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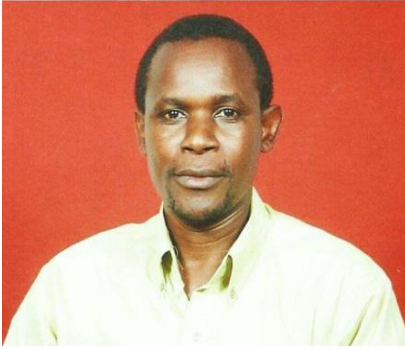
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HUMAN CENTERED DESIGN AND COMMUNITY BASED CONSERVATION IN KENYA

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Abstract

Community based conservation (CBC) is part of the ongoing restructuring of land-use patterns driven by ideals of global environmental governance. Community-based conservation (CBC) is grounded on the concept of conservation of biodiversity with the community. It has been controversial because community development objectives are not necessarily consistent with conservation objectives in a given case. Conservation managers had to comprehend the need for engagement with local people, who commonly are hostile to wildlife conservation, to change their attitude for improved success of conservation programs. This is certainly true

in Africa, where rural inhabitants often view wildlife conservation as misguided because it puts the needs of wildlife above those of people. The researcher used case study approach of two community based conservancies in Northern and Southern Kenya to apply HCD to increase participation in biodiversity conservation. The study proposes Human Centred Design (HCD) as an alternative approach to conservation programs toward the inclusion of humans in the ecosystem, use of participatory approaches to natural resource management that evolves an understanding of ecosystems as fabric in which humans play a central part. Human Centred Design (HCD) has the potential of generating a valid conservation process, involving members as stakeholders in meeting their fundamental needs and expectations to overcome their social challenges and increase engagement by reducing conflicts arising from resource use restrictions.

Key Words: *Community based conservation, Human Centred Design, wildlife conservation, participation.*

Introduction

Increasing pressure to improve conservation outcomes of biodiversity with communities has prompted an emphasis on innovation. Design thinking has been proposed as a systematic approach to innovation in social issues, owing to its human-centered methodology that emphasizes compassion for the end-users. Therefore, a better understanding of the problem is developed for effective solutions. A key feature of design thinking is stakeholder participation.

Globally, public participation is viewed as a common phenomenon of environmental decision making in forestry, wildlife or water management and conservation. Participatory approaches occurred after a move in management from top down approach to bottom up discussion and involvement of stakeholders. This approach is will strengthen the sincerity of decisions in a transparent and trustworthy practice.

Creation of wildlife conservancy alters the rights of control, use and access of natural resources resulting into conflict with the community (Greiner, 2012). Community participation is considered an effective measure to protect the eco-environment and to improve people's livelihoods in protected areas. Rising debate as to the attention provided at a practical level in most developing countries is unclear on the impact of stimulating individuals towards achieving conservation goals. "Community conservation" is gaining ground over "fortress conservation" with many authors citing the advantages of empowering local people to enhance their potential as protectors of natural resources, creating a sustainable development for present and future generations (Lopez-Bao, Chapron, & Treves, 2017) (Kotharia, Camil, & J., 2013). The real challenge is whether participatory approach is successful in protecting biodiversity, how will non-participants benefit from conservation outcomes. Conservation needs to be participatory in nature.

International Union for Conservation of Nature: Sustainable Use and Livelihoods Specialist Group (IUCN SULi) emphasizes the need for a global cohesion to influence the community towards wildlife and habitat management. Community-based conservation (CBC) is an approach to biodiversity conservation in protected areas (PA) through participation at all levels with local communities.

Human Centred Design (HCD)

Resolution in biodiversity conservation, away from exclusive protected areas towards more people-centered or community-based conservation. This has been referred to as 'new conservation'. Human Centered Design (HCD) is a methodology that places the user at the core of design process. Explore user's needs, behaviors and experiences to create effective solutions to societal issues and challenges (Foundation, 2023). HCD works with four principles to solve societal challenges as described in the figure below:
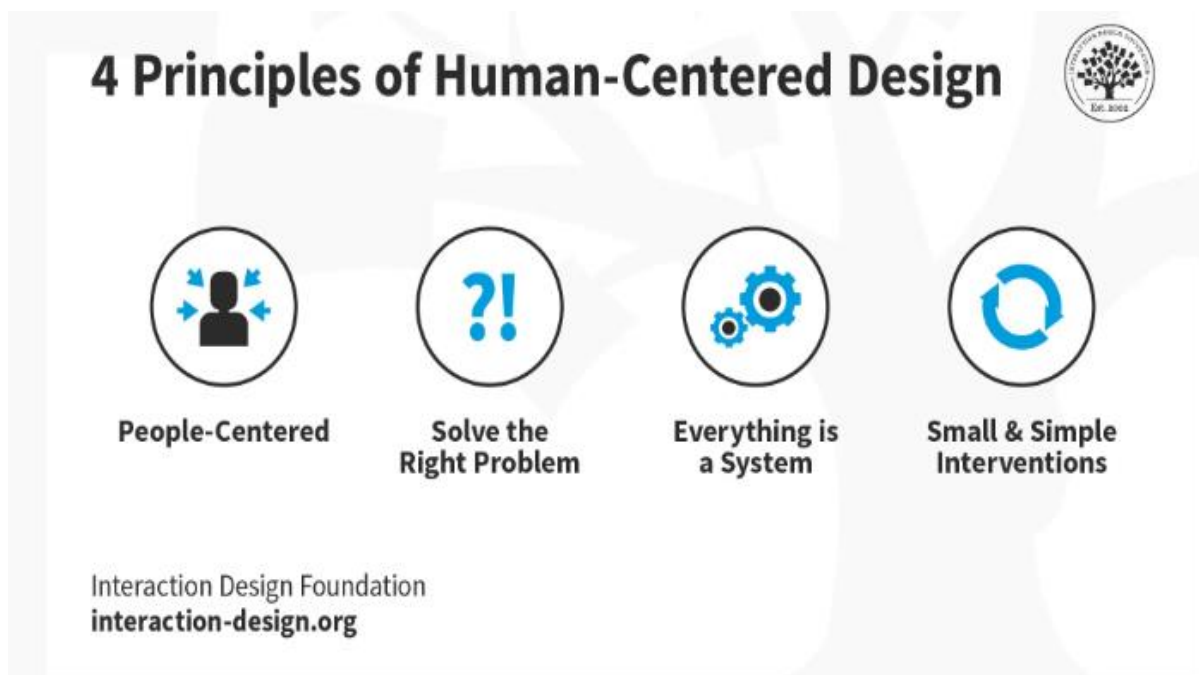
Figure 1. Principles of Human Centred Design

(Source: https://www.interaction- design.org/literature/ topics/human-centered-design)

The description of Figure 1 is as follows:

People: focus on the people and design for the people.

Problems: understand and empathize the problems facing the community and collaborate with them to create a solution.

Create systems: society works in a framework where everything is interrelated.

Prototype: create solutions with the stakeholders and utilize community knowledge of indigenous systems.

As indicated in Figure 1, the first challenge for people-centred conservation concerns the ways in which different understandings, meanings and values of biodiversity, the environment and nature are integrated and applied in devising conservation priorities and action

The second challenge for real people-oriented conservation is to find fair and just means of including the plural values, knowledge and interests of the different stakeholders recognized above. In order to do this, we need to move beyond 'participation' as practiced normally in attempts to integrate conservation and development. Many forms of participation practiced are still passive and sometimes even coercive, and a number of recent publications have criticized and dissected the application of participation in conservation projects. We need to apply methods and tools for deliberative inclusionary processes that radically transform decision-making and management processes and open up co-management frameworks to allow for learning and collective action.

'Deliberation' means careful consideration or discussion. Decision-making and planning thus require social interaction and debate.

Deliberation implies that different positions of stakeholders are recognized and respected. Participants are expected to reflect on and evaluate and re-evaluate their and others' positions, and the process of deliberation aims to bring about some kind of transformation of values or preferences and to foster negotiation between participants in order to reach a decision. 'Inclusion' is the action of including different participants in these processes.

In conclusion, the policy and institutional landscape of conservation and development is rapidly and quite significantly changed and changing. A wide range of different strategies and approaches will be necessary in the future to reconcile and trade-off the needs and demands of global to local societies. These will include traditional protected areas, but increasing more integrated and people-centered approaches to biodiversity conservation.

Community Based Conservation (CBC)

Community Based Conservation (CBC) refers to wildlife conservation efforts that involve rural people as an integral part of a wildlife conservation policy. The key elements of such programs are that local communities participate in resource planning and management and that they gain economically from wildlife utilization. In part, CBC is seen as an alternative to the more exclusionary protectionist policies of the past, which often alienated rural people from conservation efforts. The new approach has been variously called 'community conservation', 'community wildlife management' and 'community based natural resource management', although it has been suggested that the first two of these descriptions should apply to protected areas, and the remaining one reserved for forest management, watershed protection. The approach is underpinned and informed by

the notion of participation and participatory development, and parallels a fundamental shift in development thinking.

The complexity of such interactions relies on the fact that triggering events and the social-ecological context influence people's individual and collective environmental behavior. Triggers of local people's engagement in both conservation projects and traditional management practices can consist of contextual conditions of a different nature and external to the communities, such as environmental degradation and situations of conflicts and disasters Drivers can also include financial mechanisms and policy instruments to enhance community-based conservation. For instance, new market opportunities related to performing conservation activities can provide communities with economic incentives to guarantee the provision of certain ecosystem services, and state regulatory frameworks incentivizing the development of sustainable resource management can also lead to enhanced biodiversity conservation (Seixas and Davy 2008).

Local people's involvement in community-based conservation supported by external institutions can result from shared visions between communities and external actors about how to improve natural resource management for the benefit of local people (Schwartzman and Zimmerman 2005). Strong partnerships can act as catalysts and promoters of conservation by reinforcing local leadership and cohesiveness and often providing capacity building and funding to communities (Berkes and Seixas 2004, Seixas and Davy 2008, Shukla and Sinclair 2010). The encouragement of local people to participate in institutionalized conservation practices can also come from intrinsic motivations beyond economic incentives. A

collective sense of autonomy leading people to gain access to natural resources, decision.

If communities embrace wildlife conservation because of tourism and the benefits accrued from conservation programs, they may discard it if a better alternative crosses their path. Community based conservation seek to improve the relationship between people and wildlife and there is need for conservation programs to improve the livelihoods of the stakeholders.

Wildlife conservation

Wildlife conservation is the practice of protecting plant and animal species and their habitats. As part of the world's ecosystems, wildlife provides balance and stability to nature's processes. The current state of biodiversity conservation is largely the result of sociocultural systems that have emerged in adaptation to the environment. Factors such as increased wildlife population, human population, climate change, change of land use patterns and pollution and threatening the framework and survival of wildlife.

The role of humans in wildlife conservation is widely evident and recognized (Cortés-Avizanda et al. 2018), and insights from social science are increasingly used to describe interactions and relationships between humans, wildlife, and ecosystems. One aspect of wildlife conservation frequently discussed from a social science standpoint is the social dimensions of human–wildlife relationships. Interactions between humans and wildlife are often described in terms of conflict and coexistence. Protection of natural resources is often difficult due to persistent gaps in ecological data and complex conflicts between wildlife conservation and human livelihoods.

Conservation success (or failure) in many developing countries is often linked to human-wildlife interactions, which impact biodiversity and human populations in both positive and negative ways. Innovative solutions are needed to identify sources of conflict and promote coexistence between humans and wildlife.

Methodology

Study context

The researcher conducted research amongst the Maasai community who are pastoralists by nature. The case study was analyzed between Northern Kenya and Southern Kenya. In Northern Kenya the data was collected from Lekurruki community conservancy and in Southern Kenya data was collected from Mbirikani Group Ranch (MGR).
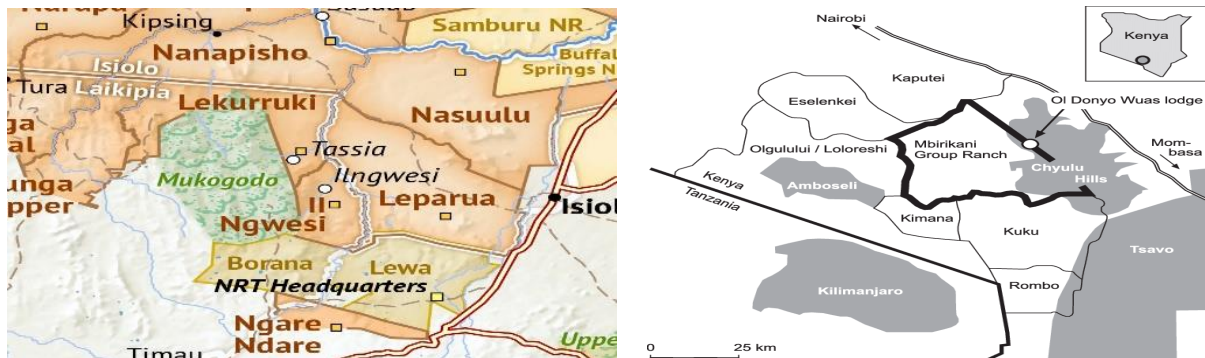

Figure 2. Location of Lekurruki and Mbirikani Group ranch

(Source: Research gate)

Data Collection

The researcher visited the community and collected data through observation, structured interviews and focus group discussions. The

study used surveys with local villagers to characterize the current state of community conservation participation in the area. Structured questions, created based on focus groups with local leaders in 2022, highlighted two key issues motivating community engagement in the region: tourism and culture. These issues, along with the broader goal of overall forest conservation, became the focus of the larger data collection effort, and camera, notebook, recorder and stationery were the tools that enhanced the data collection method.

Data analysis

Qualitative data were analyzed using a combination of grounded theory and social constructivism approach method to identify important themes that emerged during the interview conversations. The coding effort was driven by the researcher who conducted the field interviews and interacted extensively with the participants over a long period to understand nature and culture.

Few limitations were noted that are worth to mention language barrier was key and it necessitated use of a translator, way of life of the Maasai community needed research to be conducted after day's activities were over.

Results

Community Based Conservation

The Maasai community were thriving with wildlife since time in memorial and integrated it as a way of life. The two case studies had a local name Ekireketa Ingwesi which means to care for. The interviews were conducted between community leaders and members with a good proportion of 50% women involvement and 50% men

involvement in the interview guides. On the issue of herbivores or carnivorous which is esteemed highest by the members they cited both species play their role in the ecosystem and food chain hence the need to conserve both.

Tourism was a motivator for community participation in conservation programs since it brought revenues to the members. Challenge experienced, at the time, was covid 19 pandemic that reduced tourism in the area hence reduced income to the community and reduced income generation. The cultural boma Osirum at Mbirikani Group Ranch had widows who settled there permanently cited loss with the pandemic. In a year one lady cited she sold two beaded accessories for 6,000Ksh (USD 47) which couldn't sustain her household. The second lady, an aged woman in her 60s, participated through dance and showcasing of traditional attire informed us of a challenge due to lack of fees for her granddaughter since tourism was low.

According to Ogada (2019), tourism can be affected by many factors and conservation managers should view it as a variable that is dependent on community impact and not as a primary user of conservation. Another opinion raised by this author is "the misconception spread amongst the communities that makes them perceive donor-funded projects and developments as "benefits of conservation" rather than finite subsidies (Ogada, 2019).

Community participation

Passive participation was implied as a way of active participation by members. Data collected was grouped into two: women and children and men.

Participation by:	*Conservation projects*	*Meetings*	*Leadership*	*Awareness*
Women and children	*Minimal*	*Minimal*	*Minimal*	*Minimal*
Men	*Active*	*Active*	*Active*	*Active*

Women and children by culture are to be passive participants as the men lead. Children below 18 years do not participate in any way until inducted into adulthood. Rangers employed at the site at Lekurruki Conservacy are 33 in total with 30 males and 3 females. Leadership at the Lodge has 2/3 male representation and 1/3 female representation.

Annual meetings are held to discuss matters in the community and to be informed of conservation projects for development. Compensation meetings for example at MGR the men own the livestock hence attend the meetings vigorously, women do not own the livestock therefor minimizing their attendance in the forum. General Barazas (meetings) held every quarter had both genders attending the meetings. The interview guides had a question on: Do you speak at the meetings and half (5/10) women selected (often, rarely) rarely as an option.

Design with Human Centered Approach

The researcher held a focus group discussion with the community members and called upon prioritizing of issues in their day to day activities. The problems that arose were lack of infrastructure i.e. roads, electricity and tapped water. Insecurity due to livestock raiding with neighboring communities. Minimal compensation for loss of crop,

life and livestock attacks. Reduced income generation from tourism after the 2020 Covid pandemic.

The researcher introduced design to the members of the focus group and the following proposal were discussed:

Societal Issue	Human Centered Design solution
Lack of basic infrastructure: reliance on donor funding	Human capital is a resource and the youth could be engaged in constructing pathways with basic tools not just as security personnel Bottom up approaches to community meetings since they receive annual revenues i.e money from carbon foot print they can channel to development of water and roads Involve county government in their operations so that they can provide machinery for road construction and piped water
Ethnographical disparities: women, children, men.	Annual meetings to be divided into men, women and children to achieve active participation by members Story- telling to be adopted in cultural bomas and lodges to create characters and heroes in the community and among childrens minds with an aim of cultural day that can be a calendar event Beadwork that visualizes the endangered species in the area hence having flagship species in Northern and Southern Kenya Diversification of projects i.e. Northern Kenya have bought youth motor bikes for enhanced transportation with tourism revenues

Conclusion

The following are conclusions of the study:

First, inclusion of all relevant actors necessitates a very thorough and rigorous analysis of stakeholders: it requires that many different techniques are used to encourage people to participate and to articulate their views. Design justice as a framework recognizes the universality of design as a human activity hence the philosophy of nothing about us without us. Human centred design plays a vital role in inducting stakeholders who are community members from the decision making, planning and implementation of conservation projects. This will be measured by reduced conflict in the zones since projects are community driven. Government, Non- government organizations partnering with community members in their projects. In the words of Ogada 2019 "the inclusion of local communities as intellectual participants in conservation".

Secondly, building trust in the process and between different stakeholders takes time but is vital for the success of both process and outcome. Participants have to be confident that their views are heard and noticed, and decision-making and priority setting have to be transparent and accountable. Human centered design is pegged on the principles of : define, experiment, test and implement these will make the process transparent and acceptable by most community participants.

Thirdly participation is adaptive and learning process. Consensus and agreement is not an end-point nor necessarily desirable. Participatory approach is an approach in HCD that incorporates the community heritage and traditional knowledge necessary for dealing with

conflicts and disagreements that do not impose 'consensus' on the user.

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