 2008).

There are also cases where the indicators are highly technical and can only be understood by the subject experts (Bell and Morse, 2008; Perry and Singh, 2001; Peterson, 2000). The public or local stakeholders, on the other hand are left confused by the technical

jargon and this could affect the implementation process (Kamarudin, 2013; Perry and Singh, 2001). Nonetheless, the significance of such indicators to the implementation process is not to be denied. In this light, the appropriate measure might be to maintain a set of clearly understandable indicators as the priority indicators and common elements of the monitoring framework, but at the same time provide the opportunity for the establishment of a set of site-specific indicators according to the communities' key issues, local needs and their level of readiness (Irshad, 2010; Twining-Ward, 2007).

Another challenge is the absence of relevant data and information to support the formulation of sustainability indicators (Glasson, 2005). As further stated by Glasson, one of the biggest problems in developing sustainability indicators is when the currently available data are least able to measure sustainability, while the best indicators are those which have no data. This in turn may compromised the choice of effective indicators adopted (Glasson, 2005).

The subjectivity of indicators, related to the choice of decision-makers on what to measure, becomes another challenge in the development and use of indicators (Kamarudin, 2013; Hilden and Rosenstrom, 2008). Frequently, the final decision in determining the set of indicators is made by decision-makers who are mainly national and local authorities and project donors. However, it is very hard to determine the effectiveness of each indicator selected since different norms and nature of communities and geographical differences affect the effectiveness of indicators (TPRG, 2009). This might be the reason why it is difficult to get strong support from the decision-makers on sustainability indicators (Kamarudin and Ngah, 2007).

Making a set of proposed sustainability indicators accessible to the potential users also becomes another challenge in developing indicators (Morrone and Hawley, 1998 in Hilden and Rosenstrom, 2008: 237). Because of limited access by the public to this set of indicators, many existing indicators remain unknown, especially to the public and stakeholders in certain subjects (Bell and Morse, 2008; Kamarudin and Ngah, 2007). In response to this challenge, a public delivery system of sustainable development should be improved in order to make sure the potential users (the stakeholders and the public) are given wider access to information about the sustainability indicators (Blackstock *et. al.*, 2006; Hezri, 2004).

It is pertinent to note that the development of indicators should involve a two-way process between the decision-makers and potential users (key stakeholders and the public) (Hilden and Rosenstrom, 2008; Bell and Morse, 2008; Kamarudin and Ngah, 2007). Thus, the development of indicators requires an active engagement from the relevant stakeholders (Hilden and Rosenstrom, 2008; Bell and Morse, 2008). However, it is not an easy task to gain support from stakeholders because each stakeholder expects their aspirations, visions and opinions to be counted during the process of developing the indicators. Thus, the communication between stakeholders and decision-makers are crucial to enable the decision-makers and stakeholders' views to be heard and discussed.

Finally, there was the issue of lack of political will and skills (expertise) among decision-makers (Krank *et al.*, 2010). However, the issue of lack of political will might not be fully attributable to lack of skills or expertise, as Dhakal and Imura (2003 in Krank *et al.*, 2010:740) indicated:

“A political leadership may hesitate to use the indicator system in policy-making as it has the potential to show their inefficiency more visibly”.

Although the development and use of sustainability indicators might be hindered, to some extent, by obstacles as identified in this section, all the stakeholders should continue to embrace the learning processes which involves acquiring appropriate skills and knowledge about indicators.

## CONCLUSION

This paper has, firstly, discussed the definitions of indicator and the need for indicators. There are many different views and definitions on indicators; however, it is agreed that indicators are essential to provide relevant, accurate and reliable information for those who are responsible for making policy decisions. The review continues with examinations of selected examples of indicator sets from various literature sources. As presented in Table 1 to Table 3, there is a gap between the actual application of indicators and the desirable results of using the said indicators to measure the progress of tourism programmes in a particular destination. The literature review also emphasized the need to establish a set of site-specific indicators by selecting the right indicators that are the best fit for every baseline issue identified from every study case. Whilst the selection of the right indicators plays an important role to the success of implementation process, attaining the right indicators still remains the subject of much debate. Nevertheless, having indicator sets could add new perspectives to the overall monitoring processes via generation of up-to-date information, and the establishment of partnerships with various tourism stakeholders with collective decisions and actions, which might produce better results and information into the overall planning and monitoring processes (WTO, 2001).

The final section of this paper examined some key challenges in the development and use of indicators. Among the key challenges identified are lack of a clear and understandable framework in developing and presenting the indicators, the technicality of the indicators, lack of data and information to support the formulation of indicators, political interest among decision-makers, amongst others. The formulation of indicators requires that further development and attention should be given to make indicators more user-friendly and be more site-specific so they can be understood by potential users (especially the community and the public). With regard to their importance in informing the decision-makers and the public about the progress towards achieving sustainable development, indicators should also be considered as an element in policy consideration.

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