



## Strategies of Rural Women in Coping with the Effects of Climate Change in North Tanzania

**Peter Elias Megiroo**

Department of Community Development, Tengeru Institute of Community Development, Tanzania

\* Corresponding Author: **Peter Elias Megiroo**

---

### Article Info

**ISSN (Online):** 2582-7138

**Impact Factor (RSIF):** 7.98

**Volume:** 07

**Issue:** 01

**Received:** 03-11-2025

**Accepted:** 05-12-2025

**Published:** 02-01-2026

**Page No:** 38-44

### Abstract

The climate change is affecting human health, food security and livelihoods, quality and availability of land, water and other natural resources. It poses a serious threat to every aspect of human life. The consequences of climate change are not experienced evenly, women are said to be likely and disproportionately affected. Furthermore, women capacity to cope with effects of climate change is said to be as well more disadvantageous. However, empirical evidence on capacity of the indigenous and remote women are scarce. Therefore, this study specifically examines strategies used by rural women in coping with effects of climate change, business opportunities emerging out of coping strategies and the challenges facing rural women in coping with effects of climate change in North Tanzania. This study used quantitative approach with descriptive cross-sectional survey design. The data were collected from 500 Maasai rural women in Kilimanjaro, Arusha and Manyara sampled through convenient sampling technique. The data were collected using a questionnaire. The collected data were analysed using descriptive statistics.

The findings reveal that, the majority (79%) of the women used development and diversification of income sources, cost management and social capital management to cope with the effects of climate change. Differently, the majority (88%) of the women did not use environmental stress management in coping with the effects of climate change. Furthermore, the majority (83%) of the surveyed Maasai rural women benefited business opportunities such as formulation of business groups for loans' accessibility, doing small businesses, on participation in trainings and meetings, income generation through cultural tourism and networking which emerged from coping strategies for climate change. In addition, the majority (90%) of the women faced challenges such as overrepresentation of rural women among poor, barriers to decision-making, experiencing disproportionate mobility and unequal access to resources in coping with effects of climate change. Generally, the surveyed women practically dealt with coping strategies and not strategies for building up livelihood assets. This study advocates for serious engagement of concerned stakeholders in supporting the women to practice both coping strategies and strategies for building up livelihood assets on the effects of climate change.

**Keywords:** Coping Strategies, Rural Women, Climate Change, Livelihood Assets

---

### 1. Introduction

The climate change is an unavoidable topic in the contemporary world (Memon, 2020; Moayed & Hayati, 2023)<sup>[7, 8]</sup>. The climate change poses a serious threat to every aspect of human life including human health, food security and livelihoods, quality and availability of land, water and other natural resources (Yazdanpanah *et al.*, 2023)<sup>[11]</sup>. The effects of climate change impede development and damage human living conditions and lifestyles (Moayed & Hayati, 2023)<sup>[8]</sup>.

The given consequences (effects) of climate change are not experienced evenly (Moayedi & Hayati, 2023) <sup>[8]</sup>. In other words, the climate change is distributed differently among regions, generations, age groups, income groups, occupations, and genders (IPCC, 2001) <sup>[5]</sup>. Although the effects of climate change are not distributed evenly, the rural communities experience more the given effects of climate change than the urban communities (Aryal *et al.*, 2014) <sup>[1]</sup>.

Furthermore, the climate change does not affect individuals and groups similarly (Fitriani *et al.*, 2019; Goli *et al.*, 2023) <sup>[3,4]</sup>. Men and women experience effects of climate change in diverse ways due to their gender roles, responsibilities, positions, and social identities (Moayedi & Hayati, 2023) <sup>[8]</sup>. In view of that, the effects of climate change are said to be greater to women (Fitriani *et al.*, 2019) <sup>[3]</sup>. In other words, women are said to be likely and disproportionately affected and their capacity to cope with effects of climate change is said to be as well more disadvantageous. Women are disadvantageous on effects of climate change due to lack of proper access to services, inequality in access to knowledge and capacities to deal with risks, and inadequate access to proper training (Moayedi & Hayati, 2023) <sup>[8]</sup>.

In coping with effects of climate change, adaptation strategies are taken into account. The adaptation strategies are said to be complex and costly as they cover several human, economic, and environmental aspects (Karimi *et al.*, 2022). Such complexity and cost have not again left the women behind as the advantageous group and due to (Ylipaa *et al.*, 2019) <sup>[12]</sup>. In other words, there are inequalities in adaptation capacities on the effects of the climate change. Specifically, there are still gaps in gender integration on climate change policies and strategies within East African countries including Tanzania (Kironde *et al.*, 2022) <sup>[6]</sup>. In addition, the gender inequality renders women more vulnerable to climate change impact because of disadvantaged power to own and use of resources like land, income and increased workload associated with different adaptation strategies in Tanzania (Edward, 2020) <sup>[2]</sup>.

In summary, the consequences of climate change are not experienced evenly, women are said to be likely and disproportionately affected. Furthermore, women capacity to cope with effects of climate change is said to be as well more disadvantageous. However, empirical evidence on capacity of the indigenous and remote women are scarce. Therefore, this study specifically examines the strategies used by rural women in coping with effects of climate change, business opportunities emerging out of coping strategies and the challenges facing rural women in coping with effects of climate change in North Tanzania.

## 2. Methods

This study used mixed quantitative approach due to the nature of the main objectives. The given objectives demanded the study to be approached quantitatively with support from quantitative data. The approach likewise facilitated the establishment of statistics on examining the strategies used by rural women in coping with effects of climate change, business opportunities emerging out of coping strategies and the challenges facing rural women in coping with effects of climate change in North Tanzania.

This study applied descriptive cross-sectional survey designs as they facilitated studying individual rural women as a unit of analysis. The designs assisted in covering large

geographical area while measuring the individual rural women views, attitudes and characteristics. The designs produced the easy way of analysing the information from the surveyed rural women regarding the strategies used by rural women in coping with effects of climate change, business opportunities emerging out of coping strategies and the challenges facing rural women in coping with effects of climate change in North Tanzania.

This study was conducted in Arusha, Kilimanjaro and Manyara. These regions have the rural indigenous and remote Maasai women whose empirical evidence are scarce in the current researches. They are ones of the areas in which effects of climate change are notable in Tanzania.

The primary data of this study were collected from Maasai rural women. The multi-sampling technique principally applied in this study in which the population was identified purposively, randomly stratified and eventually conveniently approached for data collection. The convenient sampling technique yielded to 500 respondents.

The primary data of this study were collected principally using the questionnaire. The questionnaire were used as they offered a fast, efficient and inexpensive means of collecting large amount of data regarding the strategies used by rural women in coping with effects of climate change, business opportunities emerging out of coping strategies and the challenges facing rural women in coping with effects of climate change in North Tanzania. The data were collected using a questionnaire being triangulated with in-depth interviews.

The collected data were analysed using Descriptive Statistics. The descriptive statistics was used to quantify and describe the background information of the respondents and their data set at general about the strategies of rural women in coping with effects of climate change in North Tanzania. The descriptive statistics results were presented using frequencies and standard percentages, means and standard deviation.

## 3. Results

### 3.1. Background Information of the Respondents

The results on the background information of the surveyed respondents are presented in Table 1. Among the surveyed Maasai rural women, the range of ages were between 21 and 60 and above years. 18% of the rural women had the age between 21–29 years, 29% had between 31–39 years, 41% had between 40–49 years, 7% had between 50–59 years, and 5% had 60 and above years.

The results further display that, 30% of the surveyed rural women were single, 59% were married, 6% were widow and 5% of them were divorced. Moreover, 36% of the surveyed Maasai rural women came from Manyara, 30% came from Kilimanjaro and 34% came from Arusha.

Regarding education level, 59% of the respondents had no formal education, 37% had primary education level, 3% had secondary education level, 1% of them had undergraduate education level (certificate, diploma and bachelor degree) and none of the respondents had no postgraduate education level.

Summarily, the majority of the surveyed rural women had the age between 40 and 49 years old, were married, originally came from Manyara though with minimal differences with other regions and the majority of them had no formal education level.

**Table 1:** Background Information of the Respondents

Personal Information	Scale	Frequency	Percent
Age	1. 21-30 years	90	18.0
	2. 31-39 years	145	29.0
Age	3. 40-49 years	205	41.0
	4. 50-59	35	7.0
	5. 60 and above years	25	5.0
	Total	500	100.0
Marital Status	1. Single	150	30.0
	2. Married	295	59.0
	3. Divorced	30	6.0
	4. Widow	25	5.0
	Total	500	100.0
Region	1. Manyara	180	36.0
	2. Kilimanjaro	150	30.0
	3. Arusha	170	34.0
	Total	500	100.0
Education Level	1. No Formal Education	295	59.0
	2. Primary Education	185	37.0
	3. Secondary Education	15	3.0
	4. Undergraduate Education	5	1.0
	5. Postgraduate Education	0	0.0
	Total	500	100.0

### 3.2. Strategies Used by Rural Women in Coping with Effects of Climate Change

This section presents the results on strategies used by the surveyed Maasai rural women in coping with the effects of climate change in Arusha, Manyara and Kilimanjaro. The main strategies which were generally tested to have been used by the given women include development and diversification, cost management, social capital management and environmental stress management. The result of each strategy is herein presented:

Regarding the strategy of development and diversification of income sources, the results display that 11% of the surveyed Maasai rural women strongly disagreed, 10% disagreed, 63% agreed while 16% strongly agreed (*see* Table 2). The majority (79% i.e. 63%+16%) of the Maasai rural women agreed to have been using the development and diversification of income sources as one of the strategies of coping with the effects of climate change in Arusha, Manyara and Kilimanjaro.

Concerning the strategy of cost management, the results display that 13% of the surveyed Maasai rural women strongly disagreed, 18% disagreed, 57% agreed while 12%

strongly agreed. The majority (69% i.e. 57%+12%) of the Maasai rural women agreed to have been using the cost management as one of the strategies of coping with the effects of climate change in Arusha, Manyara and Kilimanjaro.

With reference to the strategy of social capital management, the results exhibit that 7% of the surveyed Maasai rural women strongly disagreed, 4% disagreed, 77% agreed and 12% strongly agreed. The majority (89% i.e. 77%+12%) of the Maasai rural women agreed to have been using the social capital management as one of the strategies of coping with the effects of climate change in Arusha, Manyara and Kilimanjaro.

About to the strategy of environmental stress management, the results display that 17% of the surveyed Maasai rural women strongly disagreed, 71% disagreed, 7% agreed and 5% strongly agreed. The majority (88% i.e. 71%+17%) of the Maasai rural women disagreed to have been using the environmental stress management as one of the strategies of coping with the effects of climate change in Arusha, Manyara and Kilimanjaro.

**Table 2:** Strategies Used by Rural Women in Coping with Effects of Climate Change

Measurement Scale	Development and Diversification of Income Sources		Cost Management		Social Capital Management		Environmental Stress Management	
	F	%	F	%	F	%	F	%
Strongly Disagree	54	11.0	35	7.0	59	12.0	85	17.0
Disagree	51	10.0	20	4.0	130	26.0	355	71.0
Neutral	0	0.0	0	0.0	7	1.0	0	0.0
Agree	315	63.0	385	77.0	260	52.0	35	7.0
Strongly Agree	80	16.0	60	12.0	44	9.0	25	5.0
Total	500	100.0	500	100.0	500	100.0	500	100.0

### 3.3. Business Opportunities Emerging out of Coping Strategies

Having understood the strategies used by the Maasai rural women in coping with the effects of climate change, it was very essential to determine the business opportunities emerged out of such coping strategies. The business opportunities identified by the surveyed rural women include

formulation of business groups for loans' accessibility, doing small businesses, participation of the women in trainings and meetings, cultural tourism and networking.

The results in Table 3 indicate that, 13% of the surveyed Maasai rural women strongly disagreed, 37% disagreed, 49% agreed and 1% strongly agreed that they formulated business groups for loans' accessibility as one of the business

opportunities emerged out of coping strategies for climate change. In fact, half of the women (50%) disagreed while the same half of them (50%) agreed on that particular business opportunity.

The results in Table 3 further point out that, 10% of the surveyed Maasai rural women strongly disagreed, 12% disagreed, 69% agreed, 7% strongly agreed and 2% were neutral on doing small businesses as one of the business opportunities emerged out of coping strategies for climate change. The majority (76%) of the women agreed to have been doing small businesses which emerged in association with strategies of dealing with the effects of climate change in Arusha, Manyara and Kilimanjaro.

Moreover, the results reveal that 10% of the surveyed Maasai rural women strongly disagreed, 29% disagreed, 50% agreed, 10% strongly agreed and 1% were neutral on participation in trainings and meetings as one of business opportunities emerged out of coping strategies for climate change. The majority of the surveyed Maasai rural women (60%) agreed to have been participating in trainings and meetings as one of

business opportunities emerged out of coping strategies for climate change.

Besides, the results disclose that 11% of the surveyed Maasai rural women strongly disagreed, 18% disagreed, 59% agreed and 10% strongly agreed on income generation through cultural tourism as one of business opportunities emerged out of coping strategies for climate change. The majority of the surveyed Maasai rural women (71%) agreed to have been generating income through cultural tourism as one of business opportunities emerged out of coping strategies for climate change.

Finally, the results unveil that 5% of the surveyed Maasai rural women strongly disagreed, 17% disagreed, 63% agreed, 13% strongly agreed and 2% of them were neutral on networking as one of business opportunities emerged out of coping strategies for climate change. The majority of the surveyed Maasai rural women (76%) agreed to have been doing networking as one of business opportunities emerged out of coping strategies for climate change.

**Table 3: Business Opportunities Emerging out of Coping Strategies**

Measurement Scale	Formulate Business Groups for Loans Accessibility		Do Small Businesses (herbs, ornaments and firewood)		Participating in Trainings and Meetings		Generating Income through Cultural Tourisms		meeting and networking with New People (tourists and urban people)	
	F	%	F	%	F	%	F	%	F	%
Strongly Disagree	65	13.0	49	10.0	51	10.0	53	11.0	24	5.0
Disagree	185	37.0	61	12.0	143	29.0	92	18.0	85	17.0
Neutral	0	0.0	8	2.0	7	1.0	0	0.0	11	2.0
Agree	245	49.0	345	69.0	250	50.0	295	59.0	315	63.0
Strongly Agree	5	1.0	37	7.0	49	10.0	60	12.0	65	13.0
Total	500	100.0	500	100.0	500	100.0	500	100.0	500	100.0

### 3.4. Challenges Facing Rural Women in Coping with Effects of Climate Change

This section presents the challenges faced by the Maasai rural women when trying to cope the effects of climate change in North Arusha, Manyara and Kilimanjaro. The hinted challenges generally include overrepresentation of rural women among poor, barriers in decision making, mobility challenges and unequal access to resources.

The results in Table 4 expose that, 1% of the surveyed Maasai rural women strongly disagreed, 10% disagreed, 79% agreed and 10% of them strongly agreed on overrepresentation of rural women among poor as one of the main challenges facing them in coping the effects of climate change. Therefore, the majority of the surveyed Maasai rural women (89%) agreed on overrepresentation of rural women among poor as one of the main challenges facing them in coping the effects of climate change.

The results in Table 4 depict that, 7% of the surveyed Maasai rural women disagreed, 4% agreed and 89% of them strongly agreed on barriers to decision-making as one of the main challenges facing them in coping the effects of climate

change. Therefore, the majority of the surveyed Maasai rural women (93%) agreed on barriers to decision-making as one of the main challenges facing them in coping the effects of climate change.

The results in Table 4 portray that, 11% of the surveyed Maasai rural women disagreed, 9% disagreed, 67% agreed and 13% of them strongly agreed on experiencing disproportionate mobility challenges as one of the main challenges facing them in coping with the effects of climate change. Therefore, the majority of the surveyed Maasai rural women (79%) agreed on experiencing disproportionate mobility challenges as one of the main challenges facing them in coping the effects of climate change.

The results in Table 4 render that, 1% of the surveyed Maasai rural women disagreed, 10% disagreed, 7% agreed and 82% of them strongly agreed on unequal access to resources as one of the main challenges facing them in coping with the effects of climate change. Therefore, the majority of the surveyed Maasai rural women (99%) agreed on unequal access to resources as one of the main challenges facing them in coping the effects of climate change.



**Table 4:** Challenges Facing Rural Women in Coping with Effects of Climate Change

Measurement Scale	Overrepresentation among the poor		barriers to decision-making		experience disproportionate mobility challenges		unequal access to resources	
	F	%	F	%	F	%	F	%
Strongly Disagree	5	1.0	0	0.0	53	11.0	4	1.0
Disagree	51	10.0	35	7.0	49	9.0	51	10.0
Neutral	0	0.0	0	0.0	0	0.0	0	0.0
Agree	395	79.0	20	4.0	335	67.0	35	7.0
Strongly Agree	49	10.0	445	89.0	63	13.0	410	82.0
Total	500	100.0	500	100.0	500	100.0	500	100.0

#### 4. Discussion

##### 4.1. Strategies Used by Rural Women in Coping with Effects of Climate Change

The majority (79%) of the surveyed Maasai rural women agreed to have been using the development and diversification of income sources as one of the strategies of coping with the effects of climate change in Arusha, Manyara and Kilimanjaro. The given strategy specifically includes development of complementary agricultural activities, work to earn money by women, poultry breeding, serving as a paid worker in the agricultural or non-agricultural sector, collecting medicinal plants, temporary or permanent migration of family members and beekeeping. It must be remembered that, the original economic activity of the Maasai was livestock keeping and some extent some hunting. The given original activities are now affected by the climate change something made them specifically women to opt for development and diversification of income sources. These findings are likewise supported previously by Moayed & Hayati, 2023) [8] who did the study on adaptation of rural women to climate variability in water scarce areas. The particular rural women were the agricultural households' members in Fars province who have been affected by climate change in climatic zones such as cold, mild, hot, and very hot. The findings of the study indicate that, the strategy of development and diversification of income sources was placed in the second to fourth places of adaptation strategies used by rural women in coping with effects of climate change.

The majority (69%) of the surveyed Maasai rural women agreed to have been using the cost management as one of the strategies of coping with the effects of climate change in Arusha, Manyara and Kilimanjaro. The given strategy specifically includes using facilities, reducing the cost of living, working women in the agricultural fields, selling surplus livestock, selling minerals, reducing food consumption, reducing the quality of food, renting or leasing land and real estate sales. Most of these activities are not original to the Maasai but they had to adopt them in coping with the effects of climate change. These findings are consistent with what was found by Moayed & Hayati, 2023) [8]. The given researchers noted that, the most important adaptation strategy used by rural women in Fars province against climatic changes has been the cost management strategy.

The majority (89%) of the surveyed Maasai rural women agreed to have been using the social capital management as one of the strategies of coping with the effects of climate change in Arusha, Manyara and Kilimanjaro. The given strategy specifically includes obtaining guarantees from other people to get a loan, membership in official organizations, borrowing money from others, getting help from friends, getting financial help from relatives, formation of working

groups and going under the cover of support institutions. Some of these activities are originally common to the Maasai however they became stronger in the process of coping with the effects of climate change. These findings are consistent with what was found by Moayed & Hayati, 2023) [8]. The given researchers noted that, the strategy of social capital management, was placed in the second to fourth places of adaptation strategies used by rural women following the effects of climate change.

The majority (88%) of the surveyed Maasai rural women agreed to have been using the environmental stress management as one of the strategies of coping with the effects of climate change in Arusha, Manyara and Kilimanjaro. The given strategy specifically include water storage in the tanker, buying fodder and animal feed, utilization of extensional services, insurance of agricultural products, buying water for livestock or agriculture, reducing the area under cultivation, changing the irrigation method, changing the cultivation pattern and type of product, replacing animal husbandry with agriculture, changing the type of livestock, changing of the land use from agricultural to garden and seasonal migration of livestock or bees. These findings are inconsistent with what was found by Moayed & Hayati, 2023) [8]. The given researchers noted that, the strategy of environment stress management was placed in the second to fourth places of adaptation strategies used by rural women following the effects of climate change but it wasn't the case to the Maasai rural women in Arusha, Manyara and Kilimanjaro.

##### 4.2. Business Opportunities Emerging out of Coping Strategies

In fact, half of the women (50%) disagreed while the same half of them (50%) agreed on that particular business opportunity. These results imply that, the effects of climate change have influenced the Maasai rural women to formulate business groups which facilitate them to access and acquire loans for their economic activities. The given women originally were not involved in groups for business purposes but for socio-cultural purposes including helping each other during hard times (e.g. burial ceremonies) or during joy times (e.g. traditional ceremonies, new baby-born, etc.).

The majority (76%) of the women agreed to have been doing small businesses which emerged in association with strategies of dealing with the effects of climate change in Arusha, Manyara and Kilimanjaro. The Maasai rural women are not originally the business people however, the effects of climate change caused them to identify the business opportunities of selling herbs, firewood and ornaments to urban people and foreigners (tourists). They have gone to the level of formulating centres "manyata" to conduct the given small businesses. The given business products were previously used by the Maasai for their cultural, traditional

and customary issues however, they are turned into business opportunities.

The majority of the surveyed Maasai rural women (60%) agreed to have been participating in trainings and meetings as one of business opportunities emerged out of coping strategies for climate change. These results imply the different purpose of the traditional trainings and meetings of the Maasai rural women. They used the meetings for trainings on traditions and customs but have turned the given meetings and trainings into business opportunities. Through the previously formulated groups, they can now conduct meetings and trainings on business opportunities. In other words, the meetings and trainings become the business opportunities to accommodate the effects of the climate change.

The majority of the surveyed Maasai rural women (71%) agreed to have been generating income through cultural tourism as one of business opportunities emerged out of coping strategies for climate change. These results imply the different purpose of the cultural products like ornaments, foods, songs, dressing and traditional housing of the Maasai rural women. They used the given cultural products for their traditional life however, they turned the given cultural products into business opportunities. Alternatively, the given cultural products became the business opportunities to accommodate the effects of the climate change in North Tanzania.

The majority of the surveyed Maasai rural women (76%) agreed to have been doing networking as one of business opportunities emerged out of coping strategies for climate change. These results imply the change of networking activities of the Maasai rural women from the traditional networking. They used the given traditional networking for their traditional life including assisting each other "enaboishu" especially during hard or joy times. The networking is now done by the Maasai rural women in Arusha, Manyara and Kilimanjaro with urban people and foreigners like tourists for business purposes.

#### **4.3. Challenges Facing Rural Women in Coping with Effects of Climate Change**

The majority of the surveyed Maasai rural women (89%) agreed on overrepresentation of rural women among poor as one of the main challenges facing them in coping the effects of climate change. Numerous individuals, activists and organizations claim to be representing women in solving their socio-economic challenges however, the real solutions and funds claimed for are not going to the grass root level of such women. They are overrepresented however; they are not really benefiting to the extent claimed by the stakeholders. They even face more barriers of accessibility to the claimed aids and men again bar them in enjoying the given aids from different stakeholders. The set systems of representing the challenges and effects of climate change to the rural women sometimes become the system of problem by itself. The given helping system sometimes lack genuine involvement and participation of women in their respective proximities.

The majority of the surveyed Maasai rural women (93%) agreed on barriers to decision-making as one of the main challenges facing them in coping the effects of climate change. The barriers such as discrimination towards women, lack of security and safety when going for meetings and trainings, lack of access to formal education, lack of ownership and entitlement on properties, treating women as

children and properties of men, lack of timely and proper information and services because of lacking information sources like radio, phones, etc. cause the Maasai rural women to lack respect for their opinions and voices when it comes to decision making at the individual, family to the community level. All these barriers still paralyse the efforts of the Maasai rural women to cope with the effects of climate change something making them more disadvantageous to the effects of climate change.

The majority of the surveyed Maasai rural women (79%) agreed on experiencing disproportionate mobility challenges as one of the main challenges facing them in coping the effects of climate change. The mobility challenges of the surveyed Maasai rural women are experienced because of women's traditional roles at home (household chores), patriarchy system, gender-based harassment, and family restriction (societal expectations of being grounded). These results are consistent with what was previously found by Noack (2010)<sup>[9]</sup> in the study which explored whether rural women mobility is deprived in Scotland.

The majority of the surveyed Maasai rural women (99%) agreed on unequal access to resources as one of the main challenges facing them in coping the effects of climate change. The surveyed Maasai rural women face the challenge of coping with the effects of climate change due to unequal access to resources in the community. The women do not have access to financial, physical and human resources as compare to men in the community. When it comes to coping strategies, they fail at early stages because of lacking resources as men. These results are even supported by Un Women (2022)<sup>[10]</sup> which noted that, unequal access to resources is one of the three challenges for rural women amid a cost of living crisis.

## **5. Conclusion and Recommendations**

### **5.1. Conclusion**

The study at hand intended to specifically examine the strategies used by rural women in coping with effects of climate change, business opportunities emerging out of coping strategies and the challenges facing rural women in coping with effects of climate change in North Tanzania. The conclusion of this study based on such specific objectives.

The majority of surveyed Maasai rural women (79%) agreed to have been using development and diversification of income sources, cost management and social capital management as the strategies of coping with the effects of climate change in Arusha, Manyara and Kilimanjaro. On the other hand, the majority (88%) of the Maasai rural women disagreed to have been using the environmental stress management as the strategy of coping with the effects of climate change in Arusha, Manyara and Kilimanjaro.

The majority of the surveyed Maasai rural women (83%) agreed to have benefited business opportunities such as formulation of business groups for loans' accessibility, doing small businesses, on participation in trainings and meetings, income generation through cultural tourism and networking emerging out of coping strategies for climate change.

The majority of the Maasai rural women (90%) faced challenges such as overrepresentation of rural women among poor, barriers to decision-making, experiencing disproportionate mobility and on unequal access to resources in the process of coping with effects of climate change in North Tanzania.

## 5.2. Recommendations

The strategies applied to cope with climate change by the Maasai rural women seem to have not been used effectively and efficiently, this study calls for both private and public support to the given women for maximum application of the given strategies. In addition, similar support is likewise needed to maintain or improve business opportunities emerging from coping strategies of climate change among the Maasai rural women in North Tanzania.

The stakeholders can work out on the presented challenges which face Maasai rural women in coping with the effects of climate change in North Tanzania. Generally, the surveyed women practically dealt with coping strategies and not strategies for building up livelihood assets. This study advocates for serious engagement of concerned stakeholders in supporting the women to practice both coping strategies and strategies for building up livelihood assets on the effects of climate change.

## Acknowledgements

The authors profoundly acknowledge all stakeholders who contributed to the complete production of the study at hand. Their contributions are highly valued.

## 6. References

1. Aryal S, Cockfield G, Maraseni T. Vulnerability of Himalayan transhumant communities to climate change. *Clim Change*. 2014;125(2):193-208. doi:10.1007/s10584-014-1157-5
2. Edward MC. Gender inequality and climate change adaptation strategies for food security in Tanzania. *Afr J Land Policy Geospatial Sci*. 2020;3(4):28-39.
3. Fitriani N, Aymen M, ul Huda N, Tufail SM, Amir S, Saud M. Gender perceptions and adaptation strategies to climatic hazards-floods in rural areas of District Sialkot, Punjab, Pakistan. *IOP Conf Ser: Earth Environ Sci*. 2019;245:012051. doi:10.1088/1755-1315/245/1/012051
4. Goli I, Azadi H, Najafabadi MO, Lashgarara F, Viira AH, Kurban A. Are adaptation strategies to climate change gender neutral? Lessons learned from paddy farmers in Northern Iran. *Land Use Policy*. 2023;125:106470. doi:10.1016/j.landusepol.2022.106470
5. IPCC. Climate change 2001: impacts, adaptation, and vulnerability. Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge: Cambridge University Press; 2001.
6. Kironde MS, Durodola OS, Kanyunge CM. Integration of gender considerations into Tanzania's climate and water policies. *Water Policy*. 2022;24(1):101-116. doi:10.2166/wp.2021.154
7. Memon FS. Understanding women's perceptions of promoting education and policy initiatives about climate change in rural areas of Sindh, Pakistan. *J Educ Educ Dev*. 2020;7(1):140-156. doi:10.22555/joed.v7i1.2965
8. Moayedi M, Hayati D. Identifying strategies for adaptation of rural women to climate variability in water scarce areas. *Front Water*. 2023;5:1177684. doi:10.3389/frwa.2023.1177684
9. Noack E. Are rural women mobility deprived? A case study from Scotland. *Sociol Ruralis*. 2011;51(1):79-97. doi:10.1111/j.1467-9523.2010.00529.x
10. UN Women. Three challenges for rural women amid a cost-of-living crisis [Internet]. New York: UN Women; 2022 [accessed 2023 May 20]. Available from: <https://www.unwomen.org/en/news-stories/feature-story/2022/10/three-challenges-for-rural-women-amid-a-cost-of-living-crisis>
11. Yazdanpanah M, Zobeidi T, Warner LA, Löhr K, Lamm A, Sieber S, *et al*. Shaping farmers' beliefs, risk perception and adaptation response through construct level theory in the southwest Iran. *Sci Rep*. 2023;13:5811. doi:10.1038/s41598-023-32564-x
12. Ylipaa J, Gabrielsson S, Jerneck A. Climate change adaptation and gender inequality: insights from rural Vietnam. *Sustainability*. 2019;11(10):2805. doi:10.3390/su11102805

## How to Cite This Article

Megiroo PE. Strategies of rural women in coping with the effects of climate change in North Tanzania. *Int J Multidiscip Res Growth Eval*. 2026;7(1):38–44.

## Creative Commons (CC) License

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.