

Towards a Co-design Framework for Sustainable CBTEs in Homabay County

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Abstract

Community participation is advocated as an integral part of sustainable community-based tourism enterprises (CBTEs), however, its uptake is slow, especially in developing countries, much to the disadvantage of local tourism. The purpose of this study is to propose a co-design framework for sustainable CBTEs, with particular interest to Homabay County. Two Community-based Organizations (CBOs) were selected for the study namely; Ndhiwa Kodumba Tse Tse group and RAMA cultural centre. Exploratory research design was used to achieve the objectives of this study. Secondary data was collected from books, journals and government documents while primary data was collected by use of oral interviews, focus group discussions (FGDs) and workshops. The findings show that co-design offers opportunities in product development and local community empowerment. The choice of co-design approach should be informed by the community dynamics, mainly a consideration of the demographics and what would be appropriate for each cohort in terms of tools, methods and techniques of engagement. Socio-cultural aspects of a community and mindsets of the community members are some of the factors that impact participation. The study recommends a co-design framework that comprises a planning phase, co-design phase and a post-design phase.

Keywords: Co-design, participation, community, typology, framework

INTRODUCTION

Co-design as a practice has been in existence in design communities for the past six decades. At inception, its application was mainly in industrial and software design. In recent years, its application can be seen across a wide range of contexts such as healthcare management systems, product design, user experience systems and so on. However, within CBTE planning and development, its application is relatively low and yet to be widely adopted.

In Kenya, CBTEs are recognized as avenues through which community involvement in tourism planning and development can be enhanced (GoK, 2011). In support of community participation in tourism are various published documents such as the Kenya's 2010 Constitution (GoK, 2010), Tourism Act 2011 (GoK, 2011), Kenya's Vision 2030 (GoK, 2007) and the Wildlife Management and Conservation Act 2013 (GoK, 2013). Each of these publications have a well articulated legal framework for community participation but there

is a lack of clear guidelines on how community participation shall be implemented to ensure the planning and development of sustainable CBTEs. Omolo (2018) and Hope (2012) analysed the implementation of community participation guidelines in various public sectors in Kenya and their findings indicate that there exists a gap between policy and practice and this weak articulation of mechanisms of engagement has significantly affected sectors such as tourism, where community participation is promoter as an enabler of sustainable CBTEs.

Co-design is about tools and methods that enhance participation. It is a participatory approach that encourages inclusivity while mitigating constraints to participation by communities. However, empirical research shows the limited application of co-design in the tourism sector and within CBTEs, it is relatively new and yet to be adopted. Two factors may be responsible for this state of affairs; i) co-design tools and techniques

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have not yet been appropriated in the context of CBTEs and ii) the adaptability of these tools and methods to different contexts of CBTEs is yet to be determined. The main objective of this study is to assess application of co-design as an approach for effective community participation in CBTEs with particular interest to Homabay County, the outcome of which is a proposed appropriate co-design framework for sustainable CBTEs.

THEORY

Community participation

The term 'community participation' is polysemous, with its meaning varying within different contexts. In this study, community participation is defined as a process whereby stakeholders (referred herein as community members) play an active role in decision-making and in consequent activities, which affect them (Tosun, 1999). The advocacy for community participation in grass-root development has its genesis in the concepts of sustainability and sustainable development. In tourism development, community participation is very critical since it's an essential factor if sustainable tourism development is to be realized (Manyara & Jones, 2007; Kibicho, 2010; Okazaki, 2008).

Typology of participation

Participation is often thought of as a continuum rather than as discreet types with defined boundaries of description. Community participation has often been evaluated in two main categories. The first category evaluates the extent to which each of the stakeholders has achieved their goals in the participatory process (Zhao & Ritchie, 2007). The second category evaluates the interests of participating stakeholders and whether they have achieved their goals in the participatory process. These two have been the basis for the formulation of typologies of participation.

In 1969, Sherry Arnstein, whose background was in policy formulation for the United States of America government, came up with what is popularly referred to as 'ladder of citizen participation' (Figure 1). The ladder has eight rings, each indicated who has power of control.



FIGURE 1
Ladder of Citizen Participation

Source: Arnstein, 1969

Table 1 is an analysis of Arnstein's ladder of participation showing the characteristics of each rung. Building on Arnstein's ladder of participation, Pimbert & Pretty (1995) came up with a typology of participation that was based on the interests of participating stakeholders. This typology is made up of seven steps as outlined in **Table 2** which provides characteristic features of each step. Both Arnstein (1969) and Pimbert & Pretty (1995) were developed in the context of general development studies.

Within tourism development, Tosun (1999) acknowledges that there are different forms of participation such as active, passive, direct, indirect and so on. He simplified these forms into three broad forms of participation namely; a) spontaneous, b) induced and c) coercive. Spontaneous form of participation is considered a bottom-up approach where ideas and decisions are made at the grass-root level. This could be compared to what Arnstein's (1969) typology refers to as 'citizen control' while Pimbert & Pretty (1995) refers to as 'self mobilization'. These are considered ideal models of community participation.

TABLE 1
 Analysis of Arnstein's ladder of participation

Form of Participation	Characteristic Features
Manipulation	These two forms are considered non participative since the sole aim is to create awareness. Public support is achieved through public relations.
Therapy	
Informing	This is an important step towards participation but there is still evidence of top-down flow of information without a channel for feedback.
Consultation	The community is given a chance at participation through the use of surveys and public gatherings but their opinion is not necessarily considered. Arnstein (1969) considers this a form of trying to legitimize participation.
Placation	Community members are co-opted into committees but the process of identifying them is not democratic. Appointed members can advise and contribute to discussions but the ultimate decision lies with the power holders.
Partnership	Both the citizens and power holders negotiate. Planning and decision making is through consensus often in joint committees.
Delegation	Citizens are major stakeholders and have a clear majority in the committees and have delegated power for decision-making.
Citizen control	The citizens are fully in charge of running the whole project from planning to implementation. They are also involved policy-making and project management.

Source: Author, 2020

TABLE 2
 Pimbert & Pretty's Typology of participation

Form of Participation	Characteristic Features
Passive	The responses of participants are not taken into consideration and the outcome is often predetermined. Use of information shared is at the discretion of external institutions.
Information Giving	Participants may give answers to questions but they do not have an opportunity to influence the context of the interview and neither are the findings shared with them.
Consultation	Participants are consulted and their views are considered. However, they are still not involved in decision-making.
Participation for	Participants are appreciated with cash or in kind for services provided. Once the 'gift' tokens are given, participants are not committed to stay on to the end of the process
Functional	Participation occurs by forming into groups with predetermined objectives. Such participation generally occurs only after major decisions have been already taken.
Interactive	The local perspective on issues is considered important and so different methodologies are employed in getting this information. Participants are involved in information generation and the subsequent analyses that lead to action plans and implementation.
Self Mobilization	Participants take initiatives to change systems. There is no external intervention and they are independent. Participants may get external inputs but they retain control over the way projects are run and managed.

Source: Pimbert & Pretty, 1995

Induced community participation is considered a top-down, passive and indirect form of participation. Participation is initiated by external stakeholders such as tour operators, government institutions and foreign investors amongst others. The community is permitted to hear and be listened to. However, there is no guarantee that

their opinions will be taken into consideration by the stakeholders. In Pimbert & Pretty's (1995) typology, this equates to 'information giving' while in Arnstein's (1969) typology, it is equivalent to consultation.

The last of Tosun's (1999) form of participation is coercive. This is also a top-down approach whose sole aim is to silence the community so that they do not become a threat to future tourism development. In Arnstein's (1969) typology it is equated to 'manipulation' while Pimbert & Pretty's (1995) typology refers to it as 'passive' participation.

Co-design as participation

Participation in co-design is not a one approach but a myriad of design activities that together provide the basis for the envisioning of the new. How then does co-design enable participation? According to Sanders (2006) designers and non-designers engage in activities focussing on telling, making and enacting as ways of enhancing participation. These engagements make use of tools and techniques developed by the designer for use by the community. **Table 3** shows a summary of some of the techniques and tools used in the three co-design activities of telling, making and enacting.

TABLE 3

A summary of some of the techniques and tools used in the three co-design activities of telling, making and enacting.

Activity	Tools and Techniques
Telling	Brainstorming Games Story telling Oral narratives Future workshops
Making	Mock-ups Probing kits Workbooks Cameras Diaries Velcro-modelling
Enacting	Drama Scenarios Role play

Source: Author, 2018

In the design process, the co-design tools and techniques help the designer to facilitate participation from the non-designers through probing, priming, understanding and generating. **Table 4** shows a summary of co-design activities, corresponding tools and techniques and purposes of the same. **Figure 2** shows the conceptual

framework that illustrates how sustainable CBTEs is a factor of participatory approaches such as Co-design and by their establishment, the community gains economic benefits such as employment, increased livelihoods and social benefits such as inclusivity, cohesion, social justice and empowerment. Apart from participation, there is the role of stakeholders such as the National and County governments, NGOs and donors who are responsible for the formulation of supporting policy frameworks and the development of physical and social infrastructure for the tourism sector.

Relationship of Variables

Independent Variable

In the conceptual framework, tourism resources are independent variables. Tourism resources are often a catalyst for the formation of CBTEs. As noted by Suansri (2003) CBTEs will often be established in close proximity to a tourism resource. The tourism resources include but not limited to game reserves, national parks, geographic features and historical features. Management and access to these resources is facilitated by the National or County Governments, NGOs or private owners.

Intervening Variable

Community participation is advocated as the basis for the planning and development of sustainable CBTEs. However, there is a lack of clear guidelines on the implementation of community participation in CBTE planning and development, the result of which are CBTEs that are unable to emphasize independence, address local community priorities, promote effective community leadership, enhance community empowerment and develop community capacity to operate their own enterprises efficiently, which is the hallmark of sustainable tourism development. Co-design, a participatory approach to the planning and development of sustainable CBTEs is the intervening variable.

Dependent Variable

Sustainable CBTEs is the dependent variable. The indices for sustainable CBTEs are the economic, environmental and social benefits accrued to the community. These include empowerment, increased livelihood options, cohesion, social justice and inclusion amongst others.

TABLE 4
 The tools and techniques of co-design organized by form and by purpose

CO-DESIGN TOOLS AND TECHNIQUES	PROBE	PRIME	UNDERSTAND	GENERATE
MAKING TANGIBLE THINGS				
Use of 2-D collages with verbal and visual triggers.	X	X	X	X
Use of 2-D mappings with verbal and visual components.		X	X	X
Use of 3-D mock-ups made from Velcro-modeling, foam, Legos, clay or any available material			X	X
TALKING, TELLING AND EXPLAINING				
Diaries made by taking daily logs through photos, writing, videos, drawing, blogs and other ways possible	X	X	X	
Use of Cards to organize, prioritize and categorize ideas and concepts. The cards may contain provocations such as signs, moments, video snippets, incidents, traces, photos, domains, technologies and templates.			X	X
ACTING, ENACTING AND PLAYING				
Board game boards with rules for playing		X	X	X
Props			X	X
Setting users in future situations				X
Improvisation				X
Skits, acting out and play acting			X	X

Source: Brandt, Binder and Sanders, 2013

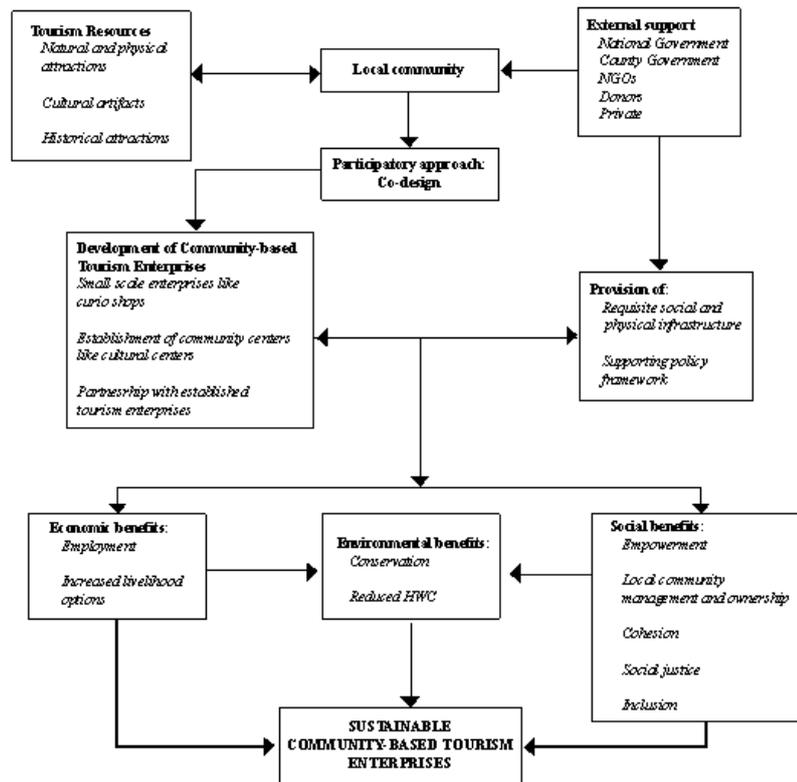


FIGURE 2
 Conceptual Framework
 Source: Author, 2018

RESEARCH METHODS

The research methods selected for the study sought to establish if co-design tools, method and techniques can effectively enhance community participation for sustainable CBTEs in Homabay county. Exploratory research design was used to achieve the objectives of the study. Two CBOs were selected for the study namely; Ndhiwa Kodumba Tse Tse group, located in Ndhiwa Constituency, next to Ruma National Park and RAMA cultural centre, located in Karachuoyo Constituency, next to Lake Simbi Nyaima. Proximity to a tourist site was a consideration since findings from literature show that CBTEs are always located in close proximity to tourist sites (Suansri, 2003).

Purposive sampling was used to get the required sample. The main goal of purposive sampling is about identifying particular characteristics of a population of interest, which best answers the research questions (Creswell, 2009). To be able to meet the objectives of the study, the researcher selected CBOs, who though not registered as CBTEs, are actively involved in forms of

tourism activities. Key informants from the government, tourism sector and academia were also respondents in the study. These included the Director of tourism Homabay county, 2 tourism field officers from Homabay county, the director of Abasuba Community Peace Museum, one representative each from KWS, KFS and Nature Kenya. Academia were represented by 2 lecturers from the University of Nairobi, Department of Art and Design and 2 lecturers from Kenyatta University, Department of tourism. The profile for the key informants was that they might already be involved with the chosen CBOs and/or professionally, bring in a wealth of knowledge as related to the planning and development of sustainable CBTEs.

Secondary data was collected from books, journals and government documents while primary data was collected by use of oral interviews, focus group discussions (FGDs) and co-design workshops. *Nvivo* for Mac was used to: Organize data, list participants' significant statements, develop

theme clusters, develop main themes and lastly, to develop textural, structural and composite descriptions of participants' lived experiences with the research subject. Data from the interviews, workshop and focus group discussion were coded into sets of categories based on identified themes. Recurring themes were identified, recorded and grouped together. The data was mainly represented in narratives as well as various visual formats such as tables, word clouds and quote banks.

RESULTS AND DISCUSSION

The findings discussed are from primary sources such as observations, key informant interviews, focus group discussions and co-design workshops with the CBOs. From observation, the researcher confirmed that there is local community participation in tourism activities and the nature of engagement is mainly informal. **Figures 3a, b and c** and **Figures 4a and b** show some of the tourism activities the community is involved in.



FIGURE 3a, b and c
 Crafts on sale near Lake Simbi Nyaima
 Source: Author, 2018



FIGURE 4a and b
 Young men found at some of the tourism sites who charge a little fee to act as guides to visitors
 Source: Author, 2018

It is also evident that there are constraints to participation as shown in **Table 5** which is a summary from key informants. From co-designing with the two CBOs, it was noted that the effective use of co-design tools and techniques to enhance community participation is influenced by several factors namely:

Demographics

This is a statistical characteristic of a population such as age, gender, level of income, level of education and so on. A prior knowledge on demographics of a community helps the researcher determine appropriate co-design tools and technique. In co-designing with the two CBOs, an analysis of how demographics affected the process is outlined below:

Age

Ndhiwa Kodumba Tse Tse group were mainly youthful with the mean age of the group being 25. The RAMA cultural centre members were elderly

with their mean age being 62. Ndhiwa Kodumba Tse Tse group were able to use technology like mobile phones and ICT in co-designing fairly well. They were able to create photo diaries from the use of the cameras. RAMA cultural centre members were not very conversant with technology but preferred the use of 3D models and resource maps in co-designing.

Gender

The effect of gender on co-designing was only evident with the Ndhiwa Kodumba Tse Tse group who were mixed, males and females, unlike RAMA cultural centre members who were only males. The researcher observed that the females were less vocal during the brainstorming sessions. There was also evidence of digital divide between the two genders with the males being more tech savvy.

This could be attributed to the fact that the two main communities who were part of this study;

the Luo and Abasuba communities are patriarchal in nature and the observed behaviours are as a result of social construct (Tosun, 1999).

Income levels

The income levels means access to education, technology, leisure and generally greater opportunities in life. There was a correlation between income levels and levels of education. Income levels limited or heightened access to tools for co-design such as cameras.

Literacy levels

Literacy levels may be influenced by income levels, but as a stand alone, it impacts on co-design activities. Where there is evidence of low literacy levels like with RAMA cultural centre members, there was more use of visual aids as opposed to text, simple and intuitive activities as well as avoidance of technical jargon.

Mindset

Mindset is about attitudes and perceptions the community has of who they are. In co-design, the community is presumed the ‘expert’ and so is expected to have the confidence in their ability to create. However, there are instances where political injustices, retrogressive cultural practices or low literacy levels deny the community the confidence to take on the role of an expert (Hussain & Sanders, 2012). In this study, the researcher observed that the communities believe in external aid and a right of assistance from government and non-government agencies. **Figures 5 a and b** shows the community belief that the researcher should offer financial assistance.

TABLE 5

Findings from key informants on constraints to community participation

Respondent	Constraints to community participation		
	Operational	Structural	Cultural
Director of tourism; Homabay county	Lack of policy guidelines on how to engage the local community in tourism.	Lack of appropriate legal system in structure and management of CBTEs making communities hesitant to participate in them due to fear of financial losses. Inadequate financial resources and a perceived high cost of community participation are other structural limitations hindering community participation in tourism.	Low level of awareness on CBTEs amongst the community hinders their participation.
KWS research office	Poor co-ordination amongst stakeholders		
KTB officer	Lack of a devolved management of tourism development by national governments leading to minimal or no input from the community.		

Source: Author, 2019

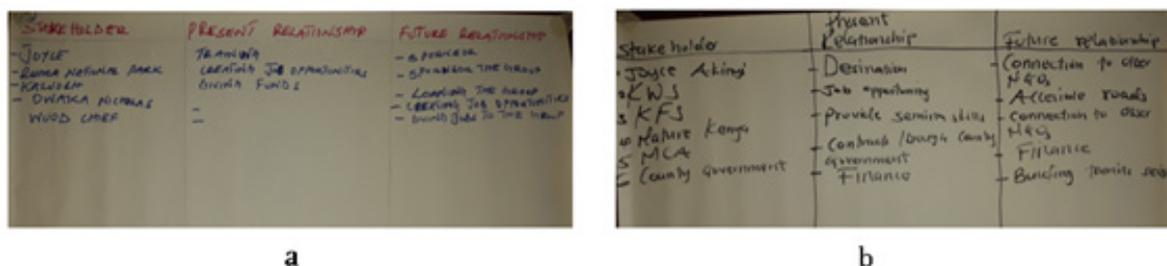


FIGURE 5a and b
Co-design outcomes showing a mindset of communities as dependants
Source: Author, 2019

Challenges of co-designing with communities

As with any other group activity, co-designing with communities pose several challenges. One of the main challenges with co-designing with communities is access. Most communities have ‘gate keepers’, people whose permission you need to get so as to access the community. Gatekeepers and authority figures give the community confidence to engage with researchers. In this study, instead of using the gatekeepers, the researcher used government officials for access to the community. Access to RAMA cultural centre was through recommendation by the Homabay county director of tourism, while for Ndhiwa Kodumba Tse Tse group, access was through the Director of youth affairs, Mimistry of ICT, Innovation and Youth affairs.

Another challenge is the participants capacity to participate. This is often affected by a myriad of factors such as literacy levels, language barriers, income levels and socio-cultural obligations such as worship. In this study for both CBOs, co-design sessions were planned outside worship days, farm activities and market days. Not often discussed, as a challenge is appropriate ways of showing appreciation. When people prioritize their time

away from their daily activities so as to participate in a research study, it is important to provide tangible appreciation to them. The dilemma is often how to show appreciation without it appearing as a form of tokenism. In this study, as a form of appreciation, the Ndhiwa Kodumba Tse Tse group were provided with refreshments and a certificate of participation while RAMA cultural centre members were provided with refreshments and a reimbursement of transport.

Appropriate co-design framework for the planning and development of sustainable CBTEs

Community participation is advocated as an integral part of sustainable CBTEs (Asker et al.,2010; Bello et al.2017; Dangi & Jamal, 2016; Giampiccoli & Saayman, 2018; Murphy, 1983). The co-design framework for the planning and development of sustainable CBTEs presented here has been designed to be adaptable by anyone, especially designers seeking to involve local communities in product or service planning, development or modification. The proposed framework is shown in **Figure 6**.

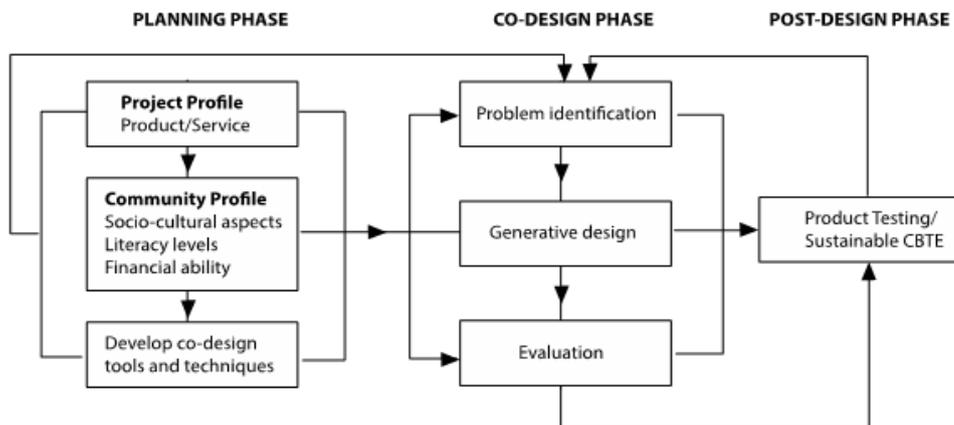


FIGURE 6
 Proposed co-design framework for the planning and development of sustainable CBTEs
 Source: Author, 2020

The framework is divided into three main phases namely: a) planning phase, b) co-design phase and c) post-design phase.

Planning Phase

This phase involves activities such as project profiling, which is basically a simplified description of the final project. It includes type of project

location, participants, expectations and project output. The phase also involves community profiling, which includes demographics and knowing aspects of the same that can impact on participation. Develop co-design tools and techniques based on the project and community profile

Co-design Phase

This is the point at which the designer and the community engage in activities to conceptualize a solution to a particular problem and generate solutions to the same. The co-design steps are i) problem identification, ii) generative design and iii) evaluation.

Post-design

This involves product testing, monitoring and evaluation

CONCLUSION AND RECOMMENDATIONS

The dynamics of community participation in developing and least developed countries has been narrowly looked at in literature (Murphy, 1983; Tosun, 1999). In Homabay County, there are socio-cultural, political and economic factors that determine level of participation in tourism. An appropriate co-design framework for sustainable CBTEs starts with the community. The researcher/designer needs to consider factors such as socio-cultural issues, literacy levels and financial ability that can affect the effectiveness of participation in a project. Project goals and outcomes need to be outlined clearly. Once this is done, appropriate tools and techniques can be designed to facilitate co-design. Prior engagement with the community helps in identifying team dynamics and organizational aspects that may promote or hinder participation. This study showed that co-design offers opportunities in product development and empowerment of participants and it can lead to effective community participation.

Since sustainability of CBTEs is pegged to community participation, clear policy statement in support of achieving effective participation considering issues of gender, youth, literacy levels, poverty levels and gaps in expertise need to be embraced. The New Constitution of Kenya lays the basis for the development of a policy framework on citizen participation in devolution but there is need for a design and content of the policy framework giving rise to concerns specific to CBTEs and one which puts into consideration the constraints to participation with a focus on apathy and low levels of awareness, low literacy levels, gender disparities, lack of expertise and financial constraints.

CITED REFERENCES

Arnstein, S. R. (1969). A ladder of citizen participation. *American Planning Association*, 35 (4), 216-224.

Asker, S., Boronyak, L., Carrard, N. & Paddon, M. (2010). *Effective community based tourism: A best practice manual*. Sydney: Sustainable Tourism Cooperative Research Centre .

Bello, F. G., Lovelock, B. & Carr, N. (2017). Constraints of community participation in protected area-based tourism planning. *The case of Malawi. Journal of Ecotourism*, 16 (2), 131-151.

Brandt, E., Binder, T. & Sanders, E. B. (2013). Tools and techniques: Ways to engage telling, making and enacting. In J. Simonsen, & T. Robertson, Routledge. *International Handbook of Participatory Design*, 1(1), 145-181.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Los Angeles: Sage.

Dangi, T. B. & Jamal, T. (2016). An integrated approach to sustainable community-based tourism. *Sustainability Journal*, 8 (5), 475.

Giampiccoli, A. & Saayman, M. (2018). Community-based tourism development model and community participation. *African Journal of Hospitality, tourism and leisure*, 7 (4), 1-27.

GoK. (2013). *Wildlife conservation and management act*. Nairobi: UNEP.

GoK. (2007). *Kenya Vision 2030*. Nairobi: GOK.

GoK. (2010). *The Constitution of Kenya*. Nairobi: National Legislative Bodies / National Authorities.

GoK. (2011). *Tourism Act*. Nairobi: National Council for Law Reporting with the Authority of the Attorney-General.

Hope, K. R. (2012). Engaging the youth in Kenya: empowerment, education, and employment. *International Journal of Adolescence and Youth*, 17 (4), 221-236.

Hussain, S. & Sanders, E. B.-N. (2012). Fusion of

horizons: Co-designing with Cambodian children who have prosthetic legs, using generative design tools. *CoDesign*, 8 (1), 43-79.

Kibicho, W. (2010). Community-based tourism: A factor-cluster segmentation approach. *Journal of Sustainable Tourism*, 16 (2), 211-231.

Manyara, G. & Jones, E. (2007). Community-based tourism enterprises development in Kenya: An exploration of their potential as avenues of poverty reduction. *Journal of Sustainable Tourism*, 15 (6), 628-644.

Murphy, P. E. (1983). Tourism as a community industry: An ecological model of tourism development. *Tourism Management*, 4 (3), 154-232.

Okazaki, E. (2008). A community-based tourism model: Its conception and use. *Journal of Sustainable Tourism*, 16 (5), 511-529.

Omolo, A. (2018). *Policy proposals on citizen participation in devolved governance in Kenya*. Nairobi: The Institute for Social Accountability (TISA).

Pimbert, M. P. & Pretty, J. (1995). *Parks, people and professionals: Putting 'participation' into protected area management*. Geneva: UNRISD Discussion Paper.

Sanders, E. B. (2006). Design research in 2006. *Design Research Quarterly*, 1(1), 1-9.

Sanders, E. B. (2003). *From user-centered to participatory design approaches*. Florida: CRC Press.

Sanders, E. B. (2000). *Generative tools for co-designing*. In S. A. Scrivener, L. J. Ball, & A. Woodcock, Collaborative Design: Proceedings of Co-designing 2000, (3-12). London.

Suansri, P. (2003). *Community based tourism handbook*. Thailand: Responsible Ecological Social Tour-REST.

Tosun, C. (1999). Towards a typology of community participation in the tourism development process. *Anatolia*, 10 (2), 113-134.

Zhao, W. & Ritchie, B. J. (2007). Tourism and poverty alleviation: An integrative research framework. *Current Issues in Tourism*, 10 (2-3), 119-143.