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Residents' Exposure to Multiple Shocks and Coping Strategies among Tourism-Gateway Communities in Northern Tanzania

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Abstract: There is increasing awareness about influence of tourism development on resident's livelihoods. Yet, studies that link tourism and residents capabilities to withstand livelihood-shocks are scant. This study was set to address this empirical gap by evaluating the extent to which tourism development has enabled resident's access to livelihood assets capable to address multiple livelihood-shocks through coping strategies. Retrospective evaluative technique embedded on multi-method approach was used to collect data, involving 63 in-depth interviews and survey among 416 tourism beneficiaries and 425 non-beneficiary agro-pastoral households in three gateway tourism destination communities of Northern Tanzania. It was found that residents have been exposed to severe multiple shocks in the facets of ecology (i.e. drought, livestock diseases and crop riding), economic (i.e. rise in food-price and business-loss), health (i.e. chronic illness and death) and social (i.e. family conflicts and cattle-theft). In response to the shocks, tourism beneficiary households used effective shock-coping strategies, such as spending on savings and livestock selling to address the shocks. On contrary, non-beneficiaries used less effective coping strategies like remittances and they reduce consumption. The study recommends increase access to resident's financial and human resources in building greater capabilities to handle multiple livelihood-shocks.

Keywords: Tourism; multiple shocks; coping strategies; Northern Tanzania

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Introduction

Households in rural areas of Sub Saharan African (SSA) countries often experiences multiple shocks that causes variability in their assets as they cope with shocks (O'Brien et al., 2009; Paumgarten et al., 2020). In the absence of sufficient assets to smooth consumption, multiple shocks may lead to severe health challenges associated with reduced food (nutrient) intake (Nguyen et al., 2020). Similarly, subsequent erosive coping, such as sale of productive assets or interruption of education (i.e. drop-out), largely reduces human capital (Nikoloski et al., 2018; Paumgarten et al., 2020). Therefore, understanding effective interventions that enable local resident's capabilities to cope with multiple shocks and stressors is crucial (O'Brien et al., 2009).

Tourism has been considered among possible interventions that contribute in building capabilities to cope with life-threatening context (i.e. occurrence of shocks, trends and seasonality) among local residents, thus, enhancing their livelihoods (Ashley, 2000; Mwongoso et al., 2023a). Efforts to improve residents' living conditions through either communal projects financed by tourism receipts or income to individuals directly involved in tourism (e.g. local residents employed in tourist's lodges, tour guides or selling hand crafts to tourists) is vital, especially to Gateway Communities (GCs) of Northern Tanzania (Mwongoso et al., 2023a). GCs are the doorways or entry points to famous protected areas that serves for nature-based tourism attraction (Frauman & Banks, 2011).

Nelson (2004) contended that tourism in GCs is the key alternative source of livelihoods' diversification to sustain well-being of pastoral and agro-pastoralists experiencing vulnerability condition due to low productivity caused by semi-aridity and typical Savannah rangelands of northern Tanzania. Thus, supporting tourism development in GCs is imperative in enhancing residents' capacity to address multiple shocks and achieve quality of life (Mwongoso et al., 2023b).

Several studies (Mbaiwa & Stronza, 2010; Agyeman et al., 2019; Mwongoso et al., 2023a) employed the sustainable livelihood framework (SLF) to establish the link between tourism development and local residents' well-being facilitated by access to livelihood capital assets (Human, Social, Natural, Physical and Financial) in GCs of SSA countries. However, this link is not adequately understood due to limited empirical evidence that describes relationship between tourism development, livelihood capital assets and residents' capabilities to cope with multiple shocks and stressors.

This study, therefore, sought to address the gap left by previous studies by evaluating the impact of tourism development in establishing capabilities to cope with multiple livelihood shocks among residents. Specifically, the study sought to identify types of severe livelihood shocks experienced by households, and, assess coping strategies used to address shocks.

Theoretical Underpinning

This study adopted the Sustainable Livelihood Capacity framework (SLCF) extended from Sustainable Livelihood Framework (SLF) by Lienert and Burger (2015). The SLCF is premised on the efficacy of the capacity of livelihood capital assets in sustaining livelihood. A sustainable livelihood is the one endowed with livelihood capitals that can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets without undermining the natural resource base (Chambers & Conway, 1992).

Shocks are defined as "adverse events that lead to a loss of household income, a reduction in consumption and/or a loss in productive assets" (Dercon et al., 2005, p. 5). Shocks, coming from different sources may lead to financial or non-financial loss, spread across space and time and vary in frequency, duration, intensity and scope (Hakim et al., 2018). For instance, scope of shock can be either idiosyncratic or covariate. The former is specific, affecting individuals or households, for example, illness, injury or unemployment of household members. The latter has wide coverage, affecting the entire community (e.g. village) such as floods, droughts or epidemics (Nguyen et al., 2020). People affected by shock do normally take coping initiatives to address the shocks.

According to Snel and Staring (2001), coping refers to "all strategically selected acts that individuals and households in a poor socio-economic situation use to restrict their expenses or earn some extra income to enable them to pay for the basic necessities and not fall too far below their society's level of welfare" (p.16)

The SLCF is used in this study as a guide in describing relationship between tourism as livelihood strategic activity, livelihood capitals assets and residents' capabilities to cope with multiple shocks and stressors. In this study, the proposition underlying the SLCF contend that the more the quality and quantity in possessing of livelihood capital assets, the greater the capacity to effectively cope with multiple shocks by the household.

Methodology

This study was conducted in three GCs: Burunge, Loliondo and Lake Natron. In this study, GC refers to a village or combination of neighboring villages with similar cultural and topographical features. As part of the PA ecosystem of Northern Tanzania, Burunge is located in wildlife migratory corridor between Tarangire and Manyara National Parks of Babati District in Manyara region. Loliondo and Lake Natron GCs are gateways to World Natural Heritage sites of Serengeti National Park and Ngorongoro Conservation Area. The agro-pastoral Maasai natives constitute 95% of residents in Loliondo and lake Natron and 28% in Burunge, where they interact with 60% of Mbugwe agro-pastoralists along with minority ethnic groups of Warangi, Iraque and the hunter-gather Barbaig group (Babati District Council, 2015; Ngorongoro District Council, 2016).

Residents in these GCs have more than two decades of tourism experience, which, over the years, have enabled these GCs to evolve through exploration, involvement and development stages (Mwongoso et al., 2021) of tourism destination life cycle. Residents in these GCs interacts with tourists through tour-jobs (e.g. tour-guiding and wildlife-tracking) and cultural offers (i.e. traditional dance and selling cultural handcrafts to tourists). Another way of

resident's engagement in tourism is through tourism investment agreements. Tourism investors are allowed to use parts of village lands endowed with abundant wildlife resources to conduct tourism activities, such as game-viewing, walking safaris, game-drive, hunting, bird-watching coupled with accommodation facilities. However, residents should comply with restriction on cultivation, grazing or settlement in the concessioned area. In return, residents access tourism revenue on land rents and tourist bed-fee per night. Subsequently, the tourism receipts have been used to construct village-offices, bridges, classrooms, health-centres and school-fee sponsorship program to kids from poorest households (Mwongoso et al., 2023b).

Design

This study used the retrospective evaluative technique embedded on quasi-experimental design, coupled with the convergent parallel approach. Given the inherent nature of repetitive shock-occurrences, scoping, intensity and duration across space and time, the retrospective technique was necessary. The technique was used to collect data on types, frequency of shock occurrences and shock-coping strategies used by households in the past (i.e. ten years ago-2008) as well as during the time of data collection (2019). A period of ten years (i.e. 2008/9-2018/19) was considered adequate to serve the purpose of impact evaluation. Noteworthy, the year 2008 was taken as starting point because prior information from pilot study revealed that respondents were able to recall severe shocks they endured and coping strategies they used when year 2008 was taken as reference period.

Quasi-experiment involved beneficiary and non-beneficiary households. It contends that households and villages where an intervention (i.e. tourism activities) is performed are referred to as target 'treated' group or tourism beneficiaries. Households located outside the target village, and thus, are not affected by interventions (i.e. there are no tourism activities) were considered as 'untreated', 'control' group or non-beneficiaries (Khandker *et al*., 2010). This approach allowed for comparison of capabilities of coping with multiple shocks between these groups. In order to obtain in-depth understanding about the attributes, scoping, sensitivity and direction of critical livelihood shocks along with shock-coping strategies, it was deemed necessary that both quantitative and qualitative data are sought from beneficiary and non-beneficiary households. Thus, both quantitative and qualitative data was collected simultaneously, analyzed separately, then, combined for general interpretation (i.e. convergent parallel approach).

Population and Sampling

The researcher used two steps to obtain a sample that represented the population. Selection of sample villages was done in the first step. The total of 9 beneficiary and 7 non-beneficiary villages were selected from 29, 17 and 28 villages constituting three divisions: Loliondo and Sale (Ngorongoro District) and Mbugwe (Babati District) respectively. These villages had to be selected purposely because it was observed that not all villages constituting GCs had even distribution of tourism attraction. Selected beneficiary villages were: Vilima Vitatu, Olasiti, Sangaiwe, Kakoi and Mwada from Burunge; Sukenya, Arash and Ololosokwan from Loliondo and one village, Engaresero from Lake Natron. Non-beneficiary villages were: Soitsambu, Olorien-Magaiduru and Njooroi from Loliondo, Kisangaji, Minjingu and Sarame from Burunge and Pinyinyi from Lake Natron GC. Non beneficiary villages were selected to match with features of beneficiary villages so as to comply with impact evaluation principles that require similarities of the study areas to minimize bias. Criteria used to select non-beneficiary villages include resemblance to beneficiary village in regard to location (i.e. near to beneficiary village), ethnicity, livelihood activities, tourism attractions, such as socio-cultural and topographical features, including wildlife view and scenic landscape.

The second step involved formulation of the household sample frame. Village registries were updated through reference to official statistic data from district and national levels for 2002 and 2012 Tanzania Population Census. This task was conducted by key informants (i.e. village council members with long experience of residents' living conditions in their local areas). The sample frame formulated constituted household heads who were selected on two criteria. Firstly, household heads had to be in the same status for the past 10 years to the time of data collection. Secondly, household heads should not possess livelihood capital assets accessed using external aid from donor-based organizations like Tanzania Social Action Fund (TASAF), which manages cash transfer programs to poorest households. These criteria were important in order to obtain eligible respondents with a responsibility of making key decisions on utilization

of household assets to cope with shocks within adequate time frame and such assets had to be earned from household self-initiatives in managing locally available resources within the GC. The sampling frame from Burunge was 1177 beneficiary and 1102 non-beneficiary household heads, respectively. From Lolindo, the sampling frame was 1634 beneficiary and 827 non-beneficiary household heads and from lake Natron GC the sampling frame was 588 beneficiary and 968 non-beneficiary household heads.

Sample Size

Household sample size was determined using a formula appropriate for small sample size corrected for a finite population recommended by Daniel and Cross (2013). A random number table was employed to select respondents who constituted the household sample frames. Finally, 146 beneficiary and 150 non-beneficiary households from Burunge, 164 beneficiary and 169 non-beneficiary from Loliondo and 108 beneficiary and 113 non-beneficiary households from Lake Natron constituted the sample size, making a total of 850 respondents (i.e. 418 tourism beneficiaries and 432 non beneficiary households). This study also purposely selected 63 household heads, known to experience severe loss from shocks. The snowball technique was used to identify the affected households.

Instrument

Household survey and interview checklist were the instruments used to collect quantitative and qualitative data. The first section of the questionnaire included questions on households' demographic features. Then, inquiry on five severe shock-events the respondents experienced within the last 5 years (2013/14-2018/19) and prior (2008/9-2013). Respondents were also asked to estimate the severity of shocks (i.e. high, low or medium) and coping strategies used to address each shock across years. The interview guide contained questions aimed to explore details on respondent's viewpoints on shock occurrences, intensity, sensitivity, coping and recovery mechanism.

Validity and Reliability

Content validity was employed to check the clarity and accuracy of the items during the pilot-study session. Initially, rigorous review of literature on livelihood shocks and shock-coping strategies was undertaken, followed by consultation with 4 experts on livelihood and risk management to determine whether items are well set to capture intended information. Expert recommendations were taken and incorporated. Observation of non-responses and normality test were performed and produced outcome that indicated 9 respondents had some outliers and missing data. These respondents had to be removed and therefore, the sample size changed from 850 to 841 (416 beneficiaries and 425 non-beneficiaries).

Reliability of data was checked through split half test with the Spearman-Brown correlation. The scores from shock severity and coping pattern were divided into halves. Subsequently, scores from each half were correlated in order to determine internal consistency. Results indicated a coefficient of 0.81 (81%) characterizing high reliability. Furthermore, triangulation of information from randomly selected samples and purposive selected sub samples of respondents ensured both validity and reliability of data.

Ethical Considerations

Ethical issues were adhered before, during and after data collection sessions. Before interacting with respondents, a research permit was requested and granted from respective regional and district authorities. Moreover, informed consent through respondents' permission was adhered after explaining the purpose to which the information was being collected. Audio was recorded when permission was granted. The anonymity and confidentiality of respondents was also ensured.

Statistical Treatment of Data

Qualitative data was transcribed and analyzed thematically, reflecting on severity of multiple shocks occurred over the years and shock-coping categories. Quantitative data was subjected to descriptive bivariate analysis. Cross tabulation with row or column percentages on frequency count was used to analyze trend of different types of severe shocks and shock-occurrences against coping activities across years 2008/9 to 2018/19.

Results and Discussions

This section focuses on demographics of respondents and then proceed with presentation and discussion of findings.

Demographic Profile

Results in Table 1 shows dominance (over 75%) of male headed households in beneficiary and non-beneficiary groups. The dominant age group was observed to be 29-38 years among heads of

households in all groups. Moreover, beneficiaries, compared to their counterpart in all GCs had progressively achieved additional level of formal education (i.e. from 11.8% to 15.9% for secondary level and 3.4% to 5% for College level in year 2008/9 and 2018/19, respectively. Furthermore, there was increase in number (i.e. from 12.3% to 31% for year 2008/9 and 2018/19 respectively) of individual household members involved in tourism-based activities, such as performing traditional dance to tourists, earning incomes through employment at tourists' lodges and camps, tour-guiding, wildlife tracking jobs and selling cultural hand-crafts to tourists. This indicates the potential of the tourism development sector in the study areas.

Table 1: Respondents' Socio-economic Characteristics

SN	Household characteristics	Beneficiary (n= 416)				Non-beneficiary (n=425)			
		2008/9		2018/19		2008/9		2018/19	
1	**Gender**	F	%	F	%	f	%	f	%
	Male	324	77.9	324	77.9	340	80.0	340	80.0
	Female	92	22.1	92	22.1	85	20.0	85	20.0
2	**Age**								
	19-28	174	41.8	0	0.0	96	22.6	0	0.0
	29-38	159	38.2	174	41.8	211	49.6	96	22.6
	39-48	66	15.9	159	38.2	87	20.5	211	49.6
	49-58	15	3.6	66	15.9	26	6.1	87	20.5
	59-68	2	.5	15	3.6	5	1.2	26	6.1
	69-78	0	0.0	2	.5	0	0.0	5	1.2
3	**Education**								
	Informal	159	38.2	159	38.2	231	54.4	231	54.4
	Primary	194	46.6	170	40.9	194	45.6	193	45.4
	Secondary	49	11.8	66	15.9	0	0.0	1	0.2
	College/University	14	3.4	21	5.0	0	0.0	0	0.0
4.	**Involved in Tourism jobs**	51	12.3	129	31	0	0.0	0	0.0

Severe Shocks Experienced in Ten Years

Almost all surveyed households were found to experience at least three recurrent severe shock-events over the years. Therefore, for purpose of clarity, the shocks were categorized into four groups consistent with previous studies (Haq, 2015 & Tongruksawattana et al., 2010). These groups include, (i) natural/agricultural shocks (i.e. drought, flood/heavy rains, crop-pests, volcano eruption, livestock diseases, crop riding and wild-animals attack; (ii) economic (i.e. rise in food-price, business-loss and remittance stopped; (iii) health (i.e. chronic illness, death and people injured by wild-animals;(iv) social shocks (i.e. family conflicts, land-use conflicts and cattle-theft).

Noteworthy, instead of natural/agricultural shocks, this study adopted the term "ecological shock" similar to Tongruksawattana et al. (2010). This is necessary in order to capture those shocking-events not directly affiliated to agriculture, like volcanic eruption or wild animals attacking livestock (predation), which are location-specific (i.e. the risk of living in areas prone to earthquake/volcano or residing in protected area eco-system, thus, susceptible to wild animal attacks). Moreover, consistent to the aforementioned studies, frequencies and percentage of reported shocks derived from total responses are used to present findings and not percentage on particular sample households. This is because multiple responses of perceived shocks were mentioned by respondents.

In Figure 1 (next page), the ecological related shock was found to be the dominant, constituting 55%. This result is consistent with findings in previous studies by Romano and Carraro (2015) and Haq (2015), who found that drought, floods and crop diseases ranked relatively higher than other shocks among rural households in Tanzania and Pakistan, respectively. In this study, the popularity of ecological shocks (i.e. drought and livestock diseases) indicates that it can be marked as covariate (i.e. affecting the entire community). The dominance of ecological shocks is justified by the fact that agro-pastoral is a crucial livelihood activity among surveyed households who happened to be located in typical semi-arid areas of Northern Tanzania. Volcanic eruption that occurred in September 2007 on Lengai Mountain after the earthquake in July 2007 which was felt widely in Northern Tanzania and particularly at Lake Natron,

imposed significant fear of repeating in the subsequent years. While the volcanic powder caused skin disease to cattle and sometimes livestock-death around Lake Natron, the presence of tsetse flies in Burunge, especially in Sangaiwe village, was mentioned by respondents as a major threat to the survival of cattle. Furthermore, crop riding events caused concerns among respondents as one interviewee in Sarame village said:

> Crop riding by Elephants and Zebras is a serious issue in this village…and it is very disappointing because when you report the event, you have to wait for a long time for the DGO [District Game Officer] and his team to make compensation of the loss and the amount is not enough.

The second dominant shock with 19% of frequencies (Figure 1) was economic related (e.g. the rise of food prices for maize, wheat and sugar). Food commodity price variation is covariate shock and most recurrent as it affects performance of business (i.e. business loss of revenue) as well as individual financial assistance through remittances.

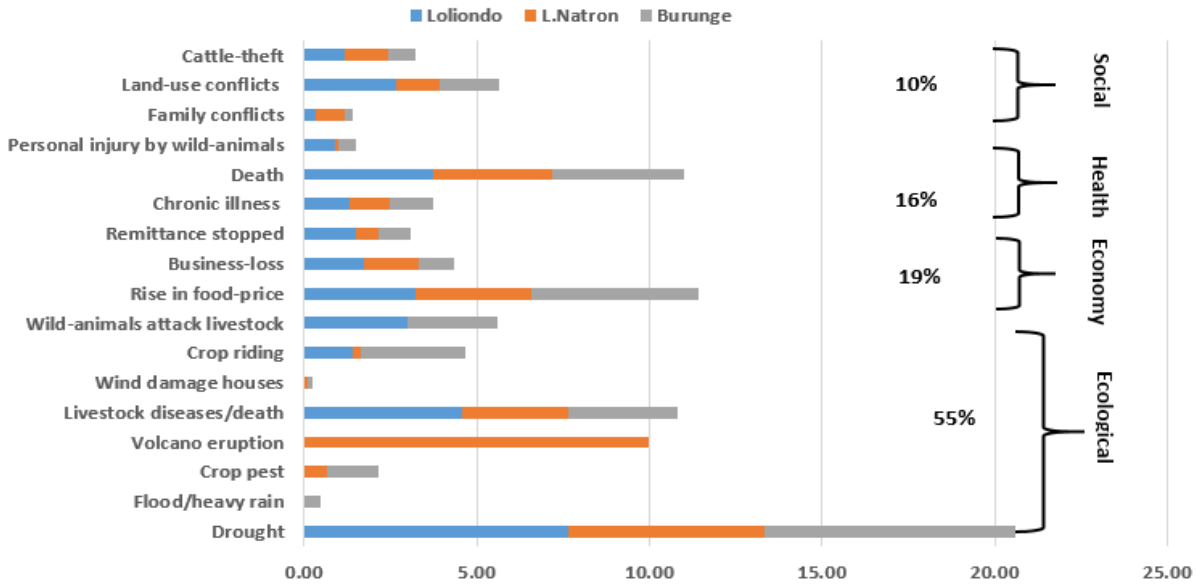

Figure 1: Severe shocks experienced by respondents from 2008/9- 2018/19

In the in-depth interview sessions, participants in Ololosokwan, Engaresero, Minjingu, Olasiti, Mwada and Kisangaji mentioned about abrupt increase in price of sugar, maize and wheat in the years 2009, 2011, 2013 and 2018 as a serious challenge to their consumption. One interviewee in Minjingu village contended, "in 2011 we used salt in porridge instead of sugar…I could not afford to buy one kilogram of sugar sold at 3,500[T. shillings]" (1 US$ was equivalent to 1,760 Tanzanian Shillings in 2011). The reported shock events of increased in food prices is supported in a study by Romano and Carraro (2015), who found that rise in food prices affected two-thirds of surveyed rural and urban households in Tanzania.

Health related shocks (e.g. death, followed by chronic illness of members of household) were found to be the third in the frequency (i.e. 16%) of highly severe shocks (see Figure 1). This result is consistent with finding from Romano and Carraro (2015), who included health shocks along with ecological and economic shocks as outstanding most frequent and severe shocks facing rural residents in Tanzania. Consistent with Nguyen et al. (2020), this study considers the health shock typical idiosyncratic as it affects individual households differently. In agro-pastoral communities, a disease known as "brucellosis" caused by consumption of unsafe meat and cattle-milk is detrimental to individual health. Along this disease is tuberculosis, also mentioned as prevailing chronic diseases. One interviewee from Njooroi village commented: "if you go to Soit sambu [health-centre] you will hear a lot of people coughing similar to those who uses heavy tobacco."

The lowest (i.e. 10%) category of severe shocks was related with social relationship challenges involving individual interaction at the family level and interaction between household members with stakeholders in different public and private

organizations while serving their interests. Conforming to Haq (2015), this study considers social related shocks as idiosyncratic (i.e. household specific) given the nature of social conflicts mentioned by respondents. These conflicts led to antagonistic relationship, which culminated to social unrest. For example, some respondents in Loliondo recalled to the event when they were violently evicted from their premises, houses burnt and cattle displaced and lost following district authority measures to restrict them from interfering with hunting activities under the Ortello Business Company (OBC) in year 2009. This finding is consistent with Gardner (2012) who narrated the pre and post violent conflicts between native Maasai and OBC in Loliondo. One interviewee in Soit sambu village said: "in that year [2009] I felt like dying…I lost 62 cows and could not do anything because I was injured and detained for two weeks."

Shock-Coping Strategies

With regards to coping strategies, it was found that the survey households opted to multiple strategies to address shocks over the years (Table 2 & 3). Consistent to previous studies (Haq, 2015 & Tongruksawattana et al., 2010) that focused on coping activities towards shock events, this study grouped the established coping strategies into four groups: (i) Borrowing, (ii) asset disposal, (iii) reduced consumption and (iv) remittances.

Borrowing

It was found that respondents relied on borrowing loans from different sources, such as relatives, neighbors, friends and local money landers. This finding is in line with Haq (2015) and Tongruksawattana et al. (2010), who contended that local residents in rural areas rely on multiple sources of borrowing while addressing livelihood shocks. From Table 2 and 3, it can be observed that respondents employed borrowing in addressing multiple shocks.

Trend in borrowing strategy for non-beneficiary households was found to increase over the years (i.e. 9.43% maximum in 2008/9-2013 (Table 2) to 10.59% maximum in 2013/14-2018) (Table 3). Worth noting, the frequency of borrowing declined among beneficiary households over the years, starting 15.13% maximum in 2008/9-2013 to 10.73% maximum in 2013/14-18. This finding has an implication to tourism impact, given the fact that the beneficiary households had reduced their dependence on borrowing to address economic shocks over the years. This implies increased accessibility to income among residents hosting tourism activities, following continued access of tourism revenue.

Table 2: Types of Shocks and Shock coping strategies by year 2008/9-2013

	Beneficiary					Non-beneficiary				
	Shock coping strategies by year 2008/9-2013					Shock coping strategies by year 2008/9-2013				
Type of Shock	Remittances	Reduce consumption	Assets disposal	Borrow	Total %	Remittances	Reduce Consumption	Assets disposal	Borrow	Total %
Ecological	3.69	3.14	10.17	7.62	24.62	6.94	17.74	2.17	2.36	29.20
Economic	3.14	3.10	11.14	15.13	32.51	5.93	15.36	2.67	2.49	26.45
Health	4.41	3.13	7.74	8.55	23.83	7.15	13.64	3.63	2.60	27.01
Social	3.00	2.40	7.20	6.42	19.03	6.24	6.80	2.31	1.98	17.33
Total	14.24	11.78	36.26	37.72	100.00	26.26	53.54	10.77	9.43	100.00

Despite the fact that access to tourism revenue has enabled beneficiary household to reduce frequency of borrowing to address multiple shocks, respondents are still borrowing, relatively higher compared to their counterpart, as seen in Table 2 and 3. The reason for this borrowing tendency can be explained from the microeconomic-household expenditure principle, which among other things, contends that an economic active household is the one that is involved in borrowing to access capital used for economic purpose like investment in small enterprises while maintaining some savings for future use (Ledgerwood et al., 2013). As seen in the Table 2 and 3, the non-beneficiaries borrowed mostly to address health related shocks while the beneficiary households borrowed mostly to address economic shocks like, rise in food prices, remittances stopped or when the business experiences unexpected loss. Borrowing enabled them to smooth consumption or prevent business

closure by covering the operating expenses. Therefore, borrowing purposes for beneficiaries are relatively effective in ensuring sustainable livelihood than their counterpart.

Asset Disposal

The use of savings (i.e. financial assets) and sale of physical assets like livestock was found to be among the surveyed households. This result conforms to findings by Haq (2015) whereby 54% of households in Pakistan responded to use asset-based coping strategies to address ecological shock events. In this study, a range of 7.20% minimum to 11.14% maximum in year 2008/9-2013 and 8.79% minimum to 13.51% maximum in 2013/14-2018 (Table 2 & 3) among beneficiary households was higher compared to non-beneficiary households for asset disposal (e.g. sale of goats/sheep) to combat economic, ecological, health and social shock-events. This result can be linked to tourism impact in beneficiary households because the presence of tourism through tourists spending on cultural items or paid-visit to Maasai cultural homestead (i.e. "Boma") lead to increase per capita income. In turn, this is a base for savings and acquisition of physical assets like livestock that can be used as buffers against severe shock events like drought or rise in food prices. In this regard, asset disposal decisions by beneficiaries are relatively effective and less erosive because stock of savings are used to cope with shocks while maintaining the current productive assets.

Table 3: Types of Shocks and Shock coping strategies by year 2013/14-2018/19

	Beneficiary					Non-beneficiary				
	Shock coping strategies by year 2013/14-2018/19					Shock coping strategies by year 2013/14-2018/19				
Type of shock	Remittances	Reduce consumption	Assets disposal	Borrow	Total %	Remittances	Reduce consumption	Assets disposal	Borrow	Total %
Ecological	3.53	3.12	12.57	6.07	25.29	7.63	18.88	1.39	3.13	31.03
Economic	3.11	3.09	13.51	10.73	30.45	6.42	17.94	1.27	2.75	28.38
Health	3.62	3.12	8.79	6.45	21.98	8.93	13.95	2.51	3.21	28.60
Social	3.34	2.30	9.60	7.03	22.27	4.66	4.63	1.19	1.50	11.99
Total	13.60	11.63	44.48	30.28	100.00	27.65	55.40	6.37	10.59	100.00

Reduced Consumption

Decision to reduce the quantity of food intake was observed to be among the shock-coping strategies undertaken by surveyed households. This result conforms to the findings by Brinkman et al. (2010) who found that significant number of vulnerable individuals opted to reduce the quality and quantity of food consumed, following the food price crisis in Haiti. Results in Table 2 and 3 indicates that non-beneficiary households compared to beneficiaries, asserted to rely heavily on reduced food intake (i.e. fasting and skipping meals) as a coping strategy when addressing ecological and economic shock events. The trend for this type of coping among the non-beneficiary households was observed to be relatively higher (17.74% maximum) during the severe drought incident of year 2008/9 to 18.88% maximum during 2013/14-2018 (Table 2 & 3). Noteworthy, reduced consumption can accelerate health-risks due to reduced food (nutrient) intake (Nguyen et al., 2020). Thus, this coping strategy is relatively less effective to sustain livelihoods.

The fact that the surveyed beneficiary households relied less on reduced consumption as coping strategy implies that tourism has played a role in reducing livelihood vulnerability during drought events. This was evidenced during interview sessions at Loliondo in Ololosokwan village, Lake Natron in Engaresero village and Burunge in Kakoi village. It was reported that during long dry-spell, village council normally resorted to spend some of tourism revenues to purchase and supply maize-flour to the most vulnerable (i.e. very poor) households in the village in order to address reduced consumption caused by food shortage.

Remittances

In the wake of shock events, cash-income received from relatives through money transfer was observed to be an option among the coping strategies. In this study, relatively fewer (3% minimum and 4.41% maximum in year 2008/9-2013 and 3.11% minimum and 3.62% in year2013/14-2018 beneficiary households in all GCs were found to rely on remittances as coping strategy to health, social and ecological shocks events (Table 2 &3).

The lower level of dependence on remittances among beneficiary households can also be linked to impact of tourism in enabling the local economy to absorb multiple shocks facing tourism beneficiaries with minimal dependence on external financial support. This tendency can be considered effective coping strategy because it posits on self-reliance that guarantee sustainable livelihood.

Conclusion and Recommendations

This study explored immerse contribution of tourism towards enabling beneficiaries' capability to use effective shock-coping strategies, such as spending on savings and livestock selling to address ecological, economic and health shocks. This is contrary to non-beneficiaries who used less effective coping strategies, like remittances and reduced consumption to address the same shock during the period of 10 years where tourism was undergoing its development stage of destination life cycle, among three tourism gateway communities located in Northern Tanzania

With this regard, local area interventions are required. For instance, more access to financial capital (i.e. monetary assets) and human capital (i.e. education, skills and ability to manage other resources) are recommended to tourism stakeholders and community development practitioners to be among the priority strategic goals to build residents' capabilities towards utilizing effective shock-coping strategies. This can be achieved through increased spending of tourism revenue on health and education projects. Furthermore, financial interventions at the group and individual levels are needed. These include establishment of financial cooperatives like savings and credit associations (SACCOs) to enable individuals access credits to establish small enterprises and diversify livelihoods activities with capabilities to address multiple shocks instead of relying merely on traditional agro-pastoralism.

References

Agyeman, Y. B., Yeboah, A. O. and Ashie, E. (2019). Protected areas and poverty reduction: The role of ecotourism livelihood in local communities in Ghana. Community Development, 50(1), 73-91.

Ashley, C. (2000). The impacts of tourism on rural livelihoods: Namibia's experience. London: Overseas Development Institute. 31pp.

Babati District Council (2015). Investment Profile. Unpublished

Brinkman, H. J., de Pee, S., Sanogo, I., Subran, L. and Bloem, M. W. (2010). High Food Prices and the Global Financial Crisis have Reduced Access to Nutritious Food and Worsened Nutritional Status and Health. The Journal of Nutrition 140(1): 153S-161S.

Chambers, R. and Conway, G. (1992). Sustainable rural livelihoods: Practical concepts for the 21st cen- tury.IDS Discussion Paper 296, Institute of Development Studies.

Daniel, W. W. and Cross, C. L. (2013). Biostatistics: A foundation for analysis in the health sciences (10th eds.). John Wiley and Sons, Inc, Journal of Chemical Information and Modeling 53: 1-25.

Dercon, S., Hoddinott, J. and Woldehanna, T. (2005). Vulnerability and Shocks in 15 Ethiopian Villages, 1999-2004. BASIS Collaborative Research Support Programme. Department of Agriculture and Applied Economics, University of Wisconsin-Madison.

Frauman, E. and Banks, S. (2011). Gateway Community Resident Perceptions of Tourism Development: Incorporating Importance-performance Analysis into a Limits of Acceptable Change Framework. Tourism Management 32: 128–140.

Hakim Haider, M. and Kumar, S. (2018). Shocks and Coping Strategies of the Poor. 154pp. [https://doi.org/10.1007/978-3-030-10859-5_5] site visited on 12/09/2020.

Haq, R. (2015). Shocks as a source of vulnerability: An empirical investigation from Pakistan. The Pakistan Development Review 250: 245-272.

Khandker, S. R., Koolwal, G. B. and Samad, H. A. (2010). Handbook on Impact Evaluation. Quantitative Methods and Practices. World Bank. Available online at [http://hdl.handle.net/10986/2693] visited on 4/10/2016.

Ledgerwood, J., Earne, J. and Nelson, C. (2013). The New Microfinance Handbook: A Financial Market System Perspective. Washington, DC, World Bank. 528pp.

Lienert, J. and Burger, P., 2015. Merging capabilities and livelihoods: analyzing the use of bio- logical resources to improve well-being. Ecol. Soc. 20.

Mbaiwa, J. E. and Stronza, A. L. (2010). The effects of tourism development on rural livelihoods in the

Okavango Delta, Botswana. Journal of Sustainable Tourism 18(5): 635-656

Mwongoso, A. J., Sirima, A., and Mgonja, J. T. (2023a). Impacts of Tourism Destination Development on Residents' Livelihoods in Northern Tanzania**.** East African Journal of Education and Social Sciences 4(2), 152-162. DOI: https://doi.org/10.46606/eajess2023v04i02.0287.

Mwongoso, A., Sirima, A. and Mgonja, J. (2023b). Impacts of Tourism Development on Residents' Quality of Life: Efficacy of Community Capitals in Gateway Communities, Northern Tanzania. Journal of Applied Research in Quality of Life.https://doi.org/10.1007/s11482-023-10196-7.

Ngorongoro District Council (2016). Investment Profile. Unpublished.

Mwongoso, A., Sirima, A. and Mgonja, J. (2021). Development of Tourism Destinations in Gateway Communities, Northern Tanzania. Journal of Tourism Quarterly, 3(4): 177-195.

Nelson, F. (2004). The evolution and impacts of community-based ecotourism in northern Tanzania (No. 131). London: International Institute for Environment and Development 2004: 1-40.

Ngorongoro District Council (2016). Investment Profile. Unpublished.

Nguyen, T. T., Nguyen, T. T. and Grote, U. (2020). Multiple shocks and households' choice of coping strategies in rural Cambodia. Ecological Economics 167: 106442.

Nikoloski, Z., Christiaensen, L. and Hill, R. (2018). Household shocks and coping mechanism: evidence from Sub-Saharan Africa. pp123-134.

O'Brien, K., Quinlan, T. and Ziervogel, G. (2009). Vulnerability interventions in the context of multiple stressors: lessons from the Southern Africa Vulnerability Initiative (SAVI). Environmental Science and Policy 12(1): 23-32.

Paumgarten, F., Locatelli, B., Witkowski, E. T. and Vogel, C. (2020). Prepare for the unanticipated: Portfolios of coping strategies of rural households facing diverse shocks. Journal of Rural Studies 2020: 1-10.

Romano, D. and Carraro, A. (2015). Price Shocks, Vulnerability and Food and Nutrition Security among Rural and Urban Households in Tanzania. In: Fourth Congress, June 11-12, 2015. Ancona, Italy No. 207281. Italian Association of Agricultural and Applied Economics, Italy. pp. 1 – 34.

Snel, E. and Staring, R. (2001). Poverty, Migration, and Coping Strategies: An Introduction. Focaal European Journal of Anthropology 38: 7–22.

Tongruksawattana, S., Waibel, H. and Schmidt, E. (2010). Shocks and coping actions of rural households: Empirical evidence from Northeast Thailand. CPRC International Conference, brooks World Poverty Institute.20pp.