



ADAPTATION FUND

## PART I: PROJECT/PROGRAMME INFORMATION

# PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

Project/Programme Category: *Regular Project*

Country: *United Republic of Tanzania*

Title of Project: *Karatu Climate Resilience and Adaptation project for Hadzabe and Datoga communities- KARAHADA*

Type of Implementing Entity: *National Implementing Entity*

Implementing Entity: *National Environmental Management Council (NEMC)*

Executing Entity: *Hakikazi Catalyst & Karatu District Council*

Amount of Financing Requested: *2,500,000 (in U.S Dollars Equivalent)*



## **Project / Programme Background and Context:**

*Brief information on the problem the proposed project is aiming to solve. Outline the economic social, development and environmental context in which the project would operate.*

### **1.1 Brief background on what the project aims to solve**

Hadzabe are one of the few societies who still depend on natural food resources for survival. They live in the lake Eyasi basin in Karatu and Mbulu Districts in Northern Tanzania. They obtain their food through hunting game, digging roots and tubers, collecting honey and gathering wild fruits<sup>i</sup>. As hunters and gatherers, Hadzabe people possess a wealth of indigenous knowledge about natural resources that has enabled them to survive in challenging semi arid landscapes, particularly in the era of climate change and variability.

Studies show that only 25% of Hadzabe population continues to live a full traditional hunting and gathering lifestyle, while 75% of the Hadzabe population have transformed and are now integrating other livelihood activities<sup>ii</sup>. At individual level some Hadzabe people have been observed to work for farmers as traditional security guards in maize farms or are involved in harvesting potatoes<sup>iii</sup>. Sometimes Hadzabe have been found to beg from farmers and pastoralists and trade honey with livestock herders.

Impacts of climate change have negatively affected the availability and distribution of wild food resources for Hadzabe communities. This situation is aggravated by presence of non Hadzabe communities who undertake exploitive activities that have been interfering with Hadzabe way of life. This situation has weakened the Hadzabe ability to support themselves on naturally found food resources that are now minimized or diminished.

### **1.2 Research problem**

Hunting and gathering are important social, cultural and economic benefits that Hadzabe people have continued to depend for their well being and livelihood. Their existence as a cultural group is threatened by impacts of climate change and growing populations of non Hadzabe communities in their territory. Research on climate change has shown that for over 30 years visible effects of climate change have been observed on ecosystems<sup>iv</sup>.

Climate change has caused natural resources to deteriorate at an alarming rate<sup>v</sup> affecting those living in marginal lands like Hadzabe. The proposed project intends to enhance resilience of vulnerable and marginalized communities (gatherers and hunters) against increasing climate -induced water scarcity and prolonged dry spells. Hadzabe are also faced with other climate related problems such as famine, Covid 19 and AIDS pandemics, and malnutrition. Because of their way of life they are less involved in development activities by Karatu District Council and other stakeholders.

The proposed project intends to work very closely with the vulnerable traditional Hadzabe and Datoga communities in selected villages to understand the climate change challenges facing them through their deep understanding of natural resources and how this can be integrated in implementing the activities that aim at building their resilience to impacts of climate change.

### **1.3 Demography of Karatu District**

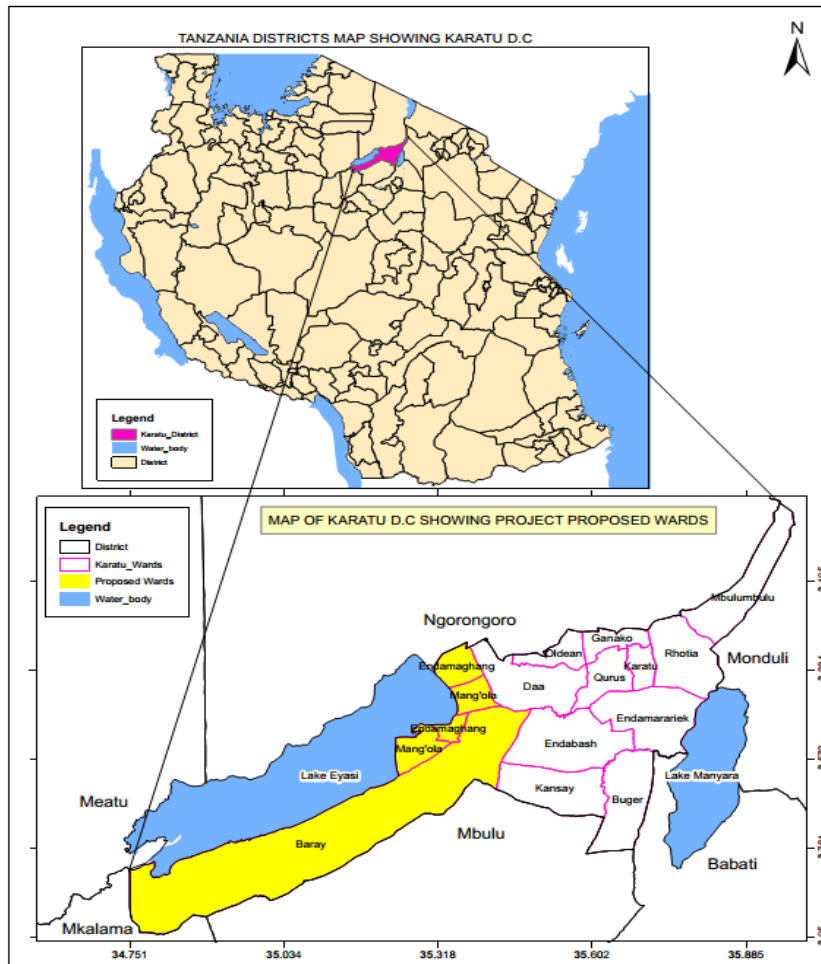
Karatu district is located South of the Equator between Latitudes 3°10' - 00'S and Longitudes 34° - 47'E-35° - 56'E. The district is bordered by Mbulu District to the South, Iramba and Meatu Districts to the North West, Ngorongoro to the North and Monduli and Babati Districts to the South East. Karatu District is estimated to have an area of approximately 3,300 square kilometers with Lake Eyasi occupying about 10.6 square kilometers.

Administratively, the Karatu District is divided into four divisions namely Mbulumbulu, Eyasi, Karatu and Endabash. There are 14 wards, 49 registered villages. The hunters and gatherers are mostly found in

Baray, Endamaghan and Mang’ola wards. Figure1 shows the map of Tanzania and the project area, the proposed wards are in yellow.

The projected population for Karatu District is expected to be 299,341 people, 153,547 being males and 145,794 are female. The Population of Hadzabe and Datoga communities in the project site are projected to be 58,483 people 30,587 being male and 27,896 are female<sup>vi</sup>.

**Figure 1: Map of Tanzania showing project location**



#### 1.4 Socio economic context

Hunting and gathering is the main socio economic activity undertaken by traditional Hadzabe communities in the proposed project sites. Hunting and gathering has been the main source of livelihood for many years with accrued cultural and economic benefits<sup>vii</sup>. A wide variety of wild food resources have been consumed by Hadzabe for a long time. Food types such as game meat, wild fruits tubers and honey have been important part of Hadzabe diet. The Hadzabe value traditional food highly both culturally and socially.

Climate change has been affecting the Lake Eyasi basin ecosystem which in turn has affected the availability and distribution of plant food reserves and pastures for wild animals. Prolonged dry spells has caused water shortage which affect plant growth and vegetation regeneration. This situation has caused Hadzabe men and

young men to travel long distances in search of wild animals and honey while women and girls travel long distances up to 8 hours in search of water, wild fruits and roots. Climate change has reduced the resilience of these communities.

Honey is valued by Hadzabe people, it is assumed to be one of the staple foods. Surplus hone is traded with Datoga blacksmith and other non Hadzabe communities. Honey is used by Datoga to make a local beer. Honey is traded using barter trade.

Cultural tourism is growing in Lake Eyasi, tourists come to observe Hadzabe hunting and gathering way of life. They pay to see Hadzabe and Datoga communities. They come to observe hunting and gathering strategies, traditional dances, dressing style, food, language and much more. After visiting the Hadzabe, tourists also visit Datoga (blacksmith) to observe their culture and but black smith souvenirs such as arrows, cutlery, long knives and small hoes. Tourism has been one of the livelihood enterprises that have helped the Hadzabe to cope with impacts of climate change by seeking alternative sources of income. Money obtained from tourism is used to buy food and medicine for diseases that cannot be cured with available plants.

Tourism has made hunters and gatherers to be more settled. Traditionally hunters and gatherers used to be mobile looking for food. They only stayed at their camps for a couple of weeks. This is now changing as they now spend more time in their camps changing their life style towards a semi permanent and permanent land use pattern. This change allows for the government to support their resilience to climate change.

### **1.5. Climate change and environmental context**

Climate change is one of the challenges to economic growth and poverty eradication in most developing countries. It affects all countries in all parts of the world but the impacts are differently distributed amongst regions, generations, age classes, income groups and occupations. The adverse impacts of climate change such as droughts and floods are already evident in Tanzania in general but Karatu in particular. Climate change affects almost all sectors of the economy in the country leading to major economic losses. The situation is worse for communities that depend largely on natural resources for their livelihood like the Hadzabe hunters and gatherers.

There is documented evidence that the climate is changing in Tanzania and in Karatu District. There is an increase in frequency and intensity of extreme events such as heavy rainfall, strong winds, hailstorms, and high temperatures. Between 1981 and 2020 there have been severe incidences of flooding, drought and record breaking rainfall that have been observed in many parts of our country. According to IPCC reports most of these extreme events have been observed in the last five years (2015, 2016, 2017, 2018 and 2019). This proposal will also present rainfall and temperature projections and anomalies.

Rainfall regime for Arusha, which is the nearest meteorological station to Karatu, exhibit bimodal regime with peak in March – May (MAM) and October – December (OND) as depicted in Figure 2. However, as indicated in Figure 3, mean annual rainfall is characterized by stronger temporal variability with no definitive trend. Over the recent years rainfall patterns in this region like in many other regions in Tanzania and over the continent have been dominated by the increasing frequency and severity of extreme events causing devastating socio-economic and ecological implications (Chang’a et.al, 2017, 2021). These extreme events include heavy rainfall, floods, and droughts.

Temperature dynamic is depicted in figures 4 & 5. In general, across much of Tanzania and in this case Arusha, warming trend is depicted, of which, the trend in minimum temperature (Figure 4) is much more pronounced and is warming faster than maximum temperature (Figure 3). These observations are consistent with results from the latest IPCC reports (IPCC 2018, 2019, 2021) and WMO state of the global climate report

(WMO, 2019, 2020, 2021).

Figure 2: Annual rainfall cycle in Arusha (1991 – 2020).

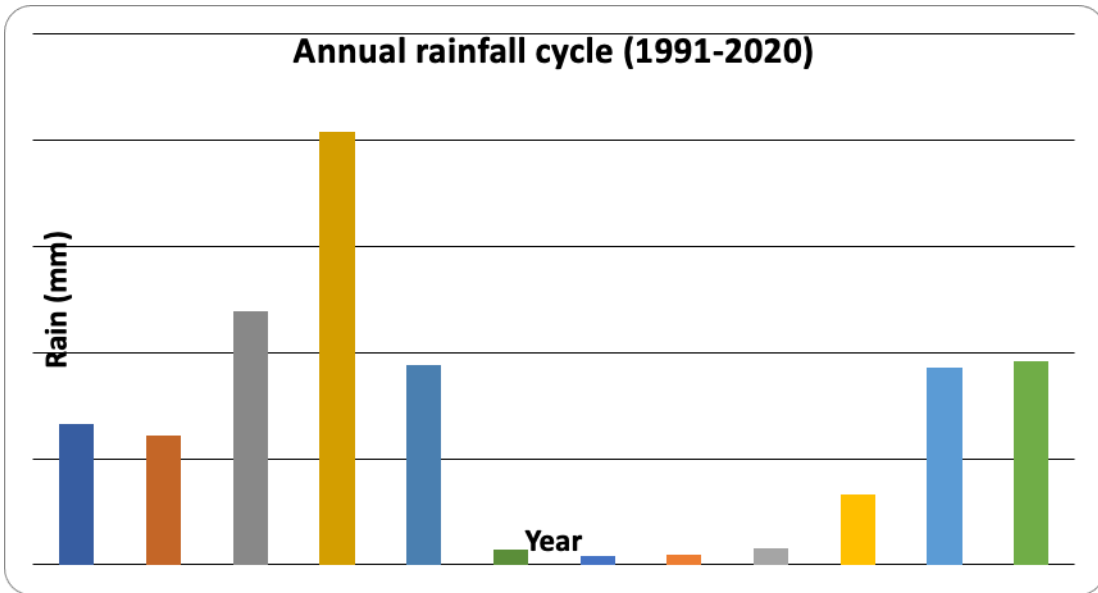


Figure 3: Mean annual rainfall for Arusha

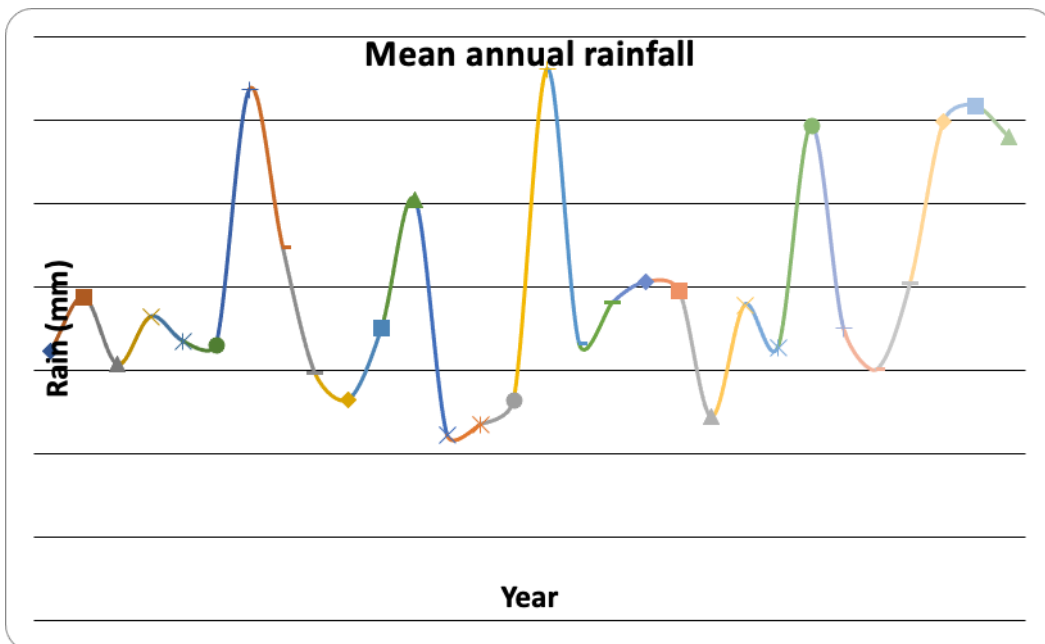


Figure 3: Mean annual maximum temperature for Arusha.

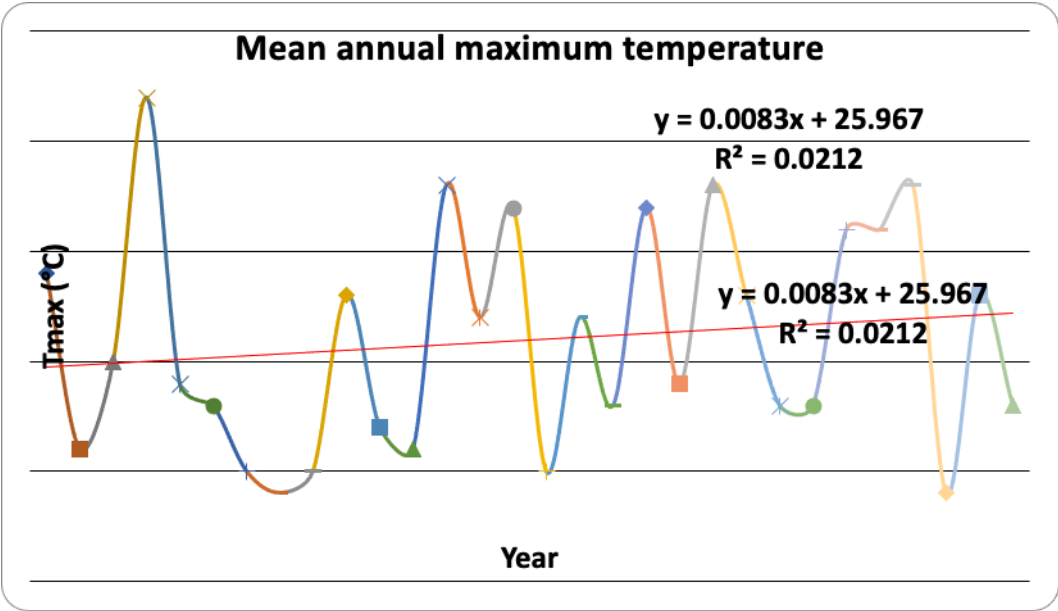
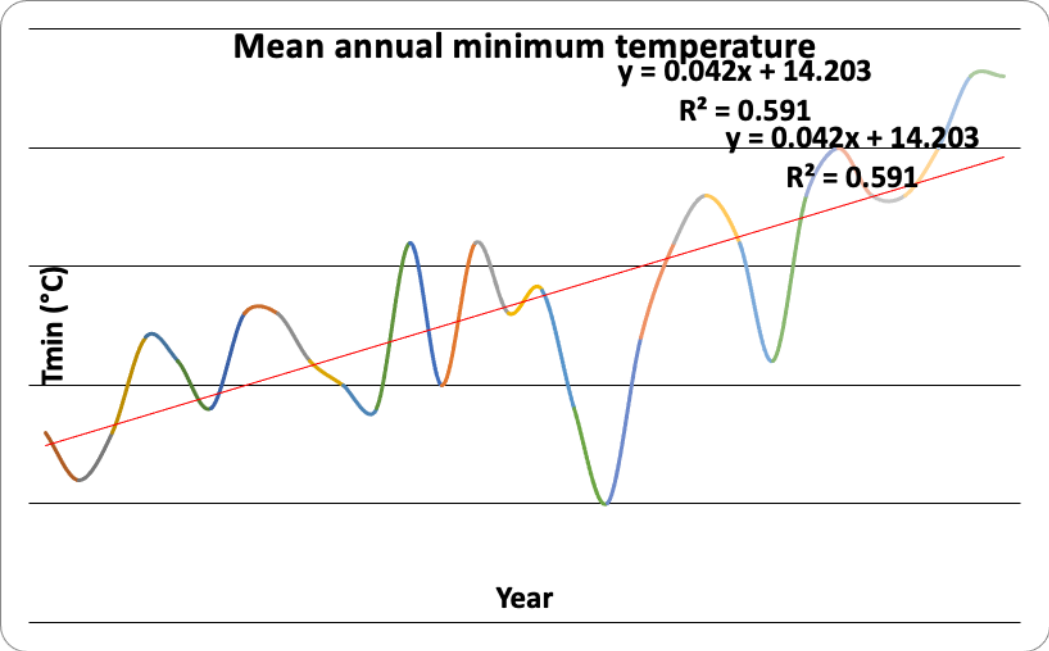


Figure 5: Mean annual minimum temperature for Arusha.



Karatu district has reserved area of about 35,399 hectares of forest. Efforts are being made by District council, CBOs, NGOs to address environmental degradation. The government has set aside 600 hectares of reserved forest for Hadzabe hunters and gatherers to preserve and keep beehives as a source of income and to increase resilience to climate change.

The Hadzabe leave less visible impacts on their environment. For many years climate change has brought around invasion of non Hadzabe cultural groups who have brought negative impacts on their already fragile ecosystem of Lake Eyasi basin causing severe impacts in terms of food security and nutrition<sup>viii</sup>. Their ability to survive in the present environment has forced them to start adapting to alternative livelihoods such as farming and livestock keeping.

The forest resources of Western zone are unique in terms of their diversity of plants and shrubs. These resources are used by the Hadzabe for food. The baobab is the most important tree, providing staple foods. There are many natural fruiting shrubs. Among the important tuber crops are *Vigna esculenta*, *Coccinea aurantica*, and *ipomoea transvalensis*. These tuber crops are crucial components for survival of the Hadzabe. One hectare of *Vigna esculenta* can support one family four about 148 days. Most shrubs and trees can provide useful medicine for both human and livestock.

This project proposes to develop and implement concrete adaptation actions at grass root levels to increase community resilience to climate change impacts and it will align with the following sectors; water resources and supply, agriculture, forestry and bee keeping, livestock production, tourism, renewable energy, good governance, community development and gender in relation to climate change. The project will apply transformative integrated environmental management, resilient rural water supply systems and climate smart agriculture practices to reduce vulnerabilities. The project will be implemented in eight selected villages in the three wards Baray, Endamaghan and Mang'ola.

This approach offers practical and effective combination of Community-Based-Adaption and Ecosystem Based-Adaptation techniques to support transformation of livelihood system, combat poverty, enhance greater climate resilience of rural communities, protection, restoration and management of forest ecosystem and gender equality while reducing emissions through long-term storage of carbon in landscapes.

The resources sought from the Adaptation Fund (AF) will implement concrete and practical cost effective and multi-stakeholder's adaptation solution to improve livelihoods of the poor and vulnerable communities in Karatu district through the following five outcomes:

i) Increased food security, income and resilience to climate change impact through Climate Smart practices in selected villages in the three wards of Baray, Endamaghan and Mang'ola

ii) Enhanced climate resilient rural water supply and micro lift irrigation systems in vulnerable communities of Hadzabe (gatherers and hunters) and Datoga (Blacksmith) in selected villages in the three wards of Baray, Endamaghan and Mang'ola

iii) Improved forests services and functions to sustain climate change resilient livelihoods in selected villages in the three wards of Baray, Endamaghan and Mang'ola

iv) Climate resilient actions in climate sensitive sectors informed by both local knowledge and science to respond to climate vulnerability and risks in Karatu District

v) Improved capacity of Karatu District Council and Hadzabe (hunters and gatherers) and Datoga (Blacksmith)

communities in planning, implementing and monitoring climate adaption actions

**Project Objectives:**

This project aims to implement activities that are directed towards enabling climate resilient livelihoods in climate change affected areas. The project will implement activities that will build capacity of Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities in undertaking practical and innovative climate smart solutions that have concrete and tangible outputs. This project will specifically envisage achieving the following:

- (i) To Enhance integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang’ola in Karatu District
- (ii) To enhance climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang’ola and EndamaghanWards in Karatu District
- (iii) To Improve climate change resilience of forests and non- timber products for selected villages of the three wards of Baray, Endamaghan and Mang’ola in Karatu District
- (iv) To Undertaking studies on climate risks and vulnerability and KAP with a particular focus on most vulnerable sectors including health, water, agriculture, nutrition in three wards of Baray, Endamaghan and Mang’ola in Karatu District
- (v) To Enhance capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang’ola to design and implement climate change adaptation interventions and improve level of understanding of climate change related issues

**Project Components and Financing:**

*The table below presents the relationships among project components, activities, expected concrete outputs, and the corresponding budgets.*



Project Components	Expected Concrete Outputs	Indicative activities	Expected Outcomes	Amount (US\$)
<p>1.Enhancing integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola in Karatu District</p>	<p>1.1 Improved bee keeping initiative for food security and increased household income.</p> <p>1.2 Use of alternative source of biomass energy promoted</p> <p>1.3 Use of local and improved breeds of rabbit and poultry for food security and income generation for selected villages three wards of Baray, Endamaghan and Mang'ola improved</p>	<p>1.1.1 Training hunters and gatherers on sustainable bee keeping practices</p> <p>1.1.2 Provision of at least 750 modern beehives and related equipment.</p> <p>1.1.3 Building capacity on honey marketing</p> <p>1.1.4 Building capacity for communities to establish honey producer's cooperative society</p> <p>1.2.1 Training Datoga (blacksmith) communities on the use of sustainable source of energy</p> <p>1.2.2 Training Datoga on how to make energy saver cooking stoves for cooking and forging tools</p> <p>1.2.3 Training Datoga (blacksmith) on making alternative energy products e.q briquettes</p> <p>1.2.4 Facilitating Datoga (blacksmith) communities to engage into a business venture for selling energy saver cooking stoves and briquettes</p> <p>1.2.5 Supporting Datoga (blacksmith) to establish and operate energy saver community group</p> <p>1.3.1 Training women men and youth on Poultry and rabbit production</p> <p>1.3.2 Construction of simple poultry and rabbit houses</p> <p>1.3.3 Provision of startup capital in form of</p>	<p>1.Increased food security, income and resilience to climate change impact through Climate Smart practices in selected wards</p>	<p>508,055</p>

	<p><b>1.4</b> Production of diversified cultural and nature-based tourism products for Hadzabe (hunters and gatherers) and Datoga (blacksmith) women, men and youth improved.</p> <p><b>1.5</b> Identification and production of suitable traditional and modern crops for enhanced food security and increased household income in selected villages of Baray, Endamaghan and Mang'ola promote</p>	<p>local pullet, cocks, does and buck to the communities</p> <p><b>1.3.4</b> Provision of feed, supplements, veterinary drugs and equipment/utensils</p> <p><b>1.3.5</b> Establishment and building capacity to operate poultry/rabbit producers group</p> <p><b>1.4.1</b> Train women and youth on jewelry and leather quality and marketing</p> <p><b>1.4.2</b> Promote the jewelry and leather business amongst women and youth</p> <p><b>1.4.3</b> Provide support and capacity for women and youth to form jeweler's and leather makers groups</p> <p><b>1.5.1</b> Training of men, women and youth on production of selected traditional and modern crops</p> <p><b>1.5.2</b> Establishment of at least 10 farms of two acres each as demonstration farms (Field Farm School-FFS) across 8 villages within the targeted three wards</p>		
<p><b>2.</b>Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District</p>	<p><b>2.1</b>At least 10 boreholes drilled in Hadzabe (gatherers and hunters) and Datoga(blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District for improved water availability</p> <p><b>2.2</b> Water supply systems constructed in Hadzabe (gatherers and hunters) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District for improved water quality</p>	<p><b>2.1.1</b> Conducting hydrogeological survey</p> <p><b>2.1.2</b> Drill boreholes in drought prone and water scarce villages and install solar driven water pumps at Baray, Mang'ola and Endamaghang Wards</p> <p><b>2.2.1</b> Design and Construct water storage tanks, distribution network systems and pump system at Baray, Mang'ola and Endamaghang Wards</p> <p><b>2.2.2</b> Construct community water points/ community water Kiosks for network systems</p> <p><b>2.2.3</b> Supply micro lift irrigation systems equipment accessories to support crop</p>	<p>2. Enhanced climate resilient rural water supply system in vulnerable communities of Hadzabe (gatherers and hunters) and Datoga (Blacksmith) at Baray and Endamaghang Wards</p>	<p><b>918,102</b></p>

	<p><b>2.3</b> Hadzabe (hunters and gathers) and Datoga (blacksmith) facilitated, trained and supported to operate and maintain the water infrastructure.</p> <p><b>2.4</b> Climate resilient behavioral change and water governance for Hadzabe and Datoga communities in the three wards of Baray, Endamaghang and Mang'ola enhanced</p>	<p>production</p> <p><b>2.3.1</b> Conduct awareness raising meetings with community stakeholders on operation and maintenance of water infrastructure and supply</p> <p><b>1.4</b> Conduct awareness raising meetings with community stakeholders on behavior change and water governance</p>		
<p><b>3.</b> Improving climate change resilience of ecosystems and non-timber products for selected villages of the three wards of Baray, Endamaghang and Mang'ola in Karatu District</p>	<p><b>3.1</b> Adoption of Ecosystem Based Adaptation and management for selected villages of Baray, Endamaghang and Mang'ola wards promoted.</p>	<p><b>3.1.1</b> Identify types of ecosystems in three wards of Baray, Endamaghang and Mang'ola to identify degraded ecosystems</p> <p><b>3.1.2</b> Mobilise enclosures in degraded ecosystem by using existing local and traditional knowledge and institutions to strengthen management of fragile ecosystems including establishment of Ecosystem Management Plans</p> <p><b>3.1.3</b> Establish and implement ecological restoration and rehabilitation plans including developing of bylaws and enforcing implementation in the wards of Baray, Endamaghang and Mang'ola landscapes</p> <p><b>3.1.4</b> Engage Hadzabe and Datoga communities in tree planting and maintenance campaign for different types of native and fruit trees.</p> <p><b>3.1.5</b> Support women and youth to establish and operate Community integrated Forest Management Groups</p>	<p><b>3.</b> Improved ecosystem services and functions to sustain climate change resilient livelihoods at selected villages in baray, Endamaghang and Mang'ola wards</p>	<p><b>128,569</b></p>
<p><b>4.</b> Undertaking studies on climate risks and vulnerability with a particular focus on most vulnerable sectors including water, agriculture, nutrition in three wards of Baray, Endamaghang and Mang'ola in Karatu District</p>	<p><b>4.1</b> Climate Risk and Vulnerability assessment for a comprehensive action plan in climate sensitive sector at Karatu District Council conducted.</p> <p><b>4.2</b> Gender and climate</p>	<p><b>4.1.1</b> Hire consultant to conduct a Risk and Vulnerability assessment and KAP for Karatu District</p> <p><b>4.2.1</b> Prepare a comprehensive multi</p>	<p>Climate resilient actions in climate sensitive sectors informed by both local knowledge and science to respond to climate vulnerability and risks in Karatu District</p>	<p><b>129,734</b></p>

	<p>change issues mainstreamed into relevant sector projects and programmes such as nutrition, health, agriculture, water at Karatu District</p> <p><b>4.3</b> Community awareness on climate adverse impacts and adaptation options to address them in three wards of Baray, Endamaghan and Mang'ola in Karatu District</p>	<p>sectoral action plan</p> <p><b>4.2.2</b> Mainstream gender and climate change considerations into District plans, projects and programmes</p> <p><b>4.2.3</b> Monitor mainstreaming progress and report progress</p> <p><b>4.3.1</b> Conduct training need assessment</p> <p><b>4.3.2</b> Prepare campaign materials</p> <p><b>4.3.3</b> Conduct awareness campaign</p> <p><b>4.3.4</b> Provide training on the adverse impacts of climate change and adaptation options to address them</p>		
<p><b>5.</b>Enhancing capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang'ola to design and implement climate change adaptation interventions and improve level of understanding of climate change related issues</p>	<p><b>5.1</b> The capacity of Karatu District Council in facilitating public awareness and understanding of climate change related issues and the adoption of resilient climate livelihood practices strengthened</p> <p><b>5.2</b> Community institutions to assist in collecting climate related local knowledge (including traditional knowledge) and disseminate relevant climate change adaptation knowledge and information to communities in three wards of Baray, Endamaghan and Mang'ola established.</p>	<p><b>5.1.1</b> Conduct training needs assessment</p> <p><b>5.1.2</b> Develop training materials and Supporting Community Based Trainers (CBT) in training peer community members</p> <p><b>5.1.3</b> Training of local government officials in Karatu district on climate resilient livelihood practices including mainstreaming of climate change into development plans and budgeting process</p> <p><b>5.1.4</b> Disseminating project results and share lessons learnt to District, Regional and National stakeholders</p> <p><b>5.1.4</b> Purchase project vehicle</p> <p><b>5.2.1</b> Facilitate community exchange visits/study tours</p> <p><b>5.2.2</b> Build and equip community resource centers for communities, CHW and others to use as their meeting space and where climate change related capacity building and skills development training will conducted for both men, women and youth. Humanitarian aid can also be organized from these centers</p>	<p><b>5.</b> Improved capacity of Karatu District Council, Hadzabe (hunters and gatherers) and Datoga (Blacksmith) communities in planning, implementing and monitoring climate adaption actions</p>	<p><b>434,186</b></p>

	<p><b>5.3.</b> Capacity of the hunters, gatherers and blacksmith communities in planning and decision making for undertaking climate resilient livelihood practices is strengthened</p> <p><b>5.4</b> Upgrade Karatu District metrological services and its network and infrastructure for provision of essential data for climate service and early warning systems to the areas surrounding the three wards of Baray, Endamaghan and Mang'ola</p>	<p><b>5.3.1</b> train community committee members on planning and decision making for undertaking climate resilient livelihood practices</p> <p><b>5.4.1</b> Train Karatu District Council staff on importance of data for climate change services and early warning systems</p> <p><b>5.4.2</b> Install automatic agro-weather station</p>		
	6. Project Execution cost (9.5%)			201,271
	7. Total Project Cost			2,118,645
	8. Project Cycle Management Fee (8.5%)			180,084
	<b>Amount of Financing Requested</b>			<b>2,500,000</b>

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Milestones	Expected Dates
Start of Project Implementation	June t, 2022
Project Closing	June 2025
Terminal Evaluation	March 2025

## PART II: PROJECT / PROGRAMME JUSTIFICATION

*A:Description of the project / programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience.*

All five components and indicative activities under this project are focusing to achieve concrete adaptation outcomes. All activities will be implemented on the ground in order to build resilience and improve adaptive capacity of vulnerable Hadzabe (hunters and gatherers and Datoga(Blacksmith) communities. The proposed project will also promote gender responsive climate action. The details of the five proposed project components are further described here under and how these will contribute to community's resilience.

### PART II: PROJECT JUSTIFICATION

*PART II A: Description of the project components, particularly focusing on the concrete adaptation activities, and how these activities would contribute to climate resilience*

All five components and indicative activities under this project are focusing to achieve concrete adaptation outcomes. All activities will be implemented on the ground in order to build resilience and improve adaptive capacity of vulnerable Hadzabe (hunters and gatherers and Datoga (Blacksmith) communities. The proposed project will also promote gender responsive climate action. The details of the five proposed project components are further described here under and how these will contribute to community's resilience.

#### Component 1:

*Developing integrated climate resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola.*

*Increase food security, income and resilience to climate change impact through Climate Smart practices in selected wards*

Considering the fact that Tanzania's economy and the livelihoods of its people depend on climate sensitive resources, it is crucial that adaptation strategies that target climate resilient livelihoods are promoted. Livelihood integration and diversification is recommended so as to maximize the resilience. This is

because reliance on only one means of livelihood may risk increased climate vulnerability if that particular livelihood activity fails. Integration of livelihoods increases cost effectiveness as may generate some co-benefits and synergies.

For example, the integration of treeplanting, poultry and rabbit keeping, growing traditional and modern crops and beekeeping on the same farm creates synergies. Trees protect soils and enhance water infiltration in the soil, poultry and rabbit keeping supplies manure for crop growth, beekeeping helps protect forests. Thus this kind of integration enhances productivity while ensuring cost effectiveness. Furthermore, beekeeping integration enhances pollination and increased income accruing from sale of honey.

About 300 camps and farmsteads are expected to benefit from the livelihood intervention in the wards of Baray, Endamaghan and Mang'ola in Karatu district either directly or indirectly. The adoption of integrated climate resilient livelihoods diversification system is envisaged to improve the household income by at least 30 % by the end of the project. The government has set aside 600 ha of forest to support conservation, income generation through bee keeping and collecting carbon credits.

### **Output 1.**

Beekeeping is one of the nature based livelihood activity with a potential to increase resilience to climate change impacts. This is output responds to the national bee keeping Policy which recognizes the importance of beekeeping sub- sector to sustainable development of Tanzania and conservation and management of natural resources. Beekeeping is a viable livelihood based enterprise benefiting communities living in and around forests particularly from the wards of Baray, Endamaghan and Mang'ola. Most importantly beekeeping can also be used a practical tool for raising the awareness of communities on the importance of forest management and conservation. Compared with cultivated crops, beekeeping is not very much affected by climate variations and can provide a more predictable income.

The climate resilience of the beekeeping enterprise lies in the fact that the honey bees can tolerate high temperatures to some extent. The integration of beekeeping in a farm will facilitate crop yield through pollination. The direct beneficiaries will include 10 beekeeping groups in the three wards of Baray, Endamaghan and Mang'ola where each group can have up to 20 members including men, women and youth. About 1000 modern beehives will be constructed and hung in established apiaries. Currently there are a number of traditional beehives and about 100 modern beehives hung on trees and laid on ground for women and children to take care.

The government through Karatu District Council has set aside 600 ha of forest for conservation purposes but mainly for sustainable income generating activities that enhance adaptive capacity of communities and reduce vulnerability to climate change. The project intends to plant trees and promote production of traditional and modern crops in selected villages. This step provides an indication of sufficient foraging area for bees in over 1000 beehives.

The natural vegetation of Lake Eyasi Basin is composed of a mixture of Somali- Maasai edaphic grassland, Maasai woodland, Acacia Commiphora deciduous bushlands and thickets, wetland and salt flats. Also there are baobab (*Afansonia digitata*) trees which are densely scattered throughout forming a baobab woodland type of vegetation suitable for beekeeping (Herlocker and Dirschil ,1972), The Acacia Commiphora deciduous bushland and thicket covers about 35% of the total area of Lake Eyasi basin and represents the most extensive vegetation type ( Mabulla(1996).

Studies have shown that Acacia woodlands dominate arid and semi arid areas and they are an important source of pollen and nectar. Most prominent tree species include *Acacia brevispica*, *Acacia*

tortilis, Commiphora madagascariensis, Commiphora merkei and Acacia mellifera. Acacia mellifera which is commonly known as Black thorn, is a sub-specie known to be ideal for bee keeping particularly in Northern Tanzania as it produces copious amounts of flower filled with nectar and pollen making it a honey bee delight (Green pop). , the trees are ranking 4<sup>th</sup> in the world top 20 trees for bees. In a study undertaken in Kitui Kenya in similar landscape, honey bees were found to be numerous flower visitors and pollinator of Acacia brevispica for a return of pollen and nectar for production of honey. Acacia trees are also well known for being drought resistant so are best suited for increasing resilience against impacts of climate change.

The linkage between pollination of Acacia brevispica and honey production it is important in conservation of woodlands, preserving biodiversity and enhancing resilience of communities against climate induced changes. Based on the above explanation it is obvious that there sufficient foraging area for 1500 beehives. After discussions with Karatu District Council it was agreed that we reduce the number of bee hives to 1000 to also take account of climate change impacts on trees and plants.

### **Output 2**

*Use alternative source of biomass energy promoted for Datoga (Blacksmith) communities in the three Wards of Baray, Endamaghan and Mang'ola*

For communities to be more adaptive to impacts of climate change they need to adopt resilient less carbon intensive and climate change smart infrastructures, tools and products. Datoga communities use charcoal as source of fuel for forging metal tools and cooking. This project will introduce the use of alternative sources of energy and energy saving stoves.

This output aims at empowering 60 homesteads of Datoga (blacksmith) communities to be able to understand climate change – energy related issues and how to make briquettes and cooking stoves. This intervention is in line with the aim of the government to ensure that at to increase least 50% use of alternative energy compared to current levels. This initiative is in line with the Tanzania Sustainable Energy for All (SE4All) Action agenda(2015). Datoga (blacksmith) and Hadzabe (hunters and Gatherers) have a long history of batter trade. This project will allow the Datoga to trade clean cooking stoves and briquettes for other products from Hadzabe such as honey, vegetables, chicken and rabbits. The process will increase income and enhance climate change resilience at the same time.

### **Output 3**

*Rabbit and Poultry farming established/ improved*

This intervention aims at facilitating communities from the three wards of Baray, Endamaghan and Mang'ola to start and improve local chicken and rabbits enterprises for food and for income generation. This is a **potential** enterprise to generate income and building resilience for the poor households and women groups. According to Tanzania Livestock master Plan (2017) which sets out livestock sector investment interventions including better genetics, feeds and livestock health services. This is also well articulated in the Agriculture Sector Development Plan II 2015-2025 which is further translated into the Karatu Agriculture development Plan – Karatu DADPs.

Therefore, this project will provide some technical assistance to interested communities on how to establish and run poultry and rabbit enterprise. The project will support small scale commercial poultry and rabbit enterprises with a view of enabling farmers to produce meat and eggs in very short time. This is envisaged to bolster the income of targeted communities thus enabling them to cope with climate induced losses in hunting and gathering. The project will support 10 poultry groups and 10 rabbit groups in the said wards by each group will have at least 25 members consisting of men, women and



youth.

#### **Output 4**

*Women jewelry and leather making business improved*

Hunters, gatherers and blacksmith communities are also involved in cultural tourism where they share their cultural experiences to tourists and they also sell jewelry, metal tools and accessories and leather pieces of clothing and ornaments. This project intends to support these communities to improve their product better make, package and display their products. This in turn will help them to have more income which can support them to buy food and other household needs, This intervention is in line with the national tourism policy (1996) which is currently under review to better address nature base tourism for the purpose of improving community livelihoods and development of quality tourism that is culturally and socially acceptable, ecologically friendly, environmental sustainable and economically viable. In this project 15 groups of jewelers, 15 groups lather tanners and 15 groups of black smith communities will be empowered to improve their enterprises for markets within the project sites and beyond. Income generated from jewelry selling supports livelihoods and ensures resilience to climate change induced stress. Each group will have 5 members.

#### **Output 5**

*The production of traditional crops for home consumption introduced*

Most Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities usually do not engage in crop and livestock production. Climate change has left them food and nutrition insecure. They also face severe water shortage as result of increased activity by other community groups such as farmers and pastoralists. This project intends to listen to community and hear their local experiences and knowledge and what type of traditional and modern crops they think will be suitable for this community to be food and water sufficient. This is in line with the Agriculture Sector Development Programme II (2015-2025) which aims at ensuring transformation in agriculture sector with emphasis on commercialization of smallholder farmer's income for improved livelihood, food and nutrition security.

This project intend to establish demonstration farms across the three wards for communities to learn, share experience on ho A total of 20 hectares will be used for different community groups of 20 people women, men and youth. These groups will be capacitated through training programs on climate smartt technologies and practices through farmers' field schools for both men and women. Food security is one of the pillars of climate change adaptation. These crops will ensure nutrition security is also attained at the same it will increase adaptive capacity of communities. The project intends to provide water and micro irrigation equipment and accessories to support these activities.

#### **Component: 2**

Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghan Wards in Karatu District

#### **Outcome 2**

*Enhanced climate resilient rural water supply system in vulnerable communities of Hadzabe (Gatherers and hunters) and Datoga (Blacksmith) at Baray and Endamaghan Wards*

Rural communities in Karatu district depend on climate sensitive water resources which is relies heavily

on climate sensitive water resources and infrastructures for their water supply. It is evident that water services in the proposed project sites are facing water security risks in various aspects such as scarcity and quality, both of which affect health and other economic development systems. Existing water sources have proved to be incapable of withstanding the effects of climate change and even increased water demands.

Although quantification of water demand in these villages have yet to be well done by proper numerical models but based on villagers' view, field observation and visits paid to the community and issues raised in the planning workshops, it is clear that water shortage is a big problem especially to women and children and therefore a burden to peoples life quality, health and livelihood. Community members mainly women and children are forced to fetch supplementary water about 30 kilometers away from their homesteads. The impacts of climate change can vividly be seen and this project will enhance resilience to those impacts. Obtained Water will be used for home consumption and for irrigating crops and providing water for chickens and rabbits sub projects which are also supported by this project. This will enhance resilience of communities particularly during the dry season when other resource of food for Hadzabe and Datoga communities is dwindling.

### **Output 1**

*At least 10 boreholes drilled in Hadzabe (gatherers and hunters) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District for improved water availability.*

The supplementary water for most villages of Baray, Endamaghan and Mang'ola wards is also obtained from traditional shallow holes and wells often along the valleys. These traditional wells dry few days after the rain season, mainly from July – November. The traditional wells are often not secure, thus hazards like floods may cover them up or contaminate them with human or livestock wastes thereby exposing people to water borne diseases (e.g. cholera, dysentery), which occurs almost every year. All supplementary water sources usually dry up during the dry season, forcing people (more often women and children) to travel longer distances looking for unsafe water wherever they are found. It is a true worry that, most likely future climate change effects will further increase water scarcity and associated diseases problems in these hunters, gatherers and blacksmith communities.

Under this output, climate resilient rural water supply and reliable water distribution networks will be established through drilling boreholes. Bore holes are the only reliable options as are considered to be more stable to climate shocks when compared to seasonal rivers which disappear every dry season. In addition, ground water in the these areas has regional recharge advantage when compared to localized recharges; hence ground water in Karatu is stable to seasonal rainfall variability, dry spells and drought. The indicative activities to be implemented under Output are:

- Drill boreholes in drought prone and water scarce villages and Install solar energy driven water pumps at selected villages of wards
- Construct water storage tanks and distribution network systems at Baray, Endamaghan and Mang'ola wards
- Construct community water points/ community water Kiosks for network systems in the project sites
- Supply micro lift irrigation systems equipment accessories to support crop production

### **Output 3**

*Community Water Users Association (WUAs) established, facilitated and committee members trained on operational and maintenance of the water supply systems*

Establishment of WUAs and capacitate them with necessary tools and expertise will empower vulnerable communities in the two wards to use their own knowledge and decision – making process to take action and active role to deliver the expected outputs of Component 2 in longer term, beyond project lifetime. The indicative activities to be implemented under this output are:

- Formula water governance structures (WUAs) and promotes equitable water allocation for all uses and revenue collection. Promote formulation of water governance/by laws to regulate effective use of water and protection of water sources
- Conduct Technical Trainings of Trainers on maintenance and operations; management of finance, accounting and group dynamics issues to selected community members of WUAs for the three selected wards.

This output is proposed to put good and sustainable institutional structure to manage community and village climate resilient water supply system in the project sites. The output suggests establishment of WUAs which will be trained on group management and dynamics, maintenance and operations of the rural water systems.

### **Output 4**

*Climate resilient behavioral change and governance at community level enhanced*

In this component community members will be trained and given opportunity to share their local knowledge and experience on how to change behavior towards water governance at community level. This project will support communities to form representatives from traditional leader's women, men and youth. The CBWSOs are being recognized by the new Water and sanitation Act No.5 of 2019 which established "Rural Water Supply and Sanitation Agency – RUWASA" with responsibility to manage rural water supply. Under this the new Water and sanitation Act, 2019, the Village water schemes are CBWSOs.

These are required to operate rural water supply in the communities in a professional way where technical managers and Accountants will be employed and paid by the Government and will work with the community representatives (Village water Boards) to sustain the water services. These CBWSOs will be backstopped by RUWASA District Managers' Office in Karatu district for technical and management issues. All CBWSOs to be formed will be responsible to set water tariffs, collect revenues from water. About 8 CBWSOs will be formed one in each of the selected villages.

## **COMPONENT 3:**

**Improving climate change resilience of ecosystems and non- timber products for selected villages of the three wards of Baray, Endamaghang and Mang'ola in Karatu District**

### **Outcome 3:**

*Improved ecosystem services and functions to sustain climate change resilient livelihoods at selected villages in Baray, Endamaghang and Mang'ola wards*

For many years , ecological systems in Karatu have been impaired by a combination of both human induced and climate change related drivers. The original and natural ecosystems, covered by savannah thickets were degraded following the decision by colonial government to establish groundnut scheme. Since then, other human induced drivers for environmental degradation such as activities done by non Hadzabe communities such as using poor farming methods, deforestations, charcoal making and overgrazing are common in the area.

Unless integrate community participation and ecosystem based solutions to tackle climate change are implemented, the trend will continue endlessly, with disastrous effect to the vulnerable community. This project under component 3 proposes innovations which promote conservation measures linked to economic benefits to the people for tackling climate change in the district. The proposed activities under component 3, are also expected to provide excellent alternative income generating options, contributing to reduction of income poverty, providing adaptation benefits and building climate resilience of vulnerable communities specially women and girls through selling bee keeping products, various fruits obtained from fruit plants and selling forest products obtained from woodlots.

Communities already use modern and traditional bee hives and practices. There is much room for improvement and the opportunity to link honey production to tourist market in Karatu and Arusha. The areas to be restored under this project has been pre- determined based on the inputs gathered from the field visits, community discussions, by carrying out transect walks in landscape The total areas for ecological restoration and rehabilitation are yet to be numerically quantified at this stage but expected to be about 30% of the approximately 600 hectares potential for forest restoration activities. Karatu District Council has put in place Land use Plan for different uses. Enforcement of land laws and bylaws may assist in addressing the degradation challenge.

This project intends to empower communities through awareness creation and by putting in place by laws that will be enforced in collaboration with from Karatu District Council, TFS, Police Force and existing Judiciary systems. Local NGOs and FBO will also be encouraged to promote conservation and enforcement of laws and by laws.

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## **Output 1**

*Adoption of Ecosystem Based Adaptation and management for selected villages of Baray, Endamaghan and Mang'ola wards*

The ongoing degradation of environmental and ecological systems coupled with climate change issues has reduced the coverage of forests and woodlands and the availability of associated goods including accelerating land degradation and water catchments in Karatu District. Across the district, wetlands have been severely degraded as a result of inter alia:

- a) Use of forestry as a source of energy
- b) Intensive cultivation of crops such as maize and horticultural crops;
- c) Excavation of sand and clay for brickworks;and
- d) Grazing activities.

These activities are in line with the National Environmental Action Plan (NEAP (2020) which advocates for comprehensive incorporation of environmental concerns into natural resource planning and economic development. Therefore, this component and the proposed output activities seek to establish and implement ecological restoration and rehabilitation plans and restoration activities of hills, observed bare land, mountainous and woodland systems. All the eight villages will be engaged for restoration and

rehabilitation activities including tree planting campaigns by engaging communities in tree planting on surrounding homesteads and camps, other degraded landscapes in schools and other public institutions.

The output will implement Ecosystem-based Adaptation (EbA) activities such as Promote bee keeping activities in woodland land and mountainous systems and fruit plants as income generating activities. The indicative activities to be implemented under Output 1 are:

- Identify types of ecosystems in three wards to identify degraded ecosystems
- Mobilize enclosures in degraded ecosystem by using existing local and traditional knowledge
- Put in place institutions to strengthen management of fragile ecosystems
- Establishment of Ecosystem Management Plans
- Developing of bylaws and enforcing implementation
- Engage Hadzabe and Datoga communities in tree planting and maintenance campaign
- Support women and youth to establish and operate Community Groups

#### **COMPONENT 4:**

##### **Undertaking studies on climate risks and vulnerability with a particular focus on most vulnerable sectors including water, agriculture, nutrition in three wards of Baray, Endamaghan and Mang'ola in Karatu District**

The impacts of climate change for vulnerable communities are increasingly felt in Karatu District. Rainfall and temperature patterns are affecting ecosystems and communities in different ways. The extent of impacts depends on exposure, sensitivity and adaptive capacity. At national and local level, these impacts and vulnerabilities manifest themselves at varying degrees and they require specific actions and support for local government and communities to respond. Assessing vulnerability to climate change is important to identify the risks posed by climate change and provides important information for identifying measures to adapt to climate change impacts. It enables actors and decision makers to identify the most vulnerable groups of community, sectors and ecosystems.

##### **Outcome 4:**

*Climate resilient actions in climate sensitive sectors informed by both local knowledge and science to respond to climate vulnerability and risks in Karatu District*

As part of achieving its nationally Determined Contributions (NDCs) to the Paris Agreement, Tanzania has committed to the development of vulnerability assessment at all levels to support identification and presentation of adaptation needs. Furthermore the National Climate Change Response Strategy (NCCRS, 2021) outlines the importance of each vulnerable sector to identify the climate risks and develop response strategies to address climate change impacts. In Tanzania not all sectors have developed their strategies, this situation calls for local government to conduct risk and vulnerability assessment. Hadzabe and Datoga communities are vulnerable to climate change like many other communities. Their resilience is threatened as they depend to a large extent to natural resources for their livelihoods. Without this assessment monitoring of vulnerability and evaluation of adaptation measures will be challenging.

## **Output 1**

*Climate Risk and Vulnerability assessment for a comprehensive action plan in climate sensitive sector at Karatu District Council conducted.*

This output will be achieved by undertaking a comprehensive Climate Risk and Vulnerability assessment which will be complemented by KAP. This assessment will assist in context-specific evidence on the types and magnitude of climate related risks. The assessment will aid in identifying the most vulnerable populations, the level of resilience, vulnerability and adaptive capacity of the weather information system and communities in the three wards of Baray, Endamaghang and Mang'ola in Karatu District. The results of this assessment will provide evidence of the magnitude of vulnerability and adaptation options to be considered in enhancing adaptive capacity of the staff, communities and systems for planning and implementation of climate change related interventions. The expected activities to achieve this output will include hiring of the consultant to undertake the assessment and integrating the assessment results into Karatu District plans, projects and programmes.

## **Output 2**

*Gender and climate change issues mainstreamed into relevant sector projects and programmes such as nutrition, health, agriculture, water at Karatu District*

Climate change adaptation in human and natural systems is an area of great concern for many developing countries including Tanzania. The effects of climate change pose a significant risk for development and attainment of Sustainable Development Goals. Important areas of concern in the field of climate change adaptation include understanding climate change and its impacts and vulnerability of its people and ecosystem. Efforts have been focusing on development of specific adaptation measures that correspond to national "most urgent and immediate needs" as indicated in NAPAs. Of recent countries have realized that climate change adaptation needs to be mainstreamed into national and sub national plans.

Karatu District Council is yet to mainstream climate change into its development planning. This project will support KDC to embark upon mainstreaming of climate change adaptation into district development planning as part of broader poverty- environment mainstreaming process with gender considerations. Expected activities to achieve this output include:

- Prepare a comprehensive multi sectoral action plan
- Mainstream gender and climate change considerations into district plans, projects and programmes
- Monitor mainstreaming progress and report progress

## **Output 3**

*Community awareness on climate adverse impacts and adaptation options to address them in three wards of Baray, Endamaghan and Mang'ola in Karatu District*

In Tanzania like many developing countries, there is critical dearth of knowledge and skills in areas related with climate change science and policy. This is due to the fact that climate change is a relatively new phenomenon and is therefore not mainstreamed as part of school curriculum. Most of the time climate change interventions at sectoral and local level are coordinated by staffs that do not have formal training or awareness on climate change. On the other hand communities those are vulnerable to impacts of climate change need to adapt to increase their resilience.

Communities need to be made aware of the risks, acquire knowledge about options that are available for them to respond to climate change impacts. Communities need to be empowered to take their own

actions based on their experience and local knowledge. Effective community engagement is key to success in planning for climate change. This project intends to support KDC staff and community to build capacity and become aware of options that will increase their resilience and sustainability of climate change interventions. The following activities will be undertaken to realise this output:

- Conduct training need assessment
- Prepare campaign materials
- Conduct awareness campaigns
- Provide training on the adverse impacts of climate change and adaptation options to address them

#### **COMPONENT 5:**

Enhancing capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang'ola to design and implement climate change adaptation intervention and improve level of understanding and awareness

#### **Outcome 5:**

*Improved capacity of Karatu District Council, Hadzabe (hunters and gatherers) and Datoga (Blacksmith) communities in planning and implementing and monitoring climate adaption actions.*

The outcome and output activities of this component are designed to strengthen the capacities of all actors by improving their understanding of climate change. This will support the communities to participate in implementing measures that are necessary for success of resilience capacity building and for the ongoing replication of adaptation strategies in the district; hence this component, when implemented is expected to make a lasting contribution to the sustainability of all climate change adaptation measures in the district and beyond.

The output will facilitate integration of good adaptation practices into existing development planning at community levels, village and ward development plans. Enhancing knowledge management system and capacities for planning, coordination and implementation at the local level is critical to guarantee effective climate adaptation in the district.

#### **Output 1**

*The capacity of Karatu District Council in facilitating public awareness and understanding of climate change related issues and the adoption of resilient climate livelihood practices strengthened*

This project will support institutional capacity building for planning and management of adaptation interventions is vital for successful implementation. The project will work in an integrated manner on strengthening capacity of the local institutions, farmers associations and communities regarding promoting the adoption of climate smart practices. At one level, the project will seek to influence and involve local people in relation to adopting smart agriculture by developing capacities among communities.

This approach will be especially effective in proposed project areas given the well-developed local organization structures that exist in local communities. Community groups and institutions will be supported (through the provision of encouragement and technical advice) to promote the adoption of climate smart livelihood practices. In addition, communities will be also capacitated to practice climate smart intervention at their camps or homesteads.

The project will also prepare and disseminate learning and knowledge management products so that the

key messages from the project reach as many people as possible. This will be done by facilitating the district councils and local communities to share and communicate the project results and lesson learnt. Thus, the project will craft mechanisms by which the project results and lessons will be disseminated to the wider community of project districts and Tanzania at large. Karatu DC staff at all levels will be supported to design and implement climate change actions.

## **Output 2**

*Established Community institutions to assist in collecting climate related local knowledge (including traditional knowledge) and disseminate relevant climate change adaptation knowledge and information to communities in three wards of Baray, Endamaghan and Mang'ola*

Hadzabe and Datoga have well rooted cultural belongings. With the help of traditional leaders, In this component community representatives from selected villages will be facilitated to establish their own institutions. More focus will be encouraging women and youth to join these Community Adaptation Committees. The committees will constitute and registered by Karatu District Council and they will undertake their activities by representing other community members. They will hold their meetings at Community resource centers in their respective villages.

## **Output 3**

*Capacity of the hunters, gatherers and blacksmith communities in planning and decision making for undertaking climate resilient livelihood practices is strengthened.*

Selected committee members will form a Community Adaptation Planning Committees CAPCs. Members of committee will be trained and capacitated to participate in planning, implementation and monitoring of climate change related interventions.

## **Output 4 *Climate smart community resource centers built, re- tooled and strengthened***

This project proposes to build a solar powered community resource centers in all 8 selected villages for communities and committees to meet and exchange knowledge and experience. These centers will be used as centers for knowledge exchange between communities on sustainable natural resource management and Ecosystem based adaptation. The CHW will also provide first aid emergence services, training on human nutrition and other climate related matters important to the communities. These communities' resource centers will provide office space for Local government staff to meet with committee members. The operations of the resource centre will be funded from community fund which will be contributed by communities and other stakeholders operating in the respective villages. This will be a place where announcements and notices for respective village matters will be posted.

Anticipated activities for this sub component will include:

- Site selection
- Conducting EIA
- Construction of centre
- Connection of water system and solar power
- Furnishing
- Launching

*Output 5 Upgrade Karatu District metrological services and its network and infrastructure to the areas surrounding the three wards of Baray, Endamaghan and Mang'ola for provision of essential data for climate service and early warning systems*



In this project, staff of Karatu DC will be capacitated to be able to collect and use climate information in their decision. Climate information will be down scaled to reach the communities in the three wards of Baray, Endamaghang and Mang'ola. The information will also be translated in Kiswahili and local language and disseminated using appropriate media channels.

***PART II B: Description how the project provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund. (Refer to Annex 5)***

All five components of this project are designed to contribute to the environmental, economic, and social benefits especially at the community level whereby local farmers and marginalized groups (including women, youth and people with disabilities) will directly benefit through the improved capacity to adapt to the impacts of climate change. This project also complies with the Environmental and Social Policy of the Adaptation Fund whereby relevant risks are clearly identified, and mitigation measures are proposed.

#### **Environmental benefits**

The proposed project is expected to have multiple environmental benefits. The adoption of climate smart agriculture practices (which promotes soil and water conservation) and other best environmental conservation practices such as tree plantation will improve the natural vegetation cover thereby contributing to proper management of soil and water resources. In particular, tree planting will significantly contribute to the restoration of forests which were previously cleared for various reasons. To address water shortage challenge, the project will support the construction of boreholes and water supply system will assist in providing sustainable source of water for consumption and other uses.

Water will be managed through formation of Water Users Associations which among others will be required to ensure protection of river catchments. The establishment of integrated farming systems the project will contribute to nutrient cycling, soil fertility and crop pollination through honey bees. All these are essential for enhancing the resilience of the ecosystems and communities in the targeted project sites.

#### **Economic benefits**

The project has been designed to transform the economic situation of rural communities in the target Baray, Endamaghan and Mang'ola wards in Karatu District. The project will be supporting the availability of water which is a very vital resource in livelihood of the communities. With the availability of water in place about 300 camps and homestead are envisaged to keep poultry and rabbits, produce traditional and modern crops which will not only increase household food security but also income. The income of beneficiary households is expected to increase by at least 20% through implementing alternative livelihood strategies as explained in component 1 of the project. The activities to be implemented under components 1 and 3 will transform the economic status of communities from resource-poor and vulnerable to resource-rich and resilient to climate shocks. The implementation of livelihood-based enterprises such as beekeeping, poultry and rabbit keeping, cultivation of traditional and modern crops offers many economic benefits.

#### **Social Benefits**

As in most parts of Tanzania men and women have clearly defined socio economic roles based on

gender norms. For Hadzabe communities, gathering is a very important aspect of their life in food security and nutrition terms. The task of gathering for the family consumption falls upon women and children. Women contribution to wellbeing of communities is substantial.

All activities under each of the five components offer a wide range of social benefits with a positive multiplier effect to vulnerable and marginalized communities including women and girls. The project intends to improve rural water supply, foster food and nutrition security and supporting diversified livelihood systems including keeping livestock, promotion of cultural tourism and use of energy serving stoves and climate smart fuel.

This project intends to holistically increase family income through diversified resilient livelihoods activities and it will promote year round production for family food consumption and surplus to address other family needs and necessities. It is also expected that families will be able to invest in their own social development issues such as education, and health care issues. All these interventions have multiple benefits and contribute positively to the existing social systems in Karatu addressing climate driven social and gender related problems.

Women and youth participation in decision making will be promoted throughout the project implementation particularly at project management committee level through Community adaptation committees that will be formed with representation from both men and women members. Youth participation will be encouraged when targeting project beneficiaries. An inclusive project implementation manual will be developed. Executing entities will be made aware of the importance of inclusiveness.

Indirect socio-benefits of this project will also be observed by women and girls through raising their income and build their climate adaptive capacities, such that they will gradually transform from norms and traditional systems which create social, economic and political barriers. The observed malnutrition challenges will also be tackled through various output activities of this project especially activities under component 1, 2, 4 and 5.

Women and children that are known to be highly vulnerable groups of communities will be specifically targeted by the project to assure their participation in all project activities. Some activities of the project are specifically targeting women and vulnerable groups. The proposed project targets supporting 60% women. The water availability will also have the positive side effect of reducing women's and children's burden of fetching and collecting fuel wood. Time saved for women could be spent on other productive and reproductive roles.

The project interventions are expected to provide solutions to vulnerable communities as the benefits are multifold and are related to economic empowerment. Access to clean and safe water within shortest distance will assist in solving social problems. Sub project that aim at improving food security and income generating will make communities more resilient to climate change. All five components are beneficial to communities and hence increase harmony.

During implementation of this project appropriate measures will be undertaken to mitigate the environment and social impacts in line with the Environmental and Social safe guard of NEMC and in compliance with the Environmental and Social of the Adaptation Fund. Gender considerations will be integrated during implementation of the project and the project will be monitored, evaluated and reported using data disaggregated targets and indicators as stipulated in NEMC and Adaptation Fund Gender Policies. More information is provided in Annex 5.

***C: Describe or provide an analysis of the cost-effectiveness of the proposed project / programme.***

***a) Cost effectiveness from a technical perspective***

Flow of funds from Adaptation Fund for Tanzania is considered to be catalytic for funding for scaling up adaptation of climate change by adopting to sustainable land, water and natural resources management including improved rural water management; improving access to weather and climate information through targeted technical and institutional capacity development and on the ground activities capitalizing of deep natural resource indigenous knowledge of communities.

The KARAHADA project is designed to build on the previous work done by government institutions, civil society organizations and donors in Karatu District. It also contributes to ongoing work in climate change adaptation and the project intends to improve efficiency of investments done in water, agriculture, tourism and energy sectors. The interventions are designed to support adaptive capacity of Hadzabe and Datoga communities through sustainable use of natural resources. These interventions has a significance of generating impact on alleviation of rural poverty, improvement of ecosystem services and reducing environmental degradation, accruing long term benefits. The project is cost effective in the sense that, staff from field to district level has experience in implementing similar activities which have resulted in obtaining optimum results which benefit communities directly and indirectly in a sustainable way.

This project will build on the experience of other Adaptation Fund projects which are currently being implemented in different districts of Tanzania. They include: Enhancing Climate Change Adaptation for Agro-Pastoral Communities in Kongwa District, Bunda Climate Resilience and Adaptation Project, Strategic Water Harvesting Technologies for Enhancing Resilience to Climate Change in Rural Communities in Semi-Arid Areas of Tanzania (SWAHAT) and Enhancing Climate Change Resilience of Coastal Communities of Zanzibar.

This project will adopt an enhanced direct implementation approach using force account modality which is an efficient and new cost-effective way to deliver concrete adaptation projects with direct benefits at the local level in the United Republic of Tanzania. This modality allows for local technicians to be given contract to implement infrastructure projects by sourcing building materials and paying for contracts. Also the project will benefit for from and self-reliance (ujamaa) spirit of working together for benefit of all communities. These two approaches are time sensitive, less costly and uses a top-down approach of designing and implementing adaptation project. This is a more efficient and effective way of implementing projects as opposed to implementation from central government, usually from ministry headquarters, facilitated by multilateral-implementing entities, limiting local ownership during design and implementation.

This project targets to benefit about 3000 Hadzabe and Datoga community members directly and 30,000 communities indirectly (60% women and 40% men) The project is expected to yield concrete outputs including 10 solar pumped boreholes with complete supply and micro irrigation systems; 8 operational furnished community resource centers; 20 ha with 10 FFS, 4 tree nurseries, 1,500,000 planted trees, Restoration of 100 hectares. Provisional of 1000 beehives with 2 sets of processing plants and packaging materials, 250 knowledge management materials and an automatic weather station

For sustainability purposes the project will facilitation communities to gain skills to undertake livelihood activities including marketing of related by products, 80 nature and livelihood based community groups will be established and supported to operate during implementation phase and beyond. Community institution comprising of traditional leaders, men and women and youth will be strengthened for sustainability purposes. 14 Karatu District Councils will be trained to support community to undertake resilient livelihood activities during project implementation and beyond.

***b) Cost effectiveness from a project management perspective***

The Project Management Unit (PMU) is expected to be hosted at Karatu District Council headquarters. Most project staff will be sources from Karatu District Council and HKC. For quality assurance purposes the proposed project will contract a local Gender and Climate change expert to advise the PMU and EE on understanding of climate change and gender dynamics of the project throughout implementation. The use of Government buildings and KDC and HKC staff will cut down the project running cost by 25%-30%.

**Table 4: Project Cost and Benefits**

Component	Project Cost (USD)	Concrete adaptation benefits	Avoided losses	Trade offs
<p>1. Developing integrated climate resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola</p>	<p>508,055</p>	<ul style="list-style-type: none"> <li>• Reduced vulnerability to climate change impacts</li> <li>• Improved food and nutrition security</li> <li>• Improved management of forest ecosystem</li> <li>• Reduced income poverty</li> <li>• Enhanced resilience to climate change impacts</li> <li>• Easy and reliable access to domestic water</li> <li>• Availability of water for livestock and crop production</li> <li>• Improved food availability</li> <li>• Increased food and nutrition security</li> </ul>	<ul style="list-style-type: none"> <li>• Food and nutrition insecurity</li> <li>• Extreme poverty</li> <li>• Ill health</li> <li>• vulnerability to climate change impacts</li> </ul>	<ul style="list-style-type: none"> <li>• Deforestation</li> <li>• Increased vulnerability to climate change</li> <li>• Increased cost of adaptation for the government to provide food and other social amenities to vulnerable communities</li> </ul>
<p>2. Enhancing climate resilient rural water supply system in vulnerable Hadzabe (gatherers and hunters) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghan Wards in Karatu District</p>	<p>918,102</p>	<ul style="list-style-type: none"> <li>• Reduced time for communities to collect water, hunt and gather</li> <li>• Increased boma income/assets</li> <li>• Improved experience and knowledge on water resource management</li> <li>• Increased resilience to impacts of climate change</li> </ul>	<ul style="list-style-type: none"> <li>• Food and nutrition insecurity</li> <li>• Loss of crop and livestock produce</li> <li>• Loss of boma income</li> <li>• Increased poverty levels</li> <li>• Reduced resilience to climate change</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of reliable and sufficient source of water which increases government spending</li> <li>• Increase government spending of humanitarian food supplies for communities that have affected by loss of water and food</li> </ul>
<p>3. Improving climate change</p>	<p>128,569</p>	<ul style="list-style-type: none"> <li>• Increased natural</li> </ul>	<ul style="list-style-type: none"> <li>• Improved reporting</li> </ul>	<ul style="list-style-type: none"> <li>• High loss of</li> </ul>

Component	Project Cost (USD)	Concrete adaptation benefits	Avoided losses	Trade offs
resilience of ecosystems and non- timber products for selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District		resource management capacity <ul style="list-style-type: none"> <li>• Increased forest functions and services</li> <li>• Increased boma income</li> <li>• Enhanced resilience to climate change</li> </ul>	and referral of health issues to health facilities <ul style="list-style-type: none"> <li>• Improved information on climate change related disease outbreaks</li> <li>• Vulnerability to climate change impacts</li> <li>• Food and nutrition insecurity</li> <li>• Loss of Life</li> </ul>	biodiversity <ul style="list-style-type: none"> <li>• Increased cost of adaptation for flood and drought victims</li> <li>• Increased cost of providing food for hunger victims</li> <li>• Increased cost of health services for victims of extreme weather events</li> <li>• Land degradation</li> </ul>
4. Undertaking studies on climate risks and vulnerability with a particular focus on most vulnerable sectors including water, agriculture, nutrition in three wards of Baray, Endamaghan and Mang'ola in Karatu District	129,734	<ul style="list-style-type: none"> <li>• Understanding climate risks and adaptation options</li> <li>• Improved awareness and knowledge on climate change impacts</li> <li>• Mainstreaming gender and climate change into District plans , projects and programmes</li> <li>• Building capacity of KDC staff to make informed decision and supporting climate change adaptation and options for adaptation</li> <li>• Reduced vulnerability to climate related incidences</li> <li>• Increased resilience to climate change effects</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced adaptive capacity</li> <li>• Increased vulnerability</li> <li>• Degradation of natural resources</li> <li>• Loss of livelihood</li> </ul>	<ul style="list-style-type: none"> <li>• Poor planning and implementation of climate change interventions</li> <li>• Increased government spending to provide humanitarian services to vulnerable communities</li> </ul>

Component	Project Cost (USD)	Concrete adaptation benefits	Avoided losses	Trade offs
5. Building institutional capacity of Karatu District Council staff and Hadzabe and Datoga (blacksmith) communities in planning ,implementation of climate change adaption actions	434,186	<ul style="list-style-type: none"> <li>Improved capacity of Local Government Authority and communities to plan and implement resilient climate adaptation actions</li> <li>Improved coordination of climate interventions at local level</li> <li>Increased capacity to communicate project results and key lessons learnt</li> <li>Increased resilience to climate change</li> </ul>	<ul style="list-style-type: none"> <li>Increased vulnerability</li> <li>Inability to predict future climate change impacts</li> <li>Loss of livelihoods</li> <li>Food and nutrition insecurity</li> <li>Abject poverty</li> </ul>	<ul style="list-style-type: none"> <li>Increase numbers of victims of effects of climate change as a result of Local government and community poor planning and limited preparedness</li> <li>Reduced adaptive capacity of communities</li> <li>Increased adaptation cost</li> <li>Failure of adaptation interventions as a result of not integrating climate change action into District of plans and budgets</li> </ul>

***D: Describe how the project is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.***

The project being proposed here reflects communities, district and national issues and therefore is consistence and in -line with national vision for sustainable development, policies, plans, strategies, programs and actions. For instance this project is well reflecting top most five priorities (adaptation contributions) listed under the current Nationally Determined Contributions, the NDCs commits to : Up-scaling the level of improvement of agricultural land and water resources management; Increasing yields in an environmentally sustainable way through inter alia climate smart livelihood interventions; providing accessible mechanism for vulnerable communities such Hadzabe (hunters and gatherers) and Datoga (Blacksmith)against climate related shocks; and strengthening knowledge systems, extension services and water supply and health infrastructure to target climate actions, including through the use of climate services and traditional knowledge.

For water related contributions, the NDCs indicate to: promote integrated water resources development and management practices and development and sustainable exploitation of groundwater resources. For livestock actions, the NDCs intend to promote climate resilient traditional and modern knowledge for sustainable management systems and practices; enhance climate resilient livestock infrastructure and services, promote

livelihood diversification of livestock keepers; and Increasing livestock production through climate smart livelihood agriculture interventions. For ecosystem and forestry related commitments, the NDC will be safeguarding the ecosystem services, including through the promotion of alternative livelihood options to forest dependent communities. Therefore, all five components of this project and their output activities are strongly supporting implementation of the mined Contributions (NDCs, 2021) and the National Climate Change Response Strategy 2021 as all of them are consistency with the Adaptation Contributions.

In addition, this project is also well reflecting top most three adaptation priorities listed under the National Adaptation Programme of Action (NAPA, 2007), reflects the first and second priority sectors identified under the intended Nationally Determined Contributions (INDCs, 2014) and the National Climate Change Response Strategy (URT, 2021) that are most vulnerable, which need urgent and intergrated adaptation measures. The project is also in consistency with the Tanzania Development Vision 2025, National Five-Year Development Plan (FYDP) III (2020/2021- 2026/2026), the First and the Second National Communication submitted to the United National Framework for Convention on Climate Change (UNFCCC) the National Strategy for Growth and Poverty Reduction (MKUKUTA II), National program under the Tanzania Social Action Fund (TASAF). The Roadmap of the National Adaptation Plan (NAPs) Karatu District Strategic Plan (2017/2018- 2021/2022). All these national and district documents take account and recognize the challenges and negative effects posed by climate change. In this way there is a need to implement climate actions at local levels, where vulnerable people, particularly women and children who suffer the most and are now being forced into deeper poverty challenges as a result of increased climate vagaries.

This project is also linked to sustainable Development Goals (SDGs); particularly SDG 1: End poverty in all its forms everywhere; SDG 2; End hunger, achieve food security and improved nutrition, and promote sustainable agriculture; SDG 3: Ensure healthy lives and promote wellbeing for all ; SDG 5; Achieve gender equality and empower all women and girls; SDG 6; Ensure availability and sustainable management of water and sanitation for all, SDG 13; Take urgent action to combat climate change and its impacts (in line with the United Nations Framework Convention on Climate Change); and SDG 15 Protect, restore and promote sustainable use of terrestrial ecosystems., sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

In the same way, the proposed project is in line with the Agenda 2023; the Africa we want which promotes issues of sustainable and inclusive economic growth and to take actions to reduce the effects of climate change in rural areas. Additionally, the linkages to the national and sub national/district policies and other poverty reduction strategies can be easily seen at each component.

The project is also consistency with the current Karatu district plans, which thrive to reduce poverty among communities in this climate impacted area, a strategy to introduce poultry and rabbit farming, production of traditional and modern crops will ensure food and nutrition security and reliable income and resilience to climate change. The project will support implementation of this strategy and a plan is sought to have satisfactory extension services.

***E: Describe how the project meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc. and complies with the Environmental and Social Policy of the Adaptation Fund***

Aligned with the requirements of the 2013 Environment and Social Policy of the Adaptation Fund (see Section K), the implementation of this project will be governed by several national guidelines, policies and regulations including National Environmental Policy, 1997, National Water Policy, 2002, Forestry Policy 2002, the



National Environmental Management Act 2004, Water Resource Management Act, 2009, National Agriculture Policy 2013, Livestock policy 2004, The National Gender Policy, 2002, Community Development Policy, 1996, The Plant Health Act No 4 of 2020 which provides for control of, phytosanitary measures, importation and use of plants and plant by products. The Supply and Sanitation Act, 2009, The HIV and AIDs (Prevention and Control) Act of 2008, Occupational Health and Safety Act, 2003.

The project will also adhere to National strategies such as: National Climate Change Response Strategy 2021, National Biodiversity Strategy and Action Plan (NBSAP) 2015-2020, Water Safety Plan –Resilient to Climate Change for Rural Water Supply Services (WSP-RCC-RWS) 2015, Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulation (2005) and Water Quality Management Standards Regulations 2007. Agriculture Climate Resilient Plan 2014-2019

The National Environmental Management Act 2004 have provisions that protect and enhance the quality of natural and cultural environment of Tanzania for the benefit of both present and future generations, and assures all citizens a sound and safe environment adequate for their health and wellbeing. It is the overall guiding document on administration and management of environment matters and social safeguards. It provides for legal and institutional framework for sustainable management of environment in Tanzania. It outline principles for management, impact and risk assessment, prevention and control of pollution, waste management, environmental quality standards, public participation, compliance and enforcement. Sections 82(1) and 230(2) (h) and (q) of EMA Cap.191 Of 2004 EIA and AE Regulations, 2005 provide for the procedures to conduct EIA and Audit; and identifies/categorizes projects which are mandatory and non – mandatory to conduct projects environment.

According to the National Environmental Management Act (2004) and the Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulation (2005) and Sectorial Regulations and Guidelines of the United Republic of Tanzania, this project do not do not fall within the First Category of projects that require full EIA, as the proposed interventions of the project possess no significant negative impacts on the environment and to the community. There is no activity under any component which require full EIA as magnitude of impacts are small and location of the interventions to do not require further assessments. However, Impact Assessment (EIA) and Environmental Audit (EA) Regulation (2005) will guide implementation of ESMP during executions of project activities under component 1 to component 4.

**F: Describe if there is duplication of project with other funding sources, if any.**

There is no any duplication of this project with other funding sources. This project will rather complement Any efforts geared to foster adaptation actions in Karatu district for climate resilient livelihoods thematic area. Preliminary meetings and discussions were conducted with various stakeholders at village, ward, division, district and national levels to confirm the existence of potential synergies of proposed activities with various national development and climate action, which have suffered absence of funds. The AF resources will therefore build on ongoing district development programming as operationalized through its investment and operational budgets. Karatu district like any other Local governments receive funding from the national government and ministries through core programmes as well as through more targeted projects (including donor -supported projects). The

proposed project will build on core operational funding delivered to the district through the departments of agriculture, planning, environment, forestry, tourism, beekeeping and Rural Water Supply Agency (RUWASA) in Karatu. This will also build on more targeted projects or initiatives being implemented in Karatu particularly those funded by adaptation fund such as; Bunda Climate Resilience and Adaptation Project currently being implemented in Bunda Districts; Enhancing Climate Change Adaptation for Agro-Pastoral Communities currently being implemented in Karatu District, Enhancing Climate Change Resilience of Coastal Communities of Zanzibar currently being implemented in Unguja and Pemba Islands.

Other Programmes and initiatives that are currently being implemented include; Livestock Development in collaboration with IFAD which work with livestock keepers, agro-pastoralists and other land users in Tabora, Shinyanga, Ruvuma regions to support integrated dry land-based livelihoods including access to markets and income generation while providing ecologically sound strategies for resolving conflicts between farmers and pastoralists; Institutional Support for Climate and Seasonal Weather Information for Adaptation Planning in Mwanza and Same districts, Northern Tanzania the project funded by the African Development Bank (AfDB), had concrete adaptation intervention which used Force Account to deliver activities at local levels. Therefore, AF resources under this project are expected to build synergies on the ground particularly for component 1, 2, 3 with activities related livelihood improvements and ecological restorations, rather than duplication of resources. However, there is no geographical duplications with the sited donor funded project. There is no fund which has been allocated to implement this project, except this application to the Adaptation Fund.

***G: If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.***

Issues of learning and knowledge management including dissemination of lessons learned are captured under component five; which aims to strengthen local institutional capacity for effective adaptation strategies and reduce risks associated with climate-induced socio-economic failures in Karatu district. Hence, this project will utilize a fraction of the requested fund to build core knowledge capacity and to disseminate results and outcomes including sharing lessons which will be generated by the project. Under Activities 5.1.3, 5.1.4, 5.2.1, 5.3.1 and 5.4.1 where issues of learning, trainings and communicating results will be effectively implemented. In this way, issue on climate change education and awareness raising will be well addressed. Participatory approaches and community involvement through volunteering to implement project activities, they're in-kind contribution, trainings, tour and visits and on-site demonstrations will be conducted as part of learning and knowledge management. Sharing project results and communicating outcomes at various community and inter-village levels will also be conducted under component five. Positive project results and outcomes will be also communicated and disseminated at regional, inter district, national and international levels through progress reports, seminars, meetings, workshops, project briefs, various publications in peer reviewed journals. Other means such as newspapers, radio and video documentaries, techniques and achievements will be used as well to share and communicate lessons and outcomes of the project. Moreover, various technical training under short term basis will be conducted as part of knowledge management.

***H: Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.***

***a) Consultation during development of the KARAHADA project proposal***

Stakeholder consultation for this project was done in three phases. This include consultation with Hadzabe (hunters and Gatherers and Datoga (blacksmith); consultation with Local Government officials and leaders and consultation with other actors who have been working in Karatu District or are currently working in Karatu. These consultations were preceded by national level consultation where representatives from Government Ministries and Agencies, Academia and researchers were consulted. The aim of this stage of consultation was to present the opportunity for this round of funding and agree on the sectors/ Districts to implement projects which will support to enhance resilience of Tanzanians. This meeting was in July 2021. where participants were in consensus that Karatu district be one of the targeted District and in particular the Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities. The list of participants to this workshop is attached as Annex 2

Community consultations were conducted from 12<sup>th</sup> -17<sup>th</sup> July in Karatu. This participatory process was complemented by field visits to different Hadzabe (hunters and gatherers) and Datoga (blacksmith) camps and homesteads. The areas visited include Quangdeng Dumbachan, Mbuga Nyekundu and Mikocheni with the aim of getting more physical observations and eye witness on the full picture of the landscape, socio – economic interactions and vulnerabilities, needs and challenges of the these communities. The consultations assisted in soliciting viewpoints and to better understand the problem, it's root causes and potential interventions that would achieve greater resilience to climate change shocks in Karatu district and for Hadzabe and Datoga communities. Consultations were done to women and men separately and then joint consultations were done to give voice to the marginalized group or individuals. These meeting for pre-designing of this project assisted to perform quick analytical scanning of gender and environmental related issue as well as qualitative analysis and reviews on how climate change affects woman and men differently to facilitate proposing gender sensitive actions. The list of community members and traditional leaders consulted is attached as Annex 2.

The project formulation team conducted a two intra – and inter-departmental meetings in the district with senior officials and technical experts in Karatu as well as at Hakikazi Catalyst offices in Arusha to share and exchange views on the proposal, and to jointly identify and align priorities for the development of the full proposal. Thereafter, a series of virtual consultations among key technical and legal staffs between Karatu district council and Haki Kazi Catalyst were also conducted, The district and council leadership and head of departments were also involved in site selection of the project, Relevant face to face virtual consultations on processes involved experts from accounting, procurement, planning, agriculture, water, tourism forestry and beekeeping, land use and settlements, livestock, environment and cooperatives sections. The meetings also involved the representatives of NGOs working in Karatu. Because of COVID 19 pandemic follow up consultations were made by phone. This included consultation with Division, ward and village leaders (the list of district experts and other partners involved in the consultation process is attached as Annex 2).Further consultations continued with the staff of NEMC where the proposal was evaluated and refined to align with development polices and plans and strategies of the United Republic of Tanzania and with that of the Adaptation Funds.

**Figure 4: Project Formulation Team, Technical Experts from Karatu District Council in one of technical sessions as part of consultative process conducted in Karatu District Headquarters.**



**Figure 5: Discussions with Hadzabe (hunters and gatherers) community members**



**Figure 6: Datoga (blacksmith) young men at work.**



### Key suggestion and concerns from stakeholders.

- i) Stakeholders and beneficiaries from Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities, technical staff, from Karatu district council, government ministries, agencies and higher learning institutions indicated factors to be taken into consideration for successful planning and implementation for KARAHADA project :
- The project must adopt a use a **participatory approach** best practices from design to project implementation. This can be achieved by applying lessons from community experience and local knowledge. This in turn will assist in attaining the main goal of the project “increasing resilient of vulnerable communities at village level”.
  - Almost 100% of all stakeholders and individual experts proposed to apply **Force Account Implementation Modality** from the design to implementation stage of this project. Project. The approach is being widely applied by the Government of the United Republic of Tanzania and it has shown success in terms of value for money and project completion rates. This modality is now being adopted by other actors particularly for infrastructure development projects. This modality is viewed as cost effective and creates a sense of community ownership and practical involvement of communities by making themselves available for physical works with modest payments or with no payment and in kind contributions through contribution of building materials such as collection of gravels, sands and willingness for working in groups.
  - The project should be hosted at Karatu district headquarters and use **existing office accommodation** and work with district technical staff together with Haki Kazi Catalyst staff. The Finance should be channeled through a special account guided by the Government Final Standard Operating Procedures.
  - The District Development Plan (DDP) is a key **local planning process** that the project needs to align with. This could be achieved by locating the project implementation unit at Karatu district and district planners will be part of the Project Steering Committee.
  - Although the entire community at the project site is vulnerable to climate change impacts, the project proposal preparation team and all stakeholders agreed that it was more human and sensible to have **provisions for supporting vulnerable households** who are most vulnerable than others such as youth/ children female headed families, and people with disability and those with special needs.

Stakeholders discussed and analyzed project interventions and pointed that, project components should be addressing climate change risks, particularly on issues related water security and water resources management food security, environmental and ecosystem management, and strengthening community and local government institutions for planning and implementing climate change resilient interventions as urgent needs and priorities. Therefore, they all agreed that;

- The proposed activities/interventions for the project components in the approved full proposal are **urgently needed** and therefore reaffirmed the proposed project components, expected concrete outputs, indicated activities as well as the expected project outcomes.
- For the interventions related to food security and income generating, the stakeholders and direct beneficiaries advised this project to adopt an implementation modality which supports both **on farm and off-farm livelihood activities**.
- Since Karatu district has in place a plan to diversify livelihood for its community members, stakeholders and district experts agreed that, the proposed interventions under component 2 should consider activities to facilitate **availability of traditional and improved seeds and stock**.
- For improvement of beekeeping interventions for food security and income generation, stakeholders requested that



**modern beehives** are used to increase honey productivity. These best practices can also be adopted by other neighboring communities.

**Table 5: Some perceived challenges and possible solutions for project interventions as thought by the community and Karatu District Council representatives**

s/n	Challenge	Solution
1.	Water scarcity and lack of water infrastructure leading to inadequate water supply	<ul style="list-style-type: none"> <li>• Invest in exploration and invest and extraction of underground water resources</li> <li>• Improve water availability through drilling of boreholes and installation water supply system</li> <li>• Promote sustainable water use</li> </ul>
2.	Food scarcity, food insecurity and Malnutrition	<ul style="list-style-type: none"> <li>• Provision of humanitarian food support at Village community centres</li> <li>• Promote use of traditional and improve crops varieties</li> <li>• Promotion of beekeeping practices,</li> <li>• Promote climate change – resilient Promote. climate change–resilient livestock practicesSuch as Poultry and rabbit farming</li> </ul>
3.	De forestation	<ul style="list-style-type: none"> <li>• Mainstream climate change into forest management practices in all villages of Karatu District.</li> <li>• Promote alternative livelihoods in villages particularly targeting women and youth groups/the most vulnerable community groups.</li> <li>• Awareness on Participatory Forest Management</li> <li>• Tree planting</li> <li>• Law enforcement</li> </ul>
4.	Poor health services	<ul style="list-style-type: none"> <li>• Enhance capacity of public health care systems.</li> <li>• Improve disease surveillance and design of disease – control at health centers and village dispensaries.</li> <li>• Improve knowledge of climate change – related occupational health risks.</li> <li>• Provision Community Health Insurance</li> </ul>
5.	Limited information on climate change, impacts and associated risks including limited knowledge and information of planning with climate change in mind	<ul style="list-style-type: none"> <li>• creating awareness on climate change</li> <li>• Sharing local knowledge and solutions</li> <li>• Building strong community institutions</li> <li>• Strengthening climate information services</li> <li>• mainstreaming climate change District Development Plans</li> </ul>
6.	Gender related issues	<ul style="list-style-type: none"> <li>• Promote gender equity and equality among communities in Karatu to address norms and traditional systems which expose women to struggle mostly with domestic issues and to keep domestic matters of families going.</li> <li>• Promote and implement alternative income diversification activities such as beekeeping, poultry farming, local chickens’ productions, Fruit tree planting, and home gardens for traditional crops</li> <li>• Promote awareness to encourage women and girls to participate in all stages of the projects implementations and meetings</li> </ul>

**Source: Field Visit 2021**

**Figure 7: Proposal development team visited one of the caves used by Hadzabe hunters and gatherers**



### **(b) Gender analysis**

At the stage of full proposal development, a gender scoping was done. Its findings were analyzed and discussed during consultations with Karatu district council staff and also with other partners working in Karatu. As it is indicated at section 1.2.2 inequality related to gender, exclusion of those with disabilities and income inequality are some of the factors that contribute significantly for vulnerability of women and disabled groups to the current and future climate change impacts and even structural inequality. Such inequality predisposes women and other marginalized groups in Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities especially widows, subjects vulnerable women and girls to negative, even harmful, coping strategies, including risky behaviors such as transactional sex.

The analysis on gender also indicates traditional gender roles in Karatu confer more powers to men over women, but this situation does not relieve women from burdens of house work and looking for food and water. This is mainly due to prevailing social, economic and political barriers. As a result, women constitute approximately 60 percent of rural people living in extreme poverty in Karatu District. The district is, relatively more vulnerable to climate change- induced risks, when compared to approximately only 40%



percent for men. In addition, their heavy workload that combines exploitative agriculture, household and domestic works as well as earning from nonfarm activities such as intensive tasks of child-care, fetching water and food from afar distances, as well as food processing in a context where these services are either inadequate or do not exist, are multiple gender disadvantages which trigger the intergenerational transfer of poverty among women groups in the district.

Therefore the proposed actions in this project should ensure early sensitization of all key decision-makers and communities to the need for and benefits of women's equal participation in activities of project components; specify targets for female and male participation at meetings and training events in order for the meeting/training to reach quorum, the target for women/men ration should be encouraged to be no less than 50/50 where possible and develop implementation plan which ensures targets for male /female participation in project activities to be at least 40% women. *See annex 1 summary on project component and gender analysis*

***Justification for funding requested, focusing on the full cost of adaptation reasoning***

This project is considered as main climate financing to build resilience of vulnerable Hadzabe and Datoga communities. The project aims at supporting 3,000 most vulnerable community members directly and about 30,000 communities will also benefit indirectly. The project will support the beneficiaries to transit from hunting and gathering only to a more diversified livelihood system. 60% of beneficiaries will be women and girls and 20% will be youth.

This project intends to further improve the capacity of the Karatu district government both lower and upper Local Government level by involving all relevant stakeholders. A training needs assessment will be carried out to identify required capacities for effective and efficient implementation of project and adaptation planning capacity with a focus on climate resilience of the vulnerable Hadzabe and Datoga communities particularly in agriculture, natural resource, water, renewable energy, livestock, tourism and governance sectors.

The AF - NEMC Karatu Climate Resilience and Adaptation project for Hadzabe and Datoga Communities – KARAHADA identifies five main components:

1. Enhancing integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola in Karatu District
2. Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gathered) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District
3. Improving climate change resilience of ecosystems and non- timber products for selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District
4. Undertaking studies on climate risks and vulnerability with a particular focus on most vulnerable sectors including water, agriculture, and nutrition in three wards of Baray, Endamaghan and Mang'ola in Karatu District
5. Enhancing capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang'ola to design and implement climate change adaptation interventions and improve level of understanding of climate change related issues

Planned activities under Adaptation Fund on climate adaptation and sustainable management of natural resources will contribute to adaptation to climate risks for vulnerable Hadzabe and Datoga communities while building resilience and complement Tanzania's investments in Karatu district. Best practices from this AF project will be replicated in other districts in Tanzania and at Regional level.

***J: Description on how the sustainability of the project outcomes has been taken into account when designing the project***

The project's sustainability will be supported by emphasizing the active participation and other stakeholders in decision making and implementation of the project's activities and strengthening the institutional and technical capacity at community and district levels to ensure that stakeholders have adequate knowledge and skill to maintain the benefits of the project's interventions firmly in the local communities. By engaging, communities in the design and implementation of the project and creating WUAs and Cooperative societies and community groups Farmers/ beekeepers /livestock/tree planting Groups and community based enterprises; the KARAHADA project will empower and build capacity of local people to continue sharing local knowledge and adapting to climate change risks. Community ownership will also ensure that the environmental gains are not reversed.

The proposed investment matches with government priorities set out in key national policy documents including the vision 2025, the third five years development plan, National Climate Change Response Plan strategic plan of Karatu District Council and the NAPA. Alignment with national priorities ensures Government commitment to project objectives during and beyond implementation. The operation of the project at the district authority headquarters will also ensure that district sectors and village level governments play a central role in terms of project implementation and ensuring sustainability through the irrigation of adaptation plans into district performance contracts to institutionalize and sustain community interventions.

The use of community animators to deliver project interventions will demonstrate the project's commitment to investing in local people and recognition that community members are best placed to lead the project implementation at the community level. The proposed components and interventions are rooted in the sectors that touch everyday life of communities in Karatu. By supporting adaptation measures to improve resilience to long-term and more sustainable solution to rural and vulnerable communities.

The proposed collective action, opportunities best practices, knowledge-sharing and communicating project outputs among departments, across sectors, districts and regions, and village communities in the district is viewed to accrue a disproportionately large benefit for life and livelihood quality improvement under the current and the expected future climate change effects, vis-à-vis the traditional and existing way of implementing development/adaptation projects using dis-integrated and isolated projects in the district.

The project will be implemented through the existing strong district institutions and village government structures by implementing their respective activities. Conduct technical trainings of trainers (TOTs) on maintenance and operation to selected communities members to ensure operations and maintenance of infrastructures beyond the project life time. For instance, activities under component 2 will also include training of selected members of Water Users Associations (WUAs) on operation and maintenance, revenue collection, group dynamics, accounting and financial management to ensure sustainability. Activities under component 1 and 5 will involve training of selected farmers on Farmer Field School (FFS) at Baray, Endamaghan and Mang'ola wards.

Equally, self - selected beekeepers will be trained on their maintenance and operation issues. For instance, it is designed here that, no beehives will be purchased for communities, rather experts and necessary workshop tools and equipments will be purchased and community members will

be equipped with practical knowledge on modern beehives and honey processing techniques, including maintenance and operations. Activities under component 3 will also promote sustainable environmental and forest management including tree planting. The proposed investment corresponds with Government priorities set out in the District Strategic Development Plan for Karatu District. The Secretariat Strategic Development plan (2016/2021) being implemented 6 District Authorities including Karatu District, key national policy documents including the vision 2025, the third Five Years Development Plan ( 2021/2022- 2025/2026), climate change response strategy 2021, NDCs 2021 and the NAPA 2007.

Alignment with national priorities ensures government commitment to project objectives during and beyond implementation. The operation of project through the District Authority Headquarters will also ensure that District, sector users at the district and village level and the regional governments play a central role in terms of project implementation and ensuring sustainability through the integration of adaptation plans into District and village plans to institutionalize and sustain community interventions. This provides greater opportunity for regional government in Arusha and Central government to scale up the project outcomes after phasing out of the AF funding and interventions, through sharing and communications of the lessons learned.

***K: Provide an overview of the environmental and social impacts and risks identified as being relevant to the project.***

**Table 6: Summary of identified environmental, social and safety issues.**

Checklist of Environmental and social principles.	No further assessment required for compliance	Risk and potential Impact	requirement	Management/ measures to address risk
<i>Compliance with the law</i>	Review has to be done annually during implementation of project to ensure compliance with change in law and regulation, also conformity with baseline condition set.	Risk: <b>low</b> ,  Potential impact: <b>High</b> , -workplace accidents -Child labor and women empowerment	-induction training, workplace awareness, provide personal protective equipment  -prohibit child labor and implement laws and regulations specifically Tanzania vision, 2025	-conduct detailed environmental and social impact assessment (ESIA) before starting with any activity in which EMP and monitoring plan will be implemented during project activities -Work closely with NEMC and other regulatory bodies -The full proposal will be compliant with all relevant national laws and regulation including the bylaws set by Karatu District and project sites.
<i>Access and equity</i>	Adherence to existing policy laws and regulations on gender equality and equity	Risk; <b>low</b>  Potential impact: <b>Low</b>  -Misunderstanding can arise during member selection of committee or employment	-Ensure highly motivated, skilled, and understanding members and employees /workers selected from different communities where local leaders/ government are to be consulted	-The project will ensure equitable access to project benefits by all community members.  -Involve the local community in decision making

<b><i>Marginalized and vulnerable groups</i></b>	No change in vulnerable groups observed and were consulted	<p>Risk: <b>Moderate</b></p> <p>Potential impact: <b>Moderate/High</b></p> <p>-Misunderstanding and discrimination may arise</p>	-Failure to consult marginalized and vulnerable groups may cause the project to overlook their needs and hence denying them access to project benefits.	<p>-Vulnerable groups have to be considered and be given chance to participate/ access the project activities and adhere to policies and strategies such as Tanzania Development Vision, 2025</p> <p>-Though during proposal development marginalized and vulnerable groups were consulted, more intense consultations will be done during implementation phase particularly during establishment of community institutions.</p>
<b><i>Human rights</i></b>	All rights are under control of National & international laws	<p>Risk: <b>Low</b></p> <p>Potential impact: <b>Moderate /High</b></p>	Not envisaged	The project will adhere to national and international human rights standards, policies, rules and regulations
<b><i>Gender equity and Women's Empowerment</i></b>	Counting of number of Men and Women involved in the project implementation	<p>Risk: <b>Moderate</b></p> <p>Potential impact: <b>Moderate/High</b></p> <p>-Failure to involve women in project implementations and decision making as well</p>	Establish a base/ procedure of involving women	-Gender will be mainstreamed in all project components
<b><i>Core labor rights</i></b>	Ensuring compliance with national and international labour laws and rights	<p>Risk: <b>Low</b></p> <p>Potential impact: <b>Moderate/ High</b></p> <p>-Recurrence of incidents and accidents</p> <p>-Misunderstandings between employees and employer</p> <p>-Workplace hazards</p> <p>-Child labor</p>	<p>-Investigate all accidents &amp; provide protective measure</p> <p>-Make employee to be member of trade union</p> <p>-Provide workplace protective equipment</p> <p>-Stop child labor</p>	<p>-The project will adhere to core labor rights during implementation of the project by involving government and its regulatory bodies like NEMC</p> <p>-Employee is a dedicated person to control all risk and accidents also to conduct training and awareness during project implementation.</p>

<b>Indigenous people</b>	Control for awareness of Immigrants	Risk: <b>Moderate</b>  Potential impact: <b>Moderate/High</b>  -Destruction of the project due to lack of awareness and involvement, strike and insecurity because they are skipped	-Involve the indigenous people in the project site for the project sustainability	-The projects' main target will be to address the needs of indigenous people for that to make sure they understand the positivity of the project
<b>Involuntary Resettlement</b>	Stop settlement in selected project implementation site	Risk: <b>Low</b> Potential impact: <b>High</b>	Not expected	The project design does not require involuntary resettlement.
<b>Protection of natural habitats</b>	Soil profile study during ESIA	Risk: <b>Low</b>  Potential impact: <b>High</b>	Project interventions should not lead to destruction of natural habitats	All project interventions will be conducted in a manner that leads to significant threat to natural habitats
<b>Conservation of Biological Diversity</b>	Consultation with Tanzania Forest Service Agency (TFS)	Risk: <b>Low</b>  Potential impact: <b>High</b>  -Introduction of trees can alter behavior of microorganisms, reptiles and birds life adaptation hence leads to loss of biodiversity	-Local tree species has to be planted rather than favoring exotic species -Follow regulatory rules	The sites for construction of rainwater harvesting reservoirs and dikes will be subjected to baseline assessment to determine existing species and assess any potential risk
<b>Climate change</b>	Not required	Risk: <b>Low</b>  Potential impact: <b>High</b>	Not anticipated	The project will contribute to climate change adaptation. No GHG emissions are anticipated.
<b>Pollution Prevention and Resource Efficiency</b>	Not required	Risk: <b>Low</b>  Potential impact: <b>High</b>  -Waste generation causing disease eruption -Oil spills leads to hydrocarbons pollution	-Follow waste management hierarchy and laws in place  -Use spill kits and conduct preventive maintenance on all vehicles and machines involved in project implementations	-Adhere to established national and international pollution standards. -Develop plan and procedures for waste management.  -Correct waste and dump in designated areas under government guidance

<b>Public health</b>	Health Screening for Malaria, Covid 19 and STD/STIs	<p>Risk: <b>Low</b></p> <p>Potential impact: <b>High</b></p> <ul style="list-style-type: none"> <li>-Emergence of respiratory diseases</li> <li>-Sexual transmitted diseases outbreaks</li> <li>-Water born diseases</li> <li>-Covid 19 transmission</li> </ul>	<p>-Provision of Personal Protective Equipment in project implementation</p> <p>-STD awareness</p> <p>-Boiling and chlorination drinking water</p> <p>- maintaining social distance, wearing masks and washing hands with running water particularly at camp sites</p>	<p>-The project design will ensure that public health is not adversely affected by following sanitation procedures</p> <p>-Abide with all requirements for Association of Tanzania for employees (ATE)</p>
<b>Physical and Cultural Heritage</b>	Not required	<p>Risk: <b>Low</b></p> <p>Potential impact: <b>Moderate/High</b></p> <p>-Deterioration of archeological sites without thorough and careful site selection especially during construction of water infrastructure</p>	Conduct ESIA identify all archeological and heritage sites	<p>Involve indigenous people during project implementation and ensure consultations with archeologists</p> <p>-Stop activities for the area where cultural heritage being identified and inform the authority.</p>
<b>Lands and soil conservation</b>	Soil profile study	<p>Risk: <b>Low</b></p> <p>Potential impact: <b>Moderate/High</b></p> <ul style="list-style-type: none"> <li>-Alteration and modification of soil profile and structure</li> <li>-Soil and land pollution/degradation</li> </ul>	<p>Ensure soil leveling at the end of the job</p> <p>-Soil grouping respect to structure and profile during striping and or pushing/dozing</p> <p>-Sensitize the use of fertilizer</p>	<p>The project will promote conservation of soil and land resources</p> <p>- Proper fertilizer and pesticides applications</p>

## PART III: IMPLEMENTATION ARRANGEMENTS

### PART IIIA: Project Management Arrangements

#### *The National Implementing Entity (NIE):*

The project will be implemented by the National Environment Management Council (NEMC). NEMC has a significant experience in implementing projects and programs of this nature, with dedicated unit for climate change adaptation and executions of the NIE mandate relate to the AF operations in the United Republic of Tanzania. The following are the implementation services that will be provided by NEMC under this project:

- Overall coordination and management of NIE functions and responsibilities
- Facilitate interactions with AF secretariat and other related stakeholders at global scales
- Oversight of project implementations and reporting on budget performance
- Quality assurance and accountability for outputs and delivery during project development, implementation and on completion phase;
- Receipt, management and disbursement of the AF's funds in accordance with the financial standards of the AF;
- Oversight and quality assurance of evaluation processes for project performance and ensuring that lessons learned/ best practices are incorporated to improve future projects in the United Republic of Tanzania; and
- General administration and support costs including legal services, procurement and supply management, IT and human resources management

#### **The Executing Entities: Haki Kazi Catalyst and Karatu District Council**

Karatu District Council and Haki Kazi Catalyst (HKC) will be the overall coordinators of the project, through the services of a project management unit (PMU), which will be staffed with a project coordinator, an assistant project coordinator, a project driver and a project accountant are referred here as project personnel and will be sourced from the existing staff within Karatu district council except the project coordinator will be sourced within the existing staff within NEMC. Strong participation of other District staff will be at project implementation level as activities involve cross- sectoral coordination. The project will also engage a local gender and climate change advisor for the purpose of providing support to PMU and liaising with PSC and NIE- NEMC.

There will be a project steering committee to be held at of Karatu District Council headquarters. The secretariat of the committee will be the PMU through the District Executive Director (DED) and the Executive Director of HKC. The members of project steering committee will be the DED of Karatu District Council, District Planning Officer, one representative from each of the following sector ministries: ministry responsible for Local governments, the ministry responsible for livestock, ministry responsible for agriculture, the ministry responsible for environment and climate change, the ministry responsible for forestry and natural resources. Other members will be an officer from the National Environmental Management Council (NEMC), one member from HKC, one from Tanzania Meteorological Agency, one member from RUWASA Karatu. Heads of Departments from Karatu District Council and HKC will be



invitees. The following table presents the list of proposed project partners.

**Table 7: Summary of analysis of possible project partners.**

STAKEHOLDERS	RESPONSIBILITIES
PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT(PORALG)	PORALG is mandated for Administration and Management of Regional Secretariats and Local government Authorities. PORALG will be responsible for Coordination of Regional and District Climate Change Interventions. PORALG will be part of the Steering Committee
VICE PRESIDENT'S OFFICE (VPO)	The Vice President's Office and the NDA to the Adaptation Fund and is the Focal Point to the UNFCCC. The VPO is also responsible for coordination and overseer of all climate change activities in Tanzania. Thus this project will use the VPO to ensure its implementation which contributes to the objectives articulated in the climate change strategy, NDCs, NAP and NAPA documents. VPO will chair the Steering Committee
MINISTRY OF FINANCE AND PLANNING	MoF will be responsible to ensure all project components and in-line with national development plans, visions and strategies. MoF will be part of the Project Steering Committee.
MINISTRY OF WATER	MW is responsible for water supply, water resources management and irrigation issues. This project will utilize.MW will be part of the Project Steering Committee
MINISTRY OF AGRICULTURE(MoA)	MoA is responsible for agriculture development issues in Karatu. All agricultural related activities will be implemented under MoAs guidance. MoA will be part of the Project Steering Committee
MINISTRY OF LIVESTOCK AND FISHERIES DEVELOPMENT (MOLF)	This project will utilize experiences and technical capacity of MoLF to implement livestock activities. MoLF will be part of the Project Steering Committee
ARUSHA REGIONAL ADMINISTRATION SECRETARIAT (RAS) OFFICE	Arusha Regional Administration Secretariat (RAS) office widely involved in a project design will be involved in the implementations and providing policy guidance to the management unit of the project. RAS will be part of the Project Steering Committee and various reports during the designing and implementations will be communicated to the RAS.
TANZANIA METEOROLOGICAL AGENCY (TMA)	Responsible for weather and climate related information, and will be key stake holder during the implementation and post implementation stages of the project. TMA will be part of the Project Steering Committee

<b>STAKEHOLDERS</b>	<b>RESPONSIBILITIES</b>
TANZANIA FOREST SERVICE AGENCY (TFS)	Tanzania forest service agency is seen as a potential and strategic stakeholder for tree planting, afforestation and ecological rehabilitation and restoration activities. TFS will be part of the Steering Committee.
RURAL WATER SUPPLY AGENCY- RUWASA (Karatu Office)	This is National Authority responsible for water supply in rural areas; RUWASA is a technical arm of the government for management and development of water supply infrastructures in rural areas. RUWASA in KARATU will be responsible to implement some activities related to underground water drilling and supply system activities.
HAKI KAZI CATALYST	Haki Kazi Catalyst is a key stakeholder for providing training and support for Karatu District Council. They have experience of building community institutions amongst Northern highlands tribes. They have worked in Karatu district in other projects. HKC will be part of the steering committee
LAKE EYASI OPEN SCHOOL AND HELP OTHER PEOPLE TO EXCEL TANZANIA FOUNDATION	This school offers integrated Post primary Education (IPPE) through Open and distance learning will be a key stakeholder in provision of training to communities. It will be used for tailor made courses as agreed by communities and stakeholders. The school has learning facilities and accommodation and provides health services to communities within lake Eyasi and beyond.
LOCAL NGOS, SOCIAL GROUPS AND CBOs	Non-governmental organizations, community-based organization are very few in number, and most of them are not active. However, few of them such as World Vision and Convoy of Hope operates in the project area. Informal and community-based organizations such as farmers, livestock and other social organizations exist in Karatu. These are key partners for developing and operate to the project. Additionally, are key beneficiaries of results and outcomes of the project.
PRIVATE SECTOR PARASTATAL AND GOVERNMENT AGENCIES.	This project will attempt to maximize linkages of beekeepers, farmers and livestock keepers, jewelers and black smith to markets and financial institutions and buyers of agricultural and non-agriculture products.
DIRECT BENEFICIARIES	Direct beneficiaries of the KARAHADA project are the vulnerable and marginalized communities in Karatu district, Particularly Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities. These are key stakeholders and will be widely involved widely during plan, implementation and monitoring of the KARAHADA project.

**Project Management Unit:**

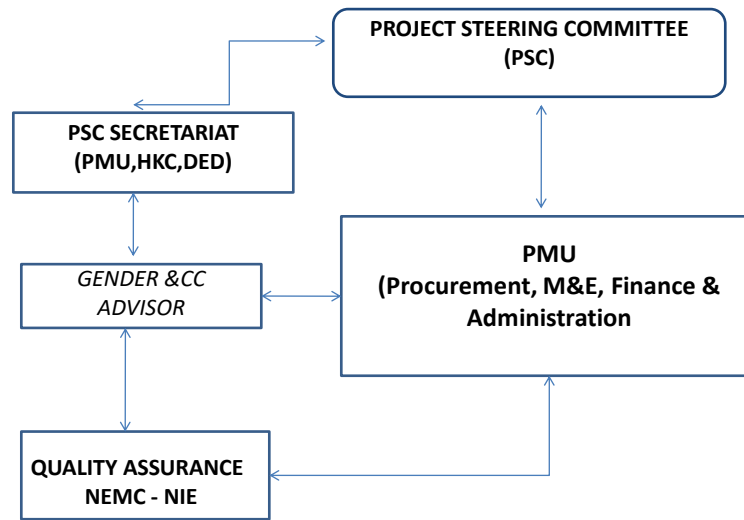
The project Management unit will be established and hosted at the headquarters of the Karatu District Council, which will be responsible for day to day management of the project activities and facilitate stakeholders and engagement. The PMU will be comprised with full time Project Coordinator (PC), full time M & E officer, full time financial and accountant (FA) and full-time driver and personal secretary (PS). The project coordinator main responsibility is to ensure that the project produces the results specified in the project document to the required standard of quality and within the specified constraints of time and cost. The annual work plan is prepared by the project coordinator, presented to the District Executive Director (DED) and to the HKC management and approved by the Project Steering Committee. However, NEMC will be in the steering committee to ensure its quality assurance role, provides and be part of the final approval. The project coordinator is also responsible for managing and monitoring the project risks initially identified and submit new risks to the Project Steering Committee for consideration and decision on possible actions if required and updates the status of these risks by maintaining the project risks log according to the AFs guidelines. The key functions of the PC will be the following:

- Oversee and manage project implementation, monitor work progress, and ensure delivery of outputs and within the specified constraints of time and cost as outlined in the project document.
- Report to Karatu district / HKC and PSC regarding project progress
- Develop and facilitate implementation of a comprehensive monitoring and reporting system
- Ensure timely preparation of detailed annual work plans and budgets for approval by the PSC
- Assist in the identification, selection of consultants and other experts as required;
- Supervise, coordinate and facilitate the work of the administrative/ technical team (consisting of the assistant coordinator, finance/ administration staff and consultants)
- Provide input to management and technical reports, and other documents as described in the M & E plan for the overall project. Reports should contain assessments of the progress in implementing activities, including reasons for delays, if any and recommendations on necessary improvements.
- Inform the Karatu district Authorities/ HKC and PSC without delay of any issue or risk which might jeopardize the success of the project.
- Liaise and coordinate with NEMC on a regular basis

*See Annex 3 for the summarized Terms of reference of the **Project Coordinator and Gender and Climate change advisor***

Because most activities are field work and will involve extensive services and training on FFS and FFFS, purchasing one field vehicle will be necessary in order to ensure that the PMU has required capacity to supervise and monitor project activities.

**Figure 8: The management arrangements for the project are summarized in the chart below.**



**PART IIIB: Describe the measures for financial and project risk management.**

**a) Financial and project risk management**

Describe the measures for financial and project risk management

The project anticipates various risks during the implementation phase as summarized in table 9. Strict precautionary measures for the identified financial and project risk management have been formulated to force those risks before they open. The risk categories are related to delayed time for project implementations and conflict management are pertinent risks of the proposed project. These are rated low, but those risks related with limited stake holder's involvement and natural and environment hazards are rated low to medium.

**Table 8: Risks and management measures.**

S/No	Identified Risks	Level of Risk - Low - L - Medium - M - High -H	Mitigation Measures
1	Competing interests between different stakeholders regarding accessing and use of project benefits and related resources	L	Establish multi-stakeholders' forum to discuss and deliberate on accessing and use of project benefits and related resources

2	<b>Local communities with limited participation and willingness to promote project initiatives</b>	L	Increase awareness campaign about the importance of communities at village community levels to actively participate and own the project , working with available set up of village government and community structures, active involvement of community organizations in project implementation
3	<b>High expectations for quick investments on the ground and resources beyond the available project resources</b>	M	Continue with awareness raising campaign to foster more understanding about the project objectives and activities under the components and implementation arrangements
4	<b>Project financial management</b>	L	The project will have clear separation of roles and strengthen accountability and auditing
5	<b>Delay in project implementation due to government bureaucracy, long and inefficient procurement processes</b>	L	Detailed Implementation Plans (DIPs) and Project Annual Plans (PAP) will be developed and be approved by both the Project Steering Committee (PSC) and National Implementing Entity (NIE). The project monitoring and evaluation plan will also be developed and implemented effectively.  Developing a procurement plan and use flexible procedures under HKC and Negotiate with Government at Karatu district to get special treatment that can fast-track implementation
6	<b>Limited Stakeholders Involvement</b>	L	All stakeholders were widely involved in all phases of the project from early stages of the project design, and will continue to be involved during implementation,

			<p>monitoring and evaluation.</p> <p>Involvement of key stakeholders at community level and inclusion of marginalized communities and groups such as women, local leaders, and community beneficiaries, Karatu DC and other public service organizations will facilitate to mitigating any risks related to stakeholders' involvement.</p>
7	<b>Low adoption rate of proposed innovations and adaptation technologies by communities</b>	M	Promotion and demonstration of new technologies and practices
8	<b>Financial Risk</b>	L	<p>There are clear financial management structures in the district that will be followed. These structures follow national laws and regulations governing public financial expenditures and transactions. Therefore, this project will adhere to all Generally Acceptable Accounting Principles (GAAP) regarding control, transparency and documentation, and have procedures and necessary infrastructure in place for an appropriate audit system by the Office of Auditor General or any other internationally accepted auditing firm.</p> <p>Approved regulations, procedures and guidelines on costs for services &amp; goods of the United Republic of Tanzania including the Adaptation Fund Standards will be strictly followed</p>
9	<b>Conflict Management</b>	L	Although it is not expected that any conflict will rise during implementation of this project, the NIE management and

			<p>conflict resolution structure/mechanism and its oversight and support role will be followed and respected to management any unforeseen conflict which may rise during lifetime of the project phases. Additionally, the PSC and the PMU will put strong early warning structure to foresee and management both financial and management risks before they happen</p>
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***PART IIIC: Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.***

Environmental and social impacts and risks have been identified for the proposed project (Section II K). Following this, a broader view of Environmental and Social Management Plan (ESMP) for the proposed project will be developed in collaboration with relevant stakeholders and authorities including NEMC Further detailed ESMP for anticipated intervention will be formulated during the inception workshop.

**Table 9: Anticipated Environmental and Social impacts and risks management**

<b>Environmental and social principle</b>	<b>Identified potential impacts and risks</b>	<b>Level H M L</b>	<b>Mitigation measures</b>
Compliance with the law	Some activities under component 1 and 2 which are currently not fully itemized/ designed there might be a risk that such activities will not comply with certain laws	L	Environmental and Social Management Plan (ESMP) will be prepared and will be adhered to monitor implementations of on the ground concrete activities such as water supply and micro- irrigation



<p>Access and equity</p>	<p>Given that the beneficiaries are rural people and marginalized poor families who are not often integrated in the village politics and decision-making processes, there could be a risk of insufficient access of the project resources by these people</p>	<p>L</p>	<p>Clear and transparent criteria have been put in place including selection of participants the trainings ad workshop. Measures have been put in place to enable this project to closely monitor all targeted beneficiaries to assure equal access of men, women, youth and the most vulnerable groups. Indicators in this regard will be included in the monitoring and evaluation plan</p>
<p>Marginalized and Vulnerable Groups</p>	<p>It is probable that project activities may exclude marginalized/ and vulnerable groups at various project sites or may have insufficient access to project resources and total involvement to execute project activities during implementations thus preventing them from accessing benefits – both in terms of resources and trainings</p>	<p>M</p>	<p>The prepared ESMP will be followed and monitored strongly during the implementation of all interventions to ensure all marginalized and vulnerable groups have adequate access to and benefit from the project interventions. In addition, the project design has ensured that benefits accruing from the project interventions – including technology transfer and awareness-raising activities – reach marginalized and vulnerable groups in the rural villages. The design of this project ensures that all components enhance the adaptive capacity of marginalized and vulnerable groups including</p>

			Transforming their social life to better levels especially for women and girls
Human rights	Project objectives promote basic human rights for equitable access to service and safe drinking water, access to food and quality and health environment	N/A	The proposed project respect and adhere to all relevant convections on human rights, national and local laws in relation to human rights
Gender equity and women's empowerment	It is likely that women will be inadequately represented during the implementation of this project, thus making the project not benefiting men and women equally	H	This project has put measures to include 60%o for gender consideration during implementation of all project activities under the five components. Fair and equitable selection of beneficiaries will be done and a list of all beneficiaries to each project activities will be maintained and monitored by the PMU and NIE on quarterly basis
Core labor rights	There is a possibility of communities/ beneficiaries who will be involved to implement activities using force account modality components 1, 2 and 3, to be exposed to the risk of minor and unforeseen accidents	L	The PMU will ensure compliance with the National and international labor laws and standards required relevant protection gears will be adequately provided
Indigenous peoples/local communities	Hadzabe and Datoga are considered as indigenous communities although they may also be categorized as local communities	M	ESMP will be monitored to ensure equitable access to project benefits and resources by local people and to the most extent communities at grass- root and relevant marginalized community groups are included in community consultation and during participatory planning activities
Involuntary resettlement	No identified risk	N/A	The project design does not include voluntary or any involuntary resettlement

Protection of natural habitats	There is a low risk that the interventions of concrete adaptation actions such as boreholes, rural water supply network, water tanks and micro-irrigation system could result in destruction of small areas of natural habitat.	L	ESMP has been prepared to monitor executions of such interventions. Activity based resettlement will be conducted during implementation phase
Conservation of Biological Diversity	Execution of concrete adaptation actions under components 1, 2 and 3 may	L	ESMP has been prepared to guide and monitor executions of such interventions. Activity based
	Result in negative impacts biodiversity		Mitigation measures has also been developed under the ESMP to be followed during the implementations
Climate change	No identified risk	N/A	None of the project activities will enhance significant emissions of green house gases
Pollution prevention and resource efficiency	No identified risk	N/A	The proposed project is visualized to cause no any harm or pollution.
Public health	No identified risk	N/A	The proposed project enhances the quality of public health. Indeed, through components 1, 2 and 3, contribution of this project to the general public health is clear. During the implementation of the project awareness rising activities will be undertaken on malnutrition related diseases, malaria and water related diseases including cholera and promote WASH issues through implementation of activities under component 1, 2, 3 and 4.
Physical and cultural heritage	None anticipated	N/A	No physical and cultural heritage sites which exists in the project sites
Lands and soil conservation	None anticipated	N/A	The ESMP recognized that, most of activities of this project is designed to enhance and promote conservation of soil and land resources. The continued degradation of the land resources will be reserved through small interventions for components 2 and 3

It should be clearly understood that, this project is designed in consistence with Environmental and Social Policy of the Adaptation Fund. However, the proposed activities will be reassessed and monitored as per the ESMP at every stage for potential social and environmental risks to ensure that potential adverse impacts are avoided, or where avoidance is not possible, minimized, mitigated, and managed. Although the AF's Environmental and Social Policy, a project can be categorized as either A, B or C, it has been revealed by initial discussions that, this project is unlikely to pose any significant adverse social and environment impacts. The already identified social and environmental risks are expected to be localized and minimal as most of proposed interventions are largely considered "green". Thus, this project is classified to be under Category B in the classification of the AF's Environmental and Social Policy.

### **Grievance mechanism**

Grievance mechanisms are proven tools in helping institutions to minimize harm to communities and ecosystems by protecting the existing rights, obligations and standards. The proposed project has included a mechanism to manage conflicts/grievances. The Project will utilize the existing grievance mechanism in the United Republic of Tanzania to allow affected to raise concerns that the Project is not complying with its social or environmental policies or commitments. It will be the responsibility of the Project Coordinator, PMU and the Karatu District Council/HKC to ensure that all relevant stakeholders are adequately informed of the grievance mechanism.

The United Republic of Tanzania has established grievance mechanism through the Employment and Labor Relation Act, 2004 and the Environmental Management Act, 2004 through the Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulation (2005) for all climate change related projects. Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulation (2005) inform and guide all Actors and persons affected by any projects on bringing forward and responding to stakeholder concerns.

In this regard, the Project Manager/executing partners (in this project the PMU at Karatu District Council Headquarters) are usually the first point of contact for any project-related complaints from stakeholders. The Project Manager and project team should respond promptly and appropriately to a complaint with the goal of avoiding escalation to the Higher Authorities for Stakeholder Safeguard- related Response.

The Project Coordinator can direct the complainants to write a letter explaining through relevant organs established from the village levels. The concerns can be submitted it to the District Executive Director' Office for Stakeholder Safeguard-related Response if the issues cannot be resolved at the project level. The PCr should advise complainants to provide complete information, so that the DED's Office can properly assess and address the complaint. If the DED's Office for Stakeholder Safeguard- related Response finds that the complaint is eligible, s/he forms a team composed of internal experts to investigate the case and propose options for the complainant to consider.

### **Grievance mechanism process**

The overall process of grievance handling will be as follows

- Community around the Baray, Endamaghang and Mang'ola wards will be sensitized about the GRM
- During operationalization of the GRM all stakeholders will be informed about how to register grievances or complaints using Complaint's Log form which is also available in Kiswahili, and the dispute resolution process, specifically about how the disputes will be resolved in an impartial and timely manner;
- NEMC in collaboration with Regional Secretariat and District Councils will oversee formation of Grievance Handling Committees including representatives of the community in the project area;
- The PMU will use local mechanism, which includes Village Government, Ward Executive Office, District Council, Regional Secretariat and NEMC. These levels will ensure equity across cases; and will eliminate nuisance claims and satisfy legitimate claimants;

- The response time will depend on the issue to be addressed but it should be addressed with efficiency, but not less than 7 days;
- Replacement of damaged utilities will be done to public utilities or individual affected person only after a written consent of the institutions or and for individual properties should involve both husband and wife where applicable. Should an institution or individual refuse the replacement suggested, an appeal to Karatu District Council could be considered.

### **Grievance Management Mechanism**

#### **Local Grievance Committee**

Each sub-project will have its own Local Grievance Committee, the committee will meet whenever a grievance is filed (one a week) and will comprise of the following members:

1. Representative of PAPs, preferably 1 female PAPs and 1 male PAPs; the number of representative PAPs can be increased depending on the number of other committee members
2. Village Chairperson who will be the Chairperson of the Local Grievance Committee
3. Secretary of the Village Land Council
4. All members from the Conflict Resolution Sub-Committee

#### **Karatu District Committee**

At Karatu District level the Grievance Redress Committee (GRC) will meet twice a month if there are any grievances files that could not be resolved at sub project level. The committee will have the following members: the Karatu District Commissioner who will be the Chairperson of the District Grievance Redress Committee, Karatu District Executive Director who will be the Secretary for the Committee, Karatu District Community Development Officer, Karatu District Environmental Management Officer, Karatu District Land Officer and Representation of a Local Grievance Committee preferably Chairperson. Ward Executive Officer will be informed of all the complaints that will be taken from the village level to the District.

#### **Appeals through Arusha Region, NEMC and Tribunals / Court System**

It is assumed that all the cases shall be resolved at Local Grievance Committee level. It may be possible, however, that there are cases which might still remain unresolved at village level. For such cases, the PAP shall have the option to refer his/her case to District, Region, Ministry and appropriate court.

At the Region level, Regional Secretariat will deal with complaints from referred from the village level using the existing normal grievance handling. Complaints may be referred to NEMC Director General or Permanent Secretary of the Vice president's Office if needed. Failure of the Grievance Redress Committee at different levels to settle the complaints, they will be addressed to the existing tribunals and/or local courts system of administration of justice.

#### **GRM Reporting Channels**

ERPP will communicate this procedure to its external stakeholders to raise awareness and offer transparency of how stakeholders can voice their grievances. Various channels for external stakeholders to vocalize their grievances formally include:

1. Using Grievance Form - Stakeholders can complete or download a grievance form located at NEMC website [www.nemc.go.tz](http://www.nemc.go.tz) the filled form can be sent to Project Officials at different levels through email or post mail. The Project Officials will channel the complaint to the concerned committee for resolution.
2. Telephone - Stakeholders can make a call to Village/District/NEMC and speak to a GRM Committee/District ERPP Focal/Project Coordinator. Using telephone number ...if you wish to call NEMC ERPP Project Coordinator.
3. Use of SMS – Complainant can write message to the PMU Officials through the mobile

- number xxxx and others that will be given at Karatu District Council
4. Email - Grievances can be sent to PMU at different levels
  5. Face to face - Stakeholders can voice their grievance to any Project Officials who will then escalate using the correct process.
  6. Use of Opinion Box xxx Community can use the Project opinion box to be placed at each village government Office or Community Resource Centers
- All received complaints must be recorded in a Complaints Log Book for future monitoring and references.

***PART III D: Description of the monitoring and evaluation arrangements and provide a budgeted M&E plan, in compliance with the ESP and the Gender Policy of the Adaptation Fund.***

The project will comply with formal guidelines, protocols and toolkits for quality assurance issued by the AF and NEMC. NEMC will develop a supervision plan during the projects inception phase which will be distributed and presented to all stakeholders during the inception workshop. The emphasis of the supervision plan will be an outcome monitoring, learning and sustainability and financial management. Project risks and assumptions will be regularly monitored by NEMC. Risk assessments and rating will be an integral part of the project implementation Review (PIR). The quality of the projects M& E will also be reviewed and rated as part of the PIR. Appropriate financial parameters will be monitored semi- annually to ensure the cost-effective use of financial resources.

An independent final evaluation will take place three months prior to the project's end date in accordance with the available guidance of NEMC as the NIE. The final evaluation will focus on the delivery of the project's results as initially planned- and as corrected after the mid-term evaluation, if any such correction took place. The final evaluation will assess the impact and sustainability of results, including their contribution to capacity development and the achievement of adaptation benefits. Both expected and un expected impacts will be investigated to inform the situation before and after project implementation.

An annual project progress review (PPR) will be undertaken and its results will be used for improving planned activities for the next financial year and phase. PPR will be prepared to monitor progress made since the project's start and in particular for the previous reporting period. The annual reviews will cover performance, outcome and output of the activities. Generally, the PPR will include but is not limited to reporting on the following:

- Progress on the projects' objectives and outcomes – each with indicators, baseline date and end -of project targets (cumulative);
- Project outputs delivered per project outcome (annual)
- Lessons learned/good practice
- Annual work plan and expenditure reports; and
- Project risks and adaptive management

Quantitative and qualitative approaches will be used for quantification and qualification of information gathered. A solid monitoring and evaluating system will be put in place and will base on the indicators and means of verification defined in results framework. Monitoring and evaluation system will be linked to results framework, annual work plans and budgets. In addition the project will commission an audit ( to be certified auditor) of project accounts to ensure compliance with the AF and the government rules and procedures.

Table 11 summarizes the budget of the M&E plan

**Table 10. Project monitoring and evaluation work plan and budget**

Activity	Responsibility	Budget in US \$	Timeframe												Notes				
			2022				2023				2024					2025			
			Quarters			Quarters			Quarters			Quarters				Quarters			
			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		Q4			
Inception and annual workshops	Project Manager M& E officer/ project management unit (PMU)	10,000														Will be done soon after receiving funds			
Initial studies to improve baseline, gender analyses, environmental and social impact assessment	National consultant, Project Coordinator and M& E officer	10,000														Will be done at the beginning of the project implementation			
Monitoring project outputs by project management team and reporting	Project manager and monitoring and evaluation officer	18,000														Will be done quarterly and the need basis			
Visits to field sites for joint review of status and project progress and reporting	Project team	20,000														Will be done on need basis			
Independent final evaluation	National consultant	15,000														Will be done at least two months before project closure			
Audits and final project audit	Chief Auditor General	8,000														Will be done at least two months before the end of the project			
<b>Total M &amp; E costs</b>		<b>71,000</b>																	

**PART 111 E: Include a results framework for the project proposal, including milestones, targets and indicators, including one or more core outcome indicators of the Adaptation Fund Results Framework, and in compliance with the Gender Policy of the Adaptation Fund.**

The results framework of the project defines success indicators for project implementation and the respective means of verification. A monitoring and evaluation system for the project will be established, based on the indicators and means of the means verification, will be confirmed during the launching event expected in June 2022

Any changes to be done to the results framework will require approval by the Project Steering Committee. The inception workshop is crucial for enhancing understanding of the projects and its implementation, building ownership for project results and agreeing modalities of project execution, documenting mutual agreement for proposed execution arrangements amongst stake holders and beneficiaries.



Table 11: the results framework with indicators to output level, baseline, targets, sources of verification and assumptions

Project description	Result	Indicators	Baseline	Targets	Means of verifications	Milestones
<b>Goal: Build adaptive capacity to manage climate related risks and reduce vulnerability of Hadzabe (hunters and gatherers) and Datoga (black smith) rural communities of Karatu district</b>						
<b>Component 1: Enhance integrated climate change resilient livelihood diversification system in the selected sites in three wards of maghan and Mang'ola in Karatu District</b>						
<b>Outcome 1: Increased food security, income, and resilience to climate change impact through Climate Smart practices in selected wards</b>		Percentage of target population ( Hadzabe and Datoga communities) transformed to adopt to diversified climate smart and sustainable livelihoods (disaggregated by gender and age)	To be determined (TBD)	An increase of at least 50% from the baseline level of population in the project areas have adopted to diversified climate smart and sustainable livelihoods at the end of the project period	Survey Regular monitoring data/records Periodic informal surveys on beneficiaries' views Baseline and Terminal Evaluations	At least 50% annual increase in adoption of diversified climate smart and sustainable livelihood over the project period
				An increase of at least 30% in Household income in the project area by the end of the project		At least 30% annual increase in Household income over the project period
<b>Output 1.1 Improved bee keeping initiative for food security and increased household income.</b>		Number of people trained (disaggregated by type of training received, gender, age, type of community)	0	200	Training records (reports, training manuals)	100 in Year 1 and 100 in Year 2
		Number of modern beehives made	1,500	1,00 65	Activity or project reports	500 in Year 1 and 500 in Year 2
<b>Output 1.2: Use of alternative source of biomass energy promoted</b>		Percentage of people in the project target areas reporting using alternative source of energy (disaggregated by gender, age, village, type of energy source used)	0%	At least 70% of people in the project target areas reporting using alternative source of energy	Survey Regular monitoring data/records Informal periodic surveys	At least 30% of people report using alternative sources of energy in Year1, 50% in Year 2 and 70% in Year 3
		Number of households members (including women	0	At least 60 households trained in the project	Training records	30 in Year 1 20 in

Project description	Result	Indicators	Baseline	Targets	Means of verifications	Milestones
		and girls) trained in making alternative sources of energy and energy products (disaggregated by gender, age, community type)		area	(reports and manuals)	Year 2 and 10 in Year 3
<b>Output 1.3: Introduction of local and improved breeds of rabbit and poultry</b>		Number of people (including women, girls, and boys) with improved breeds of rabbit and poultry (disaggregated by gender, age, and type of breed)	0	At least 500 people trained from the project area	Training records (reports and manuals) Observations	200 in Year 1, 150 in Year 2, 150 in Year 3
<b>Output 1.4: Production of diversified cultural and nature-based tourism products for Hadzabe (hunters and gatherers) and Datoga (blacksmith) women, men and youth improved</b>		Number of people trained in quality jewellery and leather making have improved their skills (disaggregated by age, gender, and type of community)	0	At least 225 people trained in quality jewelry and leather making and improved blacksmith have improved their skills	Training records Assessments	100 in Year 1, 75 in Year 2 and 50 in Year 3
		Number of community groups established (disaggregated by age, gender, group focus area, community type)	0	More than 50% increase in groups formed from the baseline level	Attendance List or Register Project reports	50 groups in Year 1, 30 groups in Year 2, 20 groups in Year 3
<b>Output 1.5: Identification and production of suitable traditional and modern crops in selected villages of Baray, Endamaghan and Mang'ola improved</b>		Number of demonstration farms (Field Farm School-FFS) across 8 villages within the targeted three wards	0	At least one with more than one acre of demonstration farm established per each village	Field Farm School Records (reports, forms, attendance) Observations	One in each village by the end of Year 1.
		Number of people participating in the FFS producing traditional and modern crops (disaggregated by gender, age, type of crops and community type)	0	400 people from all villages producing traditional and modern crops	Farm Records Activity Reports Observations	200 people in Year 1, 150 people in Year 2, 50 people in Year 3
<b>Component 2: Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District</b>						
<b>Outcome 1: Enhanced climate resilient rural water supply system in vulnerable communities at Baray, Mang 'ola and Endamaghang Wards in Karatu District</b>		Percentage of people in project target areas with access to clean and safe water from climate resilient rural water supply system (disaggregated by gender, age, community type)	0	100%	Survey Terminal Evaluation Periodic informal surveys Project reports Observations	100% from the completion of the water supply system in each village
<b>Output 1: At least 10 boreholes drilled in Hadzabe (gatherers and hunters) and Datoga(blacksmith) communities at Baray, Mang 'ola and Endamaghang Wards in Karatu District</b>		Number of constructed and functional boreholes and micro lift irrigation equipment and accessories driven by solar energy water pumps	0	10	Project report Informal periodic surveys Assessments Observations	All 8 boreholes constructed in first year and 2 boreholes in the second year.

Project description	Result	Indicators	Baseline	Targets	Means of verifications	Milestones
<b>Output 2: Water supply systems constructed in Hadzabe (gatherers and hunters) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District</b>		Number of complete and functional water supply and irrigation systems constructed	0	10.	Project report Informal periodic surveys Observations Assessment	8 in Year 1, 2 in Year 2
<b>Output 3: Hadzabe (hunters and gatherers) and Datoga (blacksmith) facilitated, trained, and supported to operate and maintain the water infrastructure.</b>		Number of WUAs established	0	10	Project reports WUA committee minutes	8 in Year 1 and 2 in Year 2
		Number of WUAs member trained on maintenance of water infrastructure and effective water uses and management (disaggregated by gender, title/position)	0	At least 100 people trained	Training records (reports, training manuals)	80 in Year 1 and 20 in Year 2
		Number of by-laws on the effective water uses and management	TBD	At least 50% increase in establishment of by-laws from baseline levels	KII Minutes/Resolutions Informal periodic surveys	8 in Year 1 and 2 in Year 2
<b>Output 4: Climate resilient behavioural change and water governance for Hadzabe and Datoga communities in the three wards of Baray, Endmagahan and Mang'ola enhanced</b>		Percentage of people in the community aware of climate change and water governance (disaggregated by gender, age)	TBD	At least 50% increase in people's knowledge about climate change from baseline level	Awareness/Training reports Informal periodic surveys	At least 50% increase in knowledge by the end of Year 1 and over the project period.
		Number of people from the community practicing positive water governance behaviours (disaggregated by gender, age)	TBD	At least 50% increase in the number of people practicing positive water governance behaviour from the baseline levels	Surveys Informal periodic surveys Observations Terminal Evaluation	At least 50% increase in positive water governance behaviour by the end of Year 1 and over the project period.
<b>Component 3: Improving climate change resilience of ecosystems and non-timber products for selected villages of the three wards of Baray, Endamaghang and Mang'ola in Karatu District</b>						
<b>Outcome 1: Improved Forest services and functions to sustain climate sensitive</b>		Size of the rehabilitated and restored ecosystem area (in hectares)	0	100ha	Project Report Forest rehabilitation and restoration plans	40 hectares in Year 1, 30 in Year 2 and 30

Project description	Result	Indicators	Baseline	Targets	Means of verifications	Milestones
rural livelihoods in Karatu district					Assessment	in Year 3.
		Number of trees planted	TBD	1,500,000	Activity reports Forest rehabilitation and restoration plans Observations	500,000 in Year 1, 500,000 in Year 2, 500,000 in Year 3
<b>Output 1: Adoption of Ecosystem Based Adaptation and management for selected villages of Baray, Endamaghan and Mang'ola wards promoted.</b>		Number of villages with forest rehabilitation and restoration plans	0	8	Project reports Forest rehabilitation and restoration plans Observations	All villages have plans by the end of Year 1
		Number of community groups engaged in tree planting activities	0	20	Activity reports Observations	More than 50% of the community groups engaged in planting trees in Year 1 and the remaining proportion in Year 2.
<b>Component 4: Undertaking studies on climate risks and vulnerability with a particular on most vulnerable sectors including water, agriculture, nutrition in three wards of Baray, Endamaghan and Mang'ola in Karatu District</b>						
<b>Outcome 4: Climate resilient actions in climate sensitive sectors informed by both local knowledge and science to respond to climate vulnerability and risks</b>						
<b>Output 1: Climate Risk and Vulnerability assessment for a comprehensive action plan in climate sensitive sector at Karatu District Council conducted.</b>		Number and type of Climate Risk and Vulnerability assessment	0	Two studies (one KAP and one Science based)	Climate Risk and Vulnerability Assessment Report Comprehensive Multisector Action Plan	All in Year 1
<b>Output 2: Climate change issues mainstreamed into relevant sector projects and programmes such as nutrition, health, agriculture, water at Karatu District</b>		Number of sectors that have climate actions integrated into their programmes and projects	TBD	At least 80% increase in the number of sectors that have integrated climate actions in their projects and programmes from the baseline level	Comprehensive Multisector Action Plan Annual reports Terminal Evaluation	30% increase in Year 1, 60% increase in Year 2 and 80% increase in Year 3
<b>Output 3: Community awareness on climate adverse impacts and adaptation in three wards of Baray, Endamaghan and Mang'ola in Karatu District</b>		Percentage of community members aware of predicted adverse impacts of climate change, and of appropriate responses	TBD	At least 80% of target population at the end of the project	Awareness campaigns Activity reports Informal periodic surveys Terminal Evaluation	At least 30% in Year 1, 60% in Year 2 and 80% in Year 3



Project description	Result	Indicators	Baseline	Targets	Means of verifications	Milestones
and its network and infrastructure for provision of essential data for climate service and early warning systems to the areas surrounding the three wards of Baray, Endamaghan and Mang'ola		early warning systems in the project area (disaggregated by gender, occupation)		and early warning system from the baseline level	periodic surveys Observations Baseline and Terminal Evaluations	Year 1, throughout and beyond the project period.

**F. Demonstrate how the project / programme aligns with the Results Framework of the Adaptation Fund.**

Table 12: Alignment with the AF results framework

Project objective(s)	Project objective indicators(s)	Fund outcome	Fund outcome indicator	Grant amount (USD)
1. To Enhance integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola in Karatu District	...% increased resilience and adaptive capacity to climate induced water scarcity in the selected agro-pastoral communities of Karatu district	<b>Outcome 6:</b> Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	6.1 Percentage of households and communities having more secure (increased) access to livelihood assets	534,463
			6.2. Percentage of targeted population with sustained climate resilient livelihoods Types of livelihood source for households created	
			6.2.1 Type of income sources for households created	
			4.1.2 No and type of development sector services modified to respond to new conditions resulting from climate change	
			6	
70				
2.. Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga	...% rural water infrastructure improved to withstand climate change and variability-induced stresses in selected communities in Karatu district	<b>Outcome 4:</b> increased adaptive capacity within relevant development and natural resource sectors  <b>Outcome 6:</b> Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted	4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change	945,893
			6.1.1. 6.1.1.No. and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or community livelihood strategies	

<i>Project objective(s)</i>	<i>Project objective indicators(s)</i>	<i>Fund outcome</i>	<i>Fund outcome indicator</i>	<i>Grant amount (USD)</i>
(blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District		areas  Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	4.2. Physical infrastructure improved to withstand climate under climate change variability- induced stress 3.2 Percentage of targeted population applying appropriate adaptation responses	
3.Improving climate change ecosystem resilience and non-timber products for selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District	Number and size of natural resources created, maintained	Outcome 5: Increased ecosystem resilience in response to climate change and variability induced stress	5.1.No. of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type and scale)	128,569
5. Enhancing capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang'ola to design and implement climate change adaptation interventions and improve level of understanding of climate change related issues	Number and type of knowledge products developed and disseminated  Number of district community population trained for effective project and adaptive initiative implementations	Outcome 2: Strengthened institutional capacity reduce risks associated with climate induced  Outcome 4: Increased adaptive capacity within relevant development and natural resource sectors	2.1. Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased  2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events (by gender)  4.1.2 No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	344,400

G. Include a detailed budget with budget notes, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.

**Table 13: Detailed budget for the proposed project**

Expected Outputs	Output budget (USD)	Activities	Inputs	Notes	Y1 (US\$)	Y2 (US\$)	Y3 (US\$)	Total amount (US\$)
<b>Component 1:</b> Enhancing integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola in Karatu District								
<b>Outcome 1:</b> Increased food security, income and resilience to climate change impacts through climate smart practices in selected wards								
1.1 Sustainable bee keeping initiative for food security and increased household income in selected village of the three wards of Baray, Endamaghan and Mang'ola improved	<b>130,720</b>	1.1.1 Training hunters and gatherers on sustainable bee keeping practices	-Training materials - and related services	1	16,997	11,332	5,670	<b>33,999</b>
		1.1.2 Provision of at least 1500 modern beehives and related equipment.	Provision of beehives and related services	2	20,895	13,930	6,965	<b>41,790</b>
		1.1.3 Building capacity on honey marketing	Building capacity on honey making	3	12,905	8,603	4,302	<b>25,810</b>
		1.1.4 Building capacity for communities to establish honey producer's cooperative society	Train communities on formation of cooperative societies	4	14,561	9,708	4,854	<b>29,123</b>



Expected Outputs	Output budget (USD)	Activities	Inputs	Notes	Y1 (US\$)	Y2 (US\$)	Y3 (US\$)	Total amount (US\$)
1.2 Use alternative source of biomass energy promoted for Datoga (Blacksmith) communities in the three wards of Baray, Endamaghan and Mang'ola	<b>106,575</b>	1.2.1 Training Datoga (blacksmith) communities on the use of sustainable source of energy	<i>Training on climate change and renewable energy</i>	5	10,243	6,829	3,415	<b>20,487</b>
		1.2.2 Training Datoga on how to make energy saver cooking stoves for sale, cooking and forging tools	<i>Trainings on how to make energy server stove.</i>	6	16,510	11,007	5,504	<b>33,021</b>
		1.2.3. Training Datoga (blacksmith) on making alternative energy products e.q briquettes	<i>Training on making briquettes</i>	7	6,972	4,648.	2324	<b>13,944</b>

Expected Outputs	Output budget (USD)	Activities	Inputs	Notes	Y1 (US\$)	Y2 (US\$)	Y3 (US\$)	Total amount (US\$)
		1.2.4. Facilitating Datoga (blacksmith) communities to engage into a business venture for selling energy saver cooking stoves and briquettes	Facilitate market access for cooking stoves and briquettes	8	14,561	9708	4854	29,123
		1.2.5 Supporting Datoga (blacksmith) to establish and operate energy saver community group	Train communities on formation of cooperative societies	9	5,000	3333	1667	10,000
1.3. Use of local and improved breeds of rabbit and poultry for food security and income generation for selected villages three wards of Baray, Endamaghan and Mang'ola improved	135,310	1.3.1 Training women men and youth on Poultry and rabbit production	Training communities on rabbit and poultry production	10	12,593	8,394	4,195	25,182
		1.3.2 Construction of simple poultry and rabbit houses	Construction of simple poultry house	11	21,166	14,111	7,055	42,332
		1.3.3 Provision of startup capital in form of local pullet, cocks, does and buck to the communities	Provision of breeding stock	12	7,676	5,117	2,559	15,352
		1.3.4 Provision of feed, supplements, veterinary drugs and equipment/utensils	Provision of feeds, equipments and drugs	13	11,693	7,795	3,898	23,386
		1.3.5 Establishment and building capacity to operate poultry/rabbit producers group	Train communities on formation of cooperative societies	14	14,529	9,686	4,843	29,058

Expected Outputs	Output budget (USD)	Activities	Inputs	Notes	Y1 (US\$)	Y2 (US\$)	Y3 (US\$)	Total amount (US\$)
1.4 Production of diversified cultural and nature-based tourism products for Hadzabe (hunters and gatherers) and Datoga (blacksmith) women, men and youth improved.	106,425	1.4.1 Train women and youth on jewelry and leather quality and marketing	<i>Train communities on quality jewelry and leather making and marketing</i>	15	15,244	10,162	5,081	30,487
		1.4.2 Promote the jewelry and leather business amongst women and youth	<i>Facilitate market access for quality jewelry and leather products</i>	16	24,912	16,608	8,30	49,824
		1.4.3 Provide support and capacity for women and youth to form jeweler's and leather makers groups	<i>Train communities on formation of jewelry and leather cooperatives</i>	17	13,057	8,705	4,352	26,114
1.5 Identification and production of suitable traditional and modern crops for enhanced food security and increased household income in selected villages of Baray, Endamaghan and Mang'ola	55,433	1.5.1 Training of men, women and youth on production of selected traditional and modern crops	<i>Training on production of selected traditional and modern crops</i>	18	13,900	9,268	4,634	27,804
		1.5.2 Establishment of at least 10 acres as demonstration farms (Field Farm School-FFS) across 8 villages within the targeted three wards	<i>Preparation of demonstration farms</i>	19	13,814	9,210	4,605	27,629
<b>Sub total</b>								<b>534,463</b>
<b>Component 2: Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghan Wards in Karatu District</b>								
<b>2 Outcome 2: Enhanced climate resilient rural water supply system in vulnerable communities of Hadzabe (gathers and hunters) and Datoga (Blacksmith) at Baray and Endamaghan</b>								

Expected Outputs	Output budget (USD)	Activities	Inputs	Notes	Y1 (US\$)	Y2 (US\$)	Y3 (US\$)	Total amount (US\$)
<b>Wards</b>								
2.1 Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District	<b>173,225</b>	2.1.1 Conducting hydro-geological survey	Conducting hydro-geological survey	20	11,548	17,323	5,774	<b>34645</b>
		2.1.2 Drill boreholes in drought prone and water scarce villages and install solar driven water pumps at Baray, Mang'ola and Endamaghang Wards	Drilling boreholes	21	46,193	69,290	23,097	<b>138580</b>
2.2 Water supply systems constructed in Hadzabe (gatherers and hunters) and Datoga (Blacksmith) communities at Baray, Mang'ola and Endamangang communities		2.2.1 Design and construct water storage tanks, distribution network systems and pump at Baray, Mango'ola and Endamangang wards	Design and construct water storage tanks and distribution networks and pump systems	22	119,367	477,468	119,367	<b>716202</b>
		2.2.2 Construct community water kiosk/points and micro irrigation structures for network systems	Construct community water points/kiosk and micro irrigation structures for network systems	23	36	145	36	<b>217</b>

Expected Outputs	Output budget (USD)	Activities	Inputs	Notes	Y1 (US\$)	Y2 (US\$)	Y3 (US\$)	Total amount (US\$)
2.3 Hadzabe (hunters and gathers) and Datoga (blacksmith) facilitated, trained and supported to operate and maintain the water infrastructure	36,249	2.3.1 Conduct awareness raising meetings with community stakeholders on operation and maintenance of water infrastructure and supply	Conduct awareness raising meetings on operation and maintenance of water supply and infrastructure.	24	12,083	12,083	12,083	36,249
2.4 Climate resilient behavioral change and water governance for Hadzabe and Datoga communities in the three wards of Baray, Endmagahan and Mang'ola enhanced	20,000	2.1..4Conduct awareness raising meetings with community stakeholders on behavior change and water governance	Conduct awareness raising meetings on behavior change and water governance	25	10,000	6667	3333	20000
<b>Sub total</b>								<b>945,893</b>
<p><b>Component 3:</b> . Improving climate change resilience of ecosystems and non- timber products for selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District</p>								
<p><b>Outcome 3:</b> Improved ecosystem services and functions to sustain climate change resilient livelihoods at selected villages in baray, Endamaghan and Mang'ola wards</p>								

Expected Outputs	Output budget (USD)	Activities	Inputs	Notes	Y1 (US\$)	Y2 (US\$)	Y3 (US\$)	Total amount (US\$)
3.1 Adoption of Ecosystem Based Adaptation and management for selected villages of Baray, Endamaghan and Mang'ola wards promoted.	128,569	3.1.1 Identify types of ecosystems in three wards of Baray, Endamaghan and Mang'ola to identify degraded ecosystems	Identification of degraded ecosystem	26	12,857	-	-	12,857
		3.1.2 Mobilise enclosures in degraded ecosystem by using existing local and traditional knowledge and institutions to strengthen management of fragile ecosystems including establishment of Ecosystem Management Plans	Establishing tree nurseries	26	15,442	5,142	5,142	25,714
		3.1.3 Establish and implement ecological restoration and rehabilitation plans including developing of bylaws and enforcing implementation in the wards of Baray, Endamaghan and Mang'ola landscapes	Tree planting and maintenance	26	20,563	2,571	2,571	25,714
		3.1.4 Engage Hadzabe and Datoga communities in tree planting and maintenance campaign for different types of native and fruit trees.	Establishment community groups for tree planting	27	20572	20572	20572	51,427

Expected Outputs	Output budget (USD)	Activities	Inputs	Notes	Y1 (US\$)	Y2 (US\$)	Y3 (US\$)	Total amount (US\$)
		3.1.5 Support women and youth to establish and operate Community integrated Forest Management Groups		29	5,151	5,151	2,575	12,857
<b>Sub total</b>								<b>128,569</b>
<b>Component 4:</b> Undertaking studies on climate risks and vulnerability with a particular focus on most vulnerable sectors including water, agriculture, and nutrition in three wards of Baray, Endamaghan and Mang'ola in Karatu District								
<b>Outcome 4.1:</b> Climate resilient actions in climate sensitive sectors informed by both local knowledge and science to respond to climate vulnerability and risks in Karatu District								
4.1. Climate Risk and Vulnerability and KAP assessment for a comprehensive action plan in climate sensitive sector at Karatu District Council conducted.	331,173	4.1.1 Hire consultant to conduct a Risk and Vulnerability assessment and KAP assessment for Karatu District	Hire consultant to conduct vulnerability and KAP assessment for the Karatu district	30	31,173	-	-	31,173

Expected Outputs	Output budget (USD)	Activities	Inputs	Notes	Y1 (US\$)	Y2 (US\$)	Y3 (US\$)	Total amount (US\$)
4.2 Gender and climate change issues mainstreamed into relevant sector projects and programmes such as nutrition, health, agriculture, water at Karatu District	97,963	4.2.1 Prepare a comprehensive multi sectoral action plan for Karatu District	<i>Integrate climate change issues into sector plans</i>	32	34804	4,366	4,366	97,436
		4.2.2 Mainstream gender and climate change considerations into District plans, projects and programmes			26,103	3,276	3,276	32,655



Expected Outputs	Output budget (USD)	Activities	Inputs	Notes	Y1 (US\$)	Y2 (US\$)	Y3 (US\$)	Total amount (US\$)
		4.2.3 Monitor mainstreaming progress and report progress			17,404	2184	2,184	21,772
		4.3.2 Prepare campaign materials	<i>Preparation of</i>	33	2911	-	-	2,911
		4.3.3. Conduct awareness campaign for Karatu District	<i>Conduct Campaign</i>	33	5231	1752	1752	8,735
		4.3.4 Provide training on the adverse impacts of climate change and adaptation options to address them for the three wards of Baray, Endama jghang and Mang'ola	<i>Provide training on impacts of climate Change and adaptation options</i>	33	6976	2332	2332	11646
<b>Sub total</b>								<b>165,320</b>
<b>Component 5:</b> Enhancing capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang'ola to design and implement climate change adaptation interventions and improve level of understanding of climate change related issues								
<b>Outcome 5:</b> Improved capacity of Karatu District Council, Hadzabe (hunters and gatherers) and Datoga (Blacksmith) communities in planning, implementing and monitoring climate adaption actions								

Expected Outputs	Output budget (USD)	Activities	Inputs	Notes	Y1 (US\$)	Y2 (US\$)	Y3 (US\$)	Total amount (US\$)
5.1 The capacity of Karatu District Council in facilitating public awareness and understanding of climate change related issues and the adoption of resilient climate livelihood practices strengthened	70,327	5.1.1 Conduct training needs assessment	Training needs assessment	36	18,477	4,619	4,619	27,715
		5.1.2. Develop training materials and Supporting Community Based Trainers (CBT) in training peer community members	Community training	37	5,582	1,396	1,396	8,374
		5.1.3 Training of local government officials in Karatu district on climate resilient livelihood practices including mainstreaming of climate change into development plans and budgeting process	Local government training	38	7,371	1,843	1,843	11,057
		5.1.4 Disseminating project results and share lessons learnt to District, Regional and National stakeholders	Disseminating project results	39	15,453	3,864	3,864	23,181
5.2 Community institutions to assist in collecting climate related local knowledge (including traditional knowledge) and disseminate relevant climate change adaptation knowledge and information to communities in three wards of Baray, Endamaghan and Mang'ola established.	200,767	5.2.1 Facilitate community exchange visits/study tours	Facilitating community exchange visits and study tours.	40	86,666	21,667	21,667	130,000
		5.2.2 Build and equip community resource centers for provision of health, water and food services	Build community resource centers for provision of health	41	47,177	11,795	11,795	70,767

Expected Outputs	Output budget (USD)	Activities	Inputs	Notes	Y1 (US\$)	Y2 (US\$)	Y3 (US\$)	Total amount (US\$)
5.3. Capacity of the hunters, gatherers and blacksmith communities in planning and decision making for undertaking climate resilient livelihood practices is strengthened	30,000	5.3.1 train community committee members on planning and decision making for undertaking climate resilient livelihood practices	Training on decision making for undertaking climate resilient livelihood practices	42	10,000	10,000	10,000	30,000
5.4 Upgrade Karatu District metrological services and its network and infrastructure for provision of essential data for climate service and early warning systems to the areas surrounding the three wards of Baray, Endamaghan and Mang'ola	43,306	5.4.1 Train Karatu District Council staff on importance of data for climate change services and early warning systems	Training on importance of data for climate change services	43	5,384	21,538	5,384	32,306
		5.4.2 Install automatic agro-weather station	Install auto agro- weather station.	44	1,833	7,334	1,833	11,000
<b>Sub total</b>								<b>344,400</b>
<b>Total project cost</b>								<b>2,118,634</b>

**Table 15: Executing fee Breakdown**

Activities	Year 1	Year 2	Year 3	Total	Notes
<b>Project Execution costs</b>					
Gender and Climate change Advisor(800 per month for 12 months)	9600	9600	9600	28,800	
Project Coordinator (1,500 per month for 12 months)	18,000	18,000	18,000	54,000	
Deputy Project Coordinator (From KDC) Top up 350 per months for 12 months	4,200	4,200	4,200	12600	
M& E officer (500 per month for 12 months)	6,000	6,000	6,000	18,000	
Accountant (500 per month for 12 months)	6,000	6,000	6,000	18,000	
Assistant Accountant (From KDC) top up 250 per month for 12 months)	3,000	3,000	3,000	9,000	
Driver (400 per month for 12 months)	4800	4800	4800	14,400	
Technical committee meetings	2,400	2,400	2,400	7,200	Travel and DSAs
Steering committee meetings	2,400	2,400	2,400	7,200	Travel and DSAs
Computers, printer and accessories	6,500			6,500	
Office consumables	1,000	1,200	1,200	3,400	
Communication	600	600	600	1,800	
Inception workshop	5371			5371	
Publishing and translation of Project results	1,500	1,500	1,500	4,500	
Final project Evaluation			7,500	7,500	
Bank charges	1,000	1,000	1,000	3,000	
<b>Total Project Execution Cost</b>	<b>80,795</b>	<b>56,488</b>	<b>63,988</b>	<b>201,271</b>	

**Table 16: KARAHADA Project Management Budget for NIE**

Component	Activities	Year 1	Year 2	Year 3	Total	Notes
Management Fees	NEMC staff allowances	13,347	13,347	13,347	<b>40,041</b>	
	Monitoring and Evaluation visits	41,681	51,695	31,667	<b>125,043</b>	Travel and Per diems)
	Bank charges	5,000	5,000	5,000	<b>15,000</b>	
<b>Total Project Management Fees</b>		<b>60,028</b>	<b>70,042</b>	<b>50,014</b>	<b>180,084</b>	

F: Disbursement schedule with time-bound milestones.

**Table 17: Disbursement Schedule**

	<i>After Signing the Implementation Agreement</i>	<i>After Year 1(US \$)</i>	<i>After Y2 (US\$)</i>	<i>Total</i>
<b>Scheduled tentative date</b>	<b>Jun-22</b>	<b>Jun-23</b>	<b>Jun-24</b>	
<i>Project Funds</i>	830,586	920,520	367,540	<b>2,118,645</b>
<i>Execution Fee</i>	80,795	56,488	63,988	<b>201,271</b>
<i>Implementing Entity Fee</i>	60,028	70,042	50,014	<b>180,084</b>
<b>Total</b>	<b>971,408</b>	<b>1,047,050</b>	<b>481,542</b>	<b>2,500,000</b>

#### T IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

- A. Record of endorsement on behalf of the government<sup>1</sup>** *Provide the name and position of the government official and indicate date of endorsement. The endorsement letter should be attached as an annex to the project proposal.*

Mohammed Khamis Abdulla, Deputy Permanent Secretary, Vice President's Office	Date: 10 <sup>th</sup> January 2022
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**B. Implementing Entity certification**

*Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address*

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (National Strategy for Growth and Reduction of Poverty 2010-2015; National Climate Change Strategy 2021, Tanzania Vision 2025 and in the National Adaptation Programme of Action (NAPA) 2007) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.



**Fredrick F. Mulinda**  
Implementing Entity Coordinator

Date: 9<sup>th</sup> August 2021

Tel. and email: Tel. and email: +255 753 240 517,  
[nieaf@nemc.or.tz](mailto:nieaf@nemc.or.tz) / [kasigazi.koku@gmail.com](mailto:kasigazi.koku@gmail.com)

Project Contact Person: Ally Mdingaya

Tel: +255767407200 Email: [ally.mdangaya@karatu.go.tz](mailto:ally.mdangaya@karatu.go.tz)

<sup>6</sup> Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

# ANNEXES

## Annex1: Government Endorsement Letter

### Letter of Endorsement by Government

#### UNITED REPUBLIC OF TANZANIA VICE PRESIDENT'S OFFICE

Telegraphic address: "MAKAMU",  
Telephone: +255 26 2329006  
Fax. No.: +255 26 2329007  
E-mail: km@vpo.go.tz



Government City,  
Mtumba Area,  
Vice President's Office Building,  
P. O. Box 2502,  
DODOMA.

In reply please quote:  
Ref. No: BA.90/201/01/101

9<sup>th</sup> August, 2021

The Adaptation Fund Board  
c/o Adaptation Fund Board Secretariat  
Email: Secretariat@Adaptation-Fund.org  
Fax: 202 522 3240/5

#### **Subject: Endorsement for *Karatu Climate Resilience and Adaptation Project for Hadzabe and Datoga Communities (KARAHADA)***

In my capacity as designated authority for the Adaptation Fund in United Republic of Tanzania, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the country.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by National Environment Management Council (NEMC) and executed by Hakikazi Catalyst in collaboration with Karatu District Council.

Sincerely,



**Mohammed Khamis Abdulla**  
Deputy Permanent Secretary, Vice President's Office

## Annex 2: Budget Notes

S/N	Description	Notes
1.	<i>Training materials and related services</i>	<p><b>Training of selected communities on bee keeping</b></p> <ul style="list-style-type: none"> <li>• Meeting venue</li> <li>• Fuel and ground transport</li> <li>• Teaching materials (banners, flip charts, marker pens, beehives, honey harvesting kit, honey pressing and packaging materials)</li> <li>• Conference facilities</li> <li>• Catering services</li> <li>• Mobile charges</li> <li>• Professional allowance</li> <li>• Casual laborers Local experts</li> </ul>
2.	<i>Provision of beehives and related equipments</i>	<p><b>Provision of beehives to communities</b></p> <ul style="list-style-type: none"> <li>• Fuel and ground transport</li> <li>• Per diem local</li> <li>• Production materials (beehives, honey harvesting kit, honey pressing and packaging and labeling materials) /workshop sessions</li> <li>• Catering services</li> <li>• consumables</li> <li>• Mobile charges</li> <li>• Casual laborers</li> </ul>
3.	<i>Building capacity on honey making</i>	<p><b>Capacity for honey making</b></p> <ul style="list-style-type: none"> <li>• Per diem local</li> </ul>



		<ul style="list-style-type: none"> <li>• Diesel and ground transport</li> <li>• Professional allowance</li> <li>• Catering services</li> <li>• consumables</li> <li>• Mobile charges</li> </ul>
4	<i>Train communities on formation of cooperative societies</i>	<b>Training on formation of cooperative societies</b> <ul style="list-style-type: none"> <li>• Fuel and ground transport</li> <li>• Per diem local</li> <li>• Training materials (banners, flip charts, marker pens)</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Consumables</li> <li>• Facilitation fee/ professional allowance</li> </ul>
5	<i>Training on climate change and renewable energy.</i>	<b>Training on climate change and renewable energy</b> <ul style="list-style-type: none"> <li>• Fuel and ground transport</li> <li>• Per diem local</li> <li>• Training materials (banners, flip charts and marker pens)</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Consumables</li> <li>• Facilitation fee/ professional allowance</li> </ul>
6	<i>Trainings on how to make energy saver stove.</i>	<b>Training for making energy saver cooking stove</b>

		<ul style="list-style-type: none"> <li>• Fuel and ground transport</li> <li>• Per diem local</li> <li>• Training materials (cooking stove mould, clay)</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Facilitation fee/ professional allowance</li> </ul>
7	<i>Training on making briquettes</i>	<p><b>Training on making briquettes</b></p> <ul style="list-style-type: none"> <li>• Fuel and ground transport</li> <li>• Per diem local</li> <li>• Training materials (rice husks, plant remains)</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Facilitation fee/ professional allowance</li> </ul>
8	<i>Facilitate market access for cooking stoves and briquettes.</i>	<p><b>Market access for briquettes</b></p> <ul style="list-style-type: none"> <li>• Fuel and ground transport</li> <li>• Per diem local</li> <li>• Market venue</li> <li>• Demonstration on the use of energy saver cooking stove and briquettes/rice husks/firewood.</li> </ul>
9	Train Datoga communities on formation of cooperative societies	<p><b>Training on formation of cooperative societies</b></p> <ul style="list-style-type: none"> <li>• Fuel and ground transport</li> <li>• Per diem local</li> <li>• Training materials (banners, flip charts, marker pens)</li> <li>• Catering services</li> </ul>

		<ul style="list-style-type: none"> <li>• Conference facilities</li> <li>• Consumables</li> <li>• Facilitation fee/ professional allowance</li> </ul>
10	<i>Training communities on rabbit and poultry production</i>	<p><b>Training of communities on rabbit and poultry production</b></p> <ul style="list-style-type: none"> <li>• Meeting venue</li> <li>• Fuel and ground transport</li> <li>• Teaching materials (banners, flip charts, marker pens, sample poultry breeds, tools and feeds)</li> <li>• Conference facilities</li> <li>• Catering services</li> <li>• Mobile charges</li> <li>• Professional allowance</li> </ul>
11	<i>Construction of simple poultry house</i>	<p><b>Construction of materials.</b></p> <ul style="list-style-type: none"> <li>• Stones</li> <li>• Interlocking blocks/ bricks</li> <li>• Cement</li> <li>• Sand</li> <li>• Ropes</li> <li>• Wire</li> <li>• Timber</li> <li>• Iron sheets</li> <li>• Water storage tanks</li> <li>• Water gutter drain</li> </ul>
12	<i>Provision of breeding stock</i>	<b>Breeding stock</b>

		<ul style="list-style-type: none"> <li>• Supply of pullets (female chicken)</li> <li>• Supply of rooster (male chicken)</li> <li>• Does (Female rabbits)</li> <li>• Buck (male rabbits)</li> <li>• Per diem</li> <li>• Transport</li> <li>• Cages</li> <li>• Telephone charges</li> <li>• Diesel</li> </ul>
13	<i>Provision of feeds, equipment's and drugs</i>	<p><b>Poultry feeds, equipment's and drugs</b></p> <ul style="list-style-type: none"> <li>• Animal feed raw materials</li> <li>• Pelletize</li> <li>• Feed mixer</li> <li>• Feed supplements</li> <li>• Vaccines</li> <li>• Veterinary drugs</li> <li>• Brooders</li> <li>• Drinkers</li> <li>• Feeders</li> <li>• Chicken Perch</li> <li>• Pallets</li> <li>• Egg trays</li> <li>• Record books, charts</li> <li>• Fuel and ground transport</li> </ul>

		<ul style="list-style-type: none"> <li>• Per diem local</li> </ul>
14	Train communities on formation of poultry and rabbit keepers cooperative societies	<b>Training on formation of poultry and rabbit keepers cooperative societies</b> <ul style="list-style-type: none"> <li>• Fuel and ground transport</li> <li>• Per diem local</li> <li>• Training materials (banners, flip charts, marker pens)</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Consumables</li> <li>• Facilitation fee/ professional allowance</li> </ul>
15	<i>Train communities on quality jewelry and leather making and marketing</i>	<b>Training on quality jewelry and leather products</b> <ul style="list-style-type: none"> <li>• Fuel and ground transport</li> <li>• Per diem local</li> <li>• Training materials (local jewelry materials, leather and tree barks, beads, wire, thread, patterns, labels and packaging material, needles, working benches, scissors, old newspapers)</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Facilitation fee/ professional allowance</li> </ul>
16	<i>Facilitate market access for quality jewelry and leather products</i>	<b>Market access for jewelry and leather products</b> <ul style="list-style-type: none"> <li>• Fuel and ground transport</li> <li>• Per diem local</li> <li>• Market venue</li> </ul>
17	Train communities on formation of jewelry and leather cooperatives	<b>Training on formation of jewelry and leather cooperatives</b> <ul style="list-style-type: none"> <li>• Fuel and ground transport</li> </ul>

		<ul style="list-style-type: none"> <li>• Per diem local</li> <li>• Training materials (banners, flip charts, marker pens)</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Consumables</li> <li>• Facilitation fee/ professional allowance</li> </ul>
18	<i>Training on production of selected traditional and modern crops</i>	<p><b>Training on production of selected traditional and modern crops</b></p> <ul style="list-style-type: none"> <li>• Fuel and ground transport</li> <li>• Per diem local</li> <li>• Training materials (banners, flip charts, marker pens, sample traditional and modern crop products)</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Consumables</li> <li>• Facilitation fee/ professional allowance</li> </ul>
19	Preparation of demonstration farms	<p><b>Preparation of demonstration farms</b></p> <ul style="list-style-type: none"> <li>• Community Land</li> <li>• Per diem local</li> <li>• Traditional vegetables and seeds</li> <li>• Consumables</li> <li>• Wheel barrow</li> <li>• Spade</li> <li>• Watering can</li> <li>• Rake/hoe</li> </ul>

		<ul style="list-style-type: none"> <li>• Manure casual laborers</li> <li>• Diesel</li> <li>• transport</li> </ul>
20	Conducting hydro-geological survey	<b>Conducting hydro-geological survey</b> <ul style="list-style-type: none"> <li>• Contract (lump sum)</li> </ul>
21	Drilling boreholes	<p>a) costs associated for contractual issues for hydro-geo-physical surveys, physical, chemical and drilling of four boreholes in selected communities</p> <p>b) Costs associated with purchasing solar panels and solar pumps for relevant boreholes in selected villages. The details of specification of the boreholes will be provided in the inception workshop</p>
22	<i>Construct water storage tanks and distribution network systems and pump system</i>	<b>Construction for;</b> <ul style="list-style-type: none"> <li>• Storage tanks</li> <li>• Distribution networks</li> <li>• Solar and pump system</li> </ul>
23	Construct community water points/ kiosks for network systems	<b>Construction for;</b> Water points
24	<i>Conduct awareness raising meetings on operation and maintenance of water supply and infrastructure</i>	<b>Conduct awareness raising meetings on operation and maintenance of water supply and infrastructure</b> <ul style="list-style-type: none"> <li>• Fuel and ground transport</li> <li>• Per diem local</li> <li>• Training materials (banners, flip charts and marker pens)</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Consumables</li> </ul>

		<ul style="list-style-type: none"> <li>• Facilitation fee/ professional allowance</li> </ul>
25	<i>Conduct awareness raising meetings on behavior change and water governance</i>	<p><b>Conduct awareness raising meetings on behavior change and water governance</b></p> <ul style="list-style-type: none"> <li>• Fuel and ground transport</li> <li>• Per diem local</li> <li>• Training materials (banners, flip charts and marker pens)</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Consumables</li> <li>• Facilitation fee/ professional allowance</li> </ul>
26	<i>Training on forest management</i>	<p><b>Training on forest management</b></p> <ul style="list-style-type: none"> <li>• Fuel and ground transport</li> <li>• Per diem local</li> <li>• Training materials (banners, flip charts and marker pens)</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Consumables</li> <li>• Facilitation fee/ professional allowance</li> </ul>
27	<i>Establishing tree nurseries</i>	<p><b>Establishing tree nurseries;</b></p> <ul style="list-style-type: none"> <li>• Per diem local</li> <li>• Tree seeds and fruit seedlings</li> <li>• Consumables</li> <li>• Polythene tubes</li> <li>• Wheel barrow</li> <li>• Spade</li> <li>• Watering can</li> <li>• Rake/ hoe</li> </ul>



		<ul style="list-style-type: none"> <li>• Manure</li> <li>• Transport</li> <li>• Casual laborers</li> <li>• Telephone charges</li> <li>• diesel</li> </ul>
28	<i>Tree planting and maintenance</i>	<b>Tree planting and maintenance;</b> <ul style="list-style-type: none"> <li>• Transport</li> <li>• Per diem local</li> <li>• Diesel</li> <li>• Telephone charges</li> </ul>
29	<i>Establishment community groups for tree planting</i>	<b>Establishment of community groups for tree planting</b> <ul style="list-style-type: none"> <li>• Per diem local</li> <li>• Transport facilities</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Consumables</li> <li>• Diesel</li> </ul>
30	<i>Hire consultant to conduct vulnerability assessment for the whole district</i>	<b>Hire consultant to conduct vulnerability assessment</b> <ul style="list-style-type: none"> <li>• Consultant fee</li> <li>• Per diem domestic</li> <li>• Telephone charges</li> <li>• Diesel</li> <li>• Conference facilities</li> </ul>
31	<i>Translate project results and project plan of action</i>	<b>Translate project results and project plan action</b> <ul style="list-style-type: none"> <li>• Consultancy fee</li> <li>• Telephone charges</li> <li>• Per diem domestic</li> <li>• Diesel</li> <li>• Consumables</li> <li>• Conference facilities</li> </ul>
32	<i>Integrate climate change issues</i>	<b>Integrate climate change issues</b>
33	<i>Create awareness on health and sanitation at Boma level</i>	<b>Training on health and sanitation at Boma level</b>

		<ul style="list-style-type: none"> <li>• Per diem</li> <li>• Domestic facilitation</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Transport</li> <li>• Consumables</li> <li>• Diesel</li> <li>• Professional allowance</li> <li>• Telephone charges</li> </ul>
34	<i>Provide emergency health services and first aid services</i>	<b>Provide emergency health services and first aid services</b> <ul style="list-style-type: none"> <li>• Emergency medicine</li> <li>• Telephone charges</li> </ul>
35	<i>Provide improved community health insurance</i>	<b>Provide improved community health insurance</b> <ul style="list-style-type: none"> <li>• Improved CHI card</li> <li>• Per diem</li> <li>• Domestic facilities</li> <li>• Catering services</li> <li>• Professional allowances</li> <li>• Conference facilities</li> </ul>
36	Training needs assessment	<b>Training needs assessment</b> <ul style="list-style-type: none"> <li>• Per diem local</li> <li>• Domestic facilitation</li> <li>• Catering services</li> <li>• Professional allowances</li> <li>• Conference facilities</li> <li>• Transport</li> <li>• Consumables</li> <li>• Diesel</li> <li>• Telephone charges</li> </ul>

37	Community training	<b>Community training</b> <ul style="list-style-type: none"> <li>• Professional allowances</li> <li>• Per diem domestic</li> <li>• Telephone charges</li> <li>• Diesel</li> <li>• Conference facilities</li> </ul> Consumable
38	Local government training	<b>Training the local government official</b> <ul style="list-style-type: none"> <li>• Consultancy fee</li> <li>• Per diem local</li> <li>• Telephone charges</li> <li>• Diesel</li> <li>• Conference facilities</li> </ul>
39	Disseminating project results	<b>Disseminating project results</b> <ul style="list-style-type: none"> <li>• Per diem local and foreign</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Transport</li> <li>• Consumables</li> <li>• Diesel</li> <li>• Telephone charges</li> </ul>
40	Facilitating community exchange visits and study tours	<b>Facilitating community exchange visits and study tours</b> <ul style="list-style-type: none"> <li>• Per diem domestic and foreign</li> <li>• Consumables</li> <li>• Transport</li> <li>• Catering services</li> <li>• Conference facilities</li> <li>• Professional allowances</li> <li>• Diesel</li> <li>• Telephone charges</li> </ul>
41	Build community resource centers for provision of health	<b>Build community resource centers for provision of health</b> <ul style="list-style-type: none"> <li>• Build resource</li> <li>• Hardtop</li> <li>• Motorcycle</li> </ul>

		<ul style="list-style-type: none"> <li>• diesel</li> </ul>
42	Training on decision making for undertaking climate resilient livelihood practices	<b>Training on decision making on climate resilient livelihood practices</b> <ul style="list-style-type: none"> <li>• Per diem domestic</li> <li>• Telephone charges</li> <li>• Diesel</li> <li>• Conference facilities</li> <li>• Consumables</li> <li>• Professional allowance</li> </ul>
43	Training on importance of data for climate change services	<b>Training on importance of data for climate change services</b> <ul style="list-style-type: none"> <li>• Per diem domestic</li> <li>• Telephone charges</li> <li>• Diesel</li> <li>• Conference facilities</li> <li>• Consumables</li> <li>• Professional allowance</li> </ul>
44	Install auto agro- weather station	<b>Install auto agro- weather station</b> Procurement of automatic weather station

### Annex 3: Summary of gender analysis against project components

Project Components	Gender Risks/Challenges	Proposed mitigation strategies	Benefits
<p>1. Enhancing integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola in Karatu District</p>	<ul style="list-style-type: none"> <li>• Low adoption rates of the transformative agricultural interventions by all gender groups</li> <li>• Elites hijacking the transformative and climate sensitive agricultural interventions</li> <li>• Women and children especially orphans suffer the most and are more vulnerable to food insecurity whenever crop failure happened due to drought and prolonged dry spell periods when compared to men</li> </ul>	<p>Proper guideline for selection members of farmer and women groups</p> <hr/> <p>Improve knowledge on best farming practices and transform traditional farming system through solid farmers tailored trainings using Farmer Field School Approach and smart micro-irrigation practices</p>	<ul style="list-style-type: none"> <li>• Enable improved access to Agricultural tools and technologies with aim of transforming exploitive their agricultural practices</li> <li>• Establish women operated gardens and poultry houses and trainings on FFFS (Female Farmer Field School) – provision of seeds and tools to diversity gender based livelihood systems</li> <li>• Increased use of climate smart crops and promoting intercropping with drought resistant varieties like, sunflower, cassava, cereals, sweet potatoes and early</li> </ul>

			maturing crops to increase resilience farming systems
2. Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District	<ul style="list-style-type: none"> <li>• Climate induced challenges related to water scarcity are forcing people (more often women and children) to travel longer distances looking for unsafe water</li> <li>• The existing un-protected traditional wells in villages wards expose mostly children and women mostly to water borne diseases especially cholera</li> </ul>	Proper guidelines to establish gender sensitive water governance system to guide representation of women, youth and vulnerable groups in the village water management institutional structure	<ul style="list-style-type: none"> <li>• Gender sensitive water management institutional structures strengthened /established</li> <li>• Water governance/by laws to regulate effective use of water and protection of water source formulated and functioning.</li> </ul>

	<ul style="list-style-type: none"> <li>• and dysentery when compared to men.</li> <li>• Gender based conflicts including incidents of abandonment or separation of couples linked to climate change issues such as water scarcity and food shortage</li> <li>• Low level of representation of gender groups in water management system as the current system in the district is dominated by men.</li> </ul>	<p>Enable improved access to rural water supply systems and technologies</p>	
<p>Component3; Improving climate change resilience of ecosystems and non- timber products for selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District</p>	<ul style="list-style-type: none"> <li>• Inactive and low participation of women and girls in ecological and environmental based activities andecological based income generating activities especially marginalization of Women, youth and vulnerable groups</li> </ul>	<p>Clear guidelines and by laws on management of the environment and village ecosystems</p> <p>Ensure that all groups are equally represented on managing ecological and environmental quality and involved in restorationactivities</p> <p>Proper and inclusive criteria for selection of beneficiaries to ensure 50% of all people involved to implement activities under this component are women</p>	<ul style="list-style-type: none"> <li>• Increased alternative income generating options ,contributing to reduction of income poverty and building climate resilience of vulnerable communities specially women and girls</li> </ul>

<p>4. Undertaking studies on climate risks and vulnerability with a particular focus on most vulnerable sectors including water, agriculture, nutrition in three wards of Baray, Endamaghan and Mang'ola in Karatu District</p>	<ul style="list-style-type: none"> <li>Limited awareness of climate change impacts and adaptation options for different community groups particularly women, children and the elderly..</li> </ul>	<p>Proper and inclusive criteria for selection of beneficiaries to ensure 50% of all people involved to implement activities under this component are women</p>	<p>Improved awareness and for vulnerable communities on climate change related issues</p>
<p>5. Enhancing capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang'ola to design and implement climate change adaptation interventions and improve level of understanding of climate change related issues</p>	<ul style="list-style-type: none"> <li>Existence of social, economic and political barriers that limit women to actively engage in climate change adaptation activities which make them to suffer the most whenever climate calamities happen</li> <li>Low participation by vulnerable groups due to low literacy levels and existence of groups with special/individual interest over others</li> </ul>	<p>Proper guidelines on participation of vulnerable groups in capacity building and other project activities will be put in place and adhered to ensure selection of at least 45% of women as beneficiaries for participation in Capacity and knowledge management and other project interventions</p>	<ul style="list-style-type: none"> <li>Improved knowledge of village communities, technical staff in Karatu District Council and civil societies on climate change, its impacts and adaptation strategies</li> <li>Capacities of beneficiaries to implement concrete adaptation actions for climate resilient and sustainable livelihood systems strengthened</li> </ul>



			<ul style="list-style-type: none"> <li>• Demonstration centers, eco-schools and eco-villages for ecosystems management and alternative income generating activities established</li> </ul>
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**Annex 2: List of institutions and stakeholders consulted**

**STAKEHOLDERS REGISTRATION FORM DURING SITE VISIT FOR COLLECTION OF PROJECT FORMULATION INFORMATION IN KARATU DISTRICT COUNCIL**

<b>S/N</b>	<b>NAME</b>	<b>TITLE/OCCUPATION</b>	<b>MOBILE NUMBER</b>
1.	LIGHNESS GINGANYI	BLACKSMITH -REVENUE COLLECTOR	0628107372
2.	GUDO MAHIYA	HADZABE-REVENUE COLLECTOR	0743726636
3.	NYERERE SAMAEL	CHAIR-HADZABE	
4.	LAJA GISUSI	HADZABE	
5.	MKUNZUVU	HADZABE	
6.	TARMO JANUARI	HADZABE	
7.	MARUKA SABENA	HADZABE	

8.	ITAMBI HADZA	HADZABE	
9.	MAYU MARTINI	HADZABE	
10.	PANDA MLEKWA	HADZABE	
11.	ELIZA SHIMBI	HADZABE	
12.	HELENA MANJANO	HADZABE	
13.	ELIZABETH SALIBOGO	HADZABE	
14.	ALIMU MASKATI	HADZABE	
15.	SABINA SIAGT	HADZABE	
16.	JUMBE KINYANYI	BLACKSMITH	
17.	LAFaeli KINYANYI	BLACKSMITH	
18.	GINYANYI	BLACKSMITH	
19.	ADE KINYANYI	BLACKSMITH	
20.	DAINGKENI KINYANYI	BLACKSMITH	
21.	SABINA KINYANYI	BLACKSMITH	

**STAKEHOLDERS REGISTRATION FORM DURING SITE VISIT FOR COLLECTION OF PROJECT FORMULATION INFORMATION IN KARATU DISTRICT COUNCIL**

S/N	NAME	TITLE/OCCUPATION	MOBILE NUMBER
1.	GODFREY G. LUGUNA	AG.DED KARATU DC	0756045323
2.	ALLY J. MDANGAYA	DEMO-KARATU DC	0767407200
3.	FELIX D. SULLE	DCDO KARATU DC	0764229090
4.	CHRISTOPHER O. KITUNDU	AG.DANRO	0754959428
5.	SAUDA LEVERY	HEALTH OFFICER	0754761246
6.	TWILAMBA NGWALE	AG.DAICO	0756660708
7.	ENG.MBARAKA M. KILANGAI	DM-KARATU	0755293780
8.	DENNIS BUBERWA	DLFO	0764886684
9.	RESTIEL HHAYUMA	TASAF	0754828227
10.	EVANCE ABDALLAH MVAMILA	HAKI KAZI CATALYST	0754055565
11.	GODLISTEN DIDAS	CONVOY OF HOPE	0692390032

12.	BERNADETTE BACHUBILA	HAKI KAZI CATALYST	0754369812
13.	RICHARD MESSAI	WORLD VISION	0787505357
14.	ANNE LEMA	HAKI KAZI CATALYST	0754310346

**Annex 7: Haki Kazi Catalyst Organization profile.**



**HAKIKAZI CATALYST**

**Knowledge. Action. Change.**

PREPARED BY:

Hakikazi Catalyst

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Arusha

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## **1.0 DESCRIPTION ON PROFILE OF HAKIKAZI CATALYST**

### **1.1 WHO WE ARE**

Hakikazi Catalyst (HKC) is a civil society organisation, with no political, religious or regional affiliation founded and registered in 2000 under the Act No.212.. HKC was re-registered on July 29<sup>th</sup> 2019 under the NGO Act No. 24/2002 Section 11(1) and 17(2) and acquired Certificate of Registration No. OONGO/R2/000204 to operate in Tanzania Mainland. The HKC Office is in Arusha City, Sombetini ward, Mawalla St, Plot No. 578.

### **1.2 OUR VISION**

Our vision is that all people are conscious of their social and economic rights and empowered to participate in, and enjoy, just, inclusive and sustainable development.

### **1.3 OUR MISSION**

Our mission is to facilitate the empowerment of poor and marginalised people so that they can engage effectively to demand their social and economic rights and benefit from meaningful development for all.

### **1.4 OUR VALUES AND BELIEFS**



## **1.5 OUR GOAL**

Our **goal** is to facilitate processes that support the initiatives of poor and marginalized communities to influence change in national and local level policy and practice and also to promote good governance, transparency and accountability that fosters eradication of poverty for sustainable livelihoods. In order to achieve this goal, we focus on the following three strategic goals:

### **1.5.1 Strategic Goal 1: Policy Analysis, Information and Public Engagement**

We aim to generate a shared understanding between communities and decision-makers, particularly at national level, about poverty reduction policies and practices. We will carry out action research and share information to ensure that decisions are evidence-based and evidence-led. This will help government become more responsive to citizens' needs and aspirations, and citizens become more engaged in policy, governance and development processes. Public participation in policy development is undermined by the nature of the language used in policy and legal documents, which is something our work will address.

### **1.5.2 Strategic Goal 2: Good Governance and Accountability**

We want to see vibrant communities whose members actively seek information about what is going on in their area and take part in decision-making processes. We aim to mobilise citizens to ensure the accountable governance of national resources for rights-based development. We believe that accountable governance is achieved when people are empowered to know their rights and duties as responsible citizens and to hold leaders accountable when those rights are denied. We will therefore provide marginalised communities and their representatives with tools to help them monitor the inputs, outputs and outcomes relevant to poverty reduction.

### **1.5.3 Strategic Goal 3: Sustainable Livelihoods**

Empowerment puts down deeper roots when awareness-creation is complemented by concrete economic activities. The livelihoods of marginalised communities are increasingly threatened by rapid population growth, environmental degradation, a rise in resource-based conflict, and more frequent and intense droughts. We will implement an integrated development programme that protects and promotes rural and urban livelihoods, strengthening the food security of households and their security of tenure over land use and water use and forest management. We will help communities build their resilience to climate change, natural resources management and work towards the economic empowerment of youth and women.

## **2.0 OUR BENEFICIARIES AND GEOGRAPHICAL FOCUS**

The ultimate beneficiaries of our work are the general public in Tanzania, particularly vulnerable

women, children, youth and men. Our direct beneficiaries include our partners and other organisations working on the issues that concern us, as well as community members and their representatives in our programme areas. Our geographical focus is the whole country depending on the need and nature of the projects.

### **3.0 Our skills, competencies and experiences**

#### *3.1 Overall experience and competency*

We have a long history of taking the meaning of complicated official documents to the people who need to understand them. We do this in a neutral way that is free from bias and stays true to the original source, in both word and spirit. We are known for pioneering the production and use of popular versions of policies and legislation. These build shared understanding between citizens and decision-makers, creating a friendly policy environment where people can engage constructively with the issues that affect their lives. In this process, knowledge moves in two directions: downstream, to inform lower levels of government and communities about the content of key policies and reforms, and upstream, to help decision-makers understand the impact of policy and practice on poor and marginalized people and what could be done to improve their livelihoods.

We pride ourselves on our ability to produce clear and simple documents that can immediately be understood by someone reading them, or hearing them read aloud. We use a range of visual tools, including cartoons, to make them comprehensible and enjoyable. We believe that more organizations, including government bodies, are starting to use plain language in their written documents in order to strengthen shared understanding and popular participation. We pioneered the use of community score cards in public expenditure tracking as a way of making service providers more accountable for public resources. We have produced a branded version – the PIMA Card – which we feel is particularly suitable for the Tanzanian environment,<sup>2</sup> and which we have now used with communities in half the 21 mainland regions.

#### *3.1 HKC experience on the proposed interventions*

In 2017/2018 HKC coordinated and facilitated implementation of the Decentralized Climate Financing for Climate change Adaptation projects in 3 districts of Monduli, Ngorongoro and Longido as well as capacity building of District and Divisional Adaptation Planning Committees. These initiatives were implemented through consortium of various actor from government and non-governmental institutions led by the President’s Office Regional Administration and Local Government (PORALG), Hakikazi Catalyst, International Institute for Environment and Development (IIED), United Nations Capital Development Fund (UNCDF), Ministry of Finance

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<sup>2</sup> ‘Pima’ means ‘measure’ in Swahili.



and Planning, Vice President Office (Environment), National Environmental Council (NEMC), Tanzania Meteorological Agency (TMA), Local Government Training Institute (LGTI) Hombolo - Dodoma, Institute of Rural Development Planning (IRDP) Dodoma, Tanzania Natural Resources Forum (TNRF) and Local Government Authorities (District Councils) of Monduli, Ngorongoro and Longido in Arusha region. A total of 36 (Monduli 13), Longido 13, Ngorongoro 10) projects were implemented as response towards climate change adaptation. In this project HKC had specific roles/activities as follows:

1. *Facilitated formation and strengthening of 10 community based adaptation entities* (3 in Monduli, 3 in Ngorongoro and 4 in Longido) at the division level known as Division Adaptation Planning Committees (DvAPCs) in three districts of Monduli, Ngorongoro and Longido. In order to ensure efficiency, and sustainability of the DvAPCs' operational at community level HKC used participatory approaches in selection of the DvAPCs members. During the selection process a thorough vetting were carried out as well as adhering to gender balance in composition of the committee members.
2. *Capacity building to the DvAPCs:* HKC facilitated various trainings to the 10 DvAPCs. The trainings aimed at imparting knowledge and skills to strengthen their capacity. Some of the specific themes include the roles and responsibilities of the DvAPCs, conceptual understanding on climate change and its effects, funds management, group dynamics, asset management and project proposal development.
3. *Formation of the District Adaptation Planning Committees (DAPC):* HKC coordinated and facilitated formation of the District Adaptation Planning Committees in three districts of Monduli, Ngorongoro and Longido. The Committee comprised of the key district officials (Heads of Departments) particularly the specific sectors affected by the climate change such as Agriculture, Livestock, Infrastructure, Environment, Natural Resources, planning and Community Development
4. *Coordinated the community Resilience Assessment:*  
HKC facilitated the Resilience Assessment carried out in three district in order to study and assess the community wellbeing and nature of their livelihoods that contribute to their wellbeing. The resilience assessment is a participatory tool which allows community members to articulate their livelihood strategies. It assesses factors that support resilience to the impacts of climate change, constraints undermining those factors, and recommendations for community intervention that will improve the adaptive capacity and wellbeing of the community.
5. *Facilitated Community Needs Assessment:* Through the DvAPCs Hakikazi Catalyst

facilitated the process of community needs assessment and priority interventions to address the effects of climate change. The assessment based on the recommendations from the Resilience Assessment of the particular division in the three districts of Monduli, Longido and Ngorongoro Provided support to the DvAPCs on the climate change community project prioritization, designing and funding proposal writing: HKC facilitated the process of prioritization, design and funding proposal writing of the community projects that address effects of climate change in their locality.

*6. Formation and capacity building of community based management committees:*

HKC facilitated formation and trainings of the community management committees which were formed by community after project completion. The committees were formed as exit and sustainability strategy. After formation it was necessary to train the committees on their roles and responsibilities, governance and operational modalities of the community projects. The committee were formed depending on the nature of the community project executed in a particular community such as dip committees and water committees as Community Owned Water Supply Organizations (COWSOs).

*7. Facilitated Monitoring, Evaluation and Learning (MEL) of the DCF project*

Being the DCF Consortium member, HKC were mandated with Monitoring, Evaluation and Learning of the DCF project. The role involved planning and reporting on the progress of the project implementation, results and learning. It also focused on assessing quality assurance, cost tracker and Value for Money (VfM) of the interventions. The HKC team had opportunity to share and learn monitoring approach of Tracking Adaptation and Monitoring Development (TAMD)

*8. Project Funds management and administration:*

I) HKC had a role of managing the project funds and project administration. This included the management and administration of funds allocated for execution of 36 climate change community projects in three districts of Monduli, Ngorongoro and Longido. The total project funds managed by HKC were **US\$ 2,070,027 (equivalent to Tanzanian shillings 4,800,000,000)**.

*9. Organize and facilitate all project meetings, workshops and forums*

HKC also played a role of organizing and facilitating all meetings, forums and workshops for the DCF consortium.

### **3.2 HKC's experience in water governance**

Since 2018, HKC has been a national cluster leader coordinating the Public Expenditure Tracking

Survey (PETS) in water interventions within the FCS partnership to promote governance in water sector. The main role of HKC is to build capacity and provide technical support to the implementing CSOs to enable them to learn and improve performance and project delivery. Other activities include training to PETS Committees and Community Based water management entities on their roles and responsibilities under the Water Act No. 5/2019 and accountability tools; Conduct national level advocacy through influencing policy and governance changes within the government structures by meeting and present issues to the key decision makers at ministry level (Ministry of Water, PORALG) and Rural Water Supply and Sanitation Agency (RUWASA). Through these interventions Hakikazi Catalyst has facilitated capacity building to 18 CSOs from 11 regions in Tanzania namely Dodoma, Dar es Salaam, Kigoma, Mtwara, Lindi, Iringa, Tanga, Shinyanga, Mara, Simiyu and Kagera.

### **3.3 HKC's experience of working in Karatu district**

For the past 10 years, HKC has worked with communities in Karatu district on the following interventions:

- i) **Councilors Oversight Training:** In 2011/2012 HKC facilitated the councilors oversight training to 22 councilors in Karatu district. The training which comprised members of the Council Water and Sanitation Team (CWST) aimed at building councilors capacity on planning, budgeting and implementation oversight, on the use of (baseline) data, on comparative analysis and on fact-finding. The 5 days training used water-specific issues as case studies and focus specifically on the Water Point Mapping within the district. The interventions were implemented in collaboration with Karatu District Council through the District Water Engineer and the CWST Team.
  
- ii) **Participatory Democracy for Public Accountability in Agricultural Sector**  
In 2012/2013 HKC implemented a 12 months project on Participatory Democracy for Public Accountability in Agricultural Sector. The project focused on building the capacity of communities on the District Implementation Manual (DIM) for the District Agricultural Plans (DADPs) through trainings to the Village Agricultural Facilitation Teams (VAFTs), PETS Committees and Village Government leaders. The project covered a total of 15 villages in 5 wards of Mbulumbulu, Baray, Mang'ola, Endmarariek and Karatu. The project were implemented in collaboration

with the Karatu District Council through the Agriculture and Livestock department.

iii) Enhancing Good Governance for Sustainable Livelihoods

In 2016/2017, HKC implemented a 12 months project that focused on promoting good governance and accountability by ensuring effective youths participation in policy development and implementation. The initiatives were implemented through formation of youth platforms in two villages in Mang'ola ward namely Mang'ola Barazani and Laghangareri. The projects were implemented in collaboration with the Karatu District Council through the Community Development Department.

### **3.4 HKC's expected contribution in the proposed interventions**

In this project Hakikazi Catalyst (HKC) will contribute by broadening governance and accountability mechanisms within the climate change framework in strengthening community resilience. HKC will also facilitate capacity building to the Community Based Entities such as CBWSOs on sustainable management of water resource use as well as the forest management entities for sustainable forest management. HKC has built trust, linkages and strong relationship with the government at all levels as well as engagement with national, regional and International networks such as Policy Forum (PF), Agricultural Non State Actors Forum (ANSAF), Tanzania Water and Sanitation Network (TAWASANET), Tanzania Education Network (TEN/MET), Jukwaa la Katiba Tanzania (JUKATA), East African Civil Society Organizations Forum (EACSOF), Decentralized Climate Financing (DCF) Alliance and Global Network for Disaster. We are grateful that most of the proposed components in the project are within the HKC strategic objectives in the 5 years Strategic Plan (2019 – 2023). We expect to utilize our 15+ years' strong experience and capacity in organizing and implementing community programmes as well as funds management and administration to contribute in empowering and strengthening resilience of communities in Mang'ola, Endamaghan and Baray wards in Karatu district..

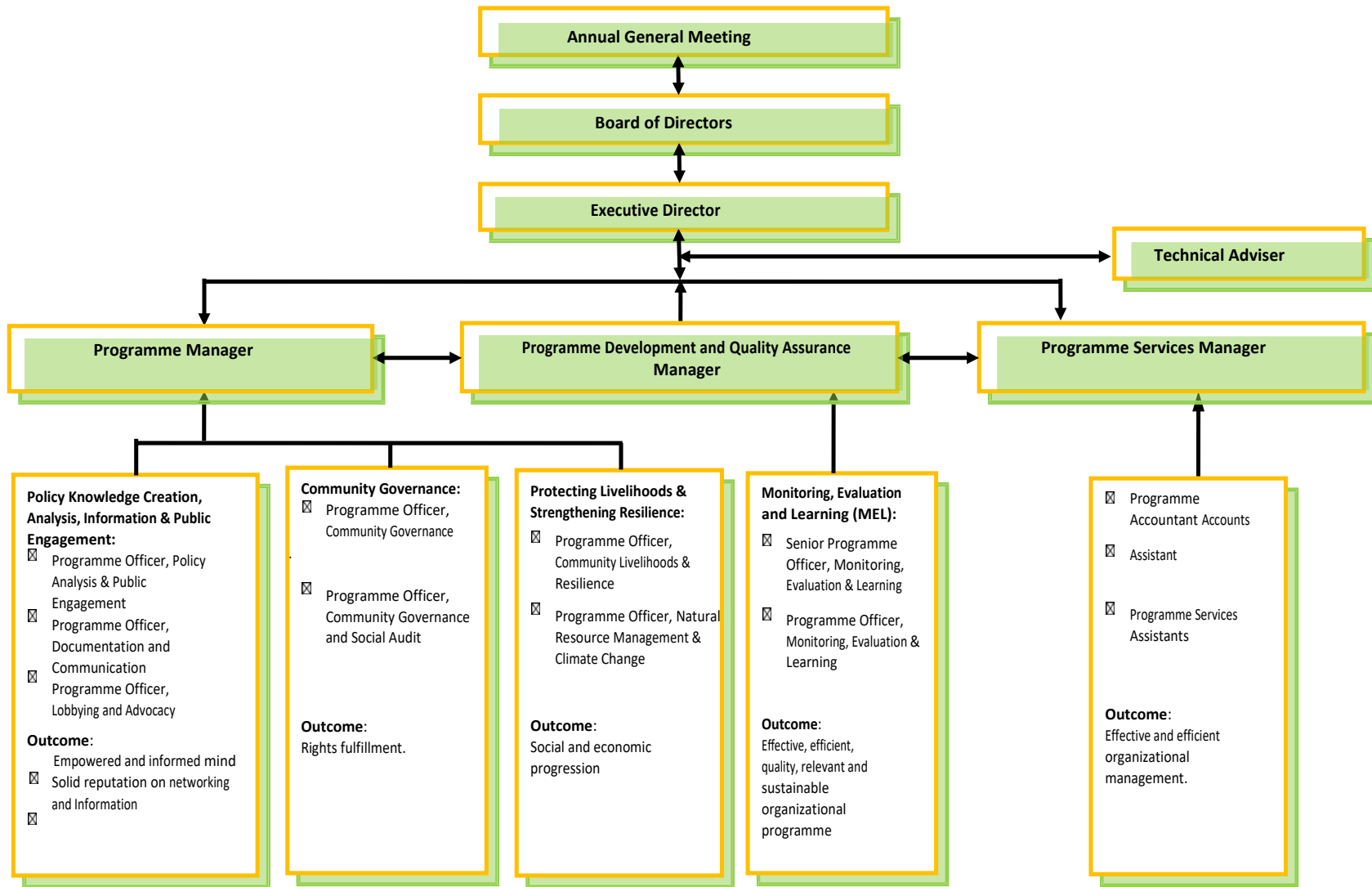
<b>4.0 HAKIKAZI CATALYST PROGRAMMES, MANAGEMENT UNIT TEAMS AND ORGANOGRAM</b>				
<b>Unit</b>	<b>Goal</b>	<b>Objectives</b>	<b>Key Functions</b>	<b>Head of Unit</b>
<b>Strategic Programme Management</b>	To enable HKC promote effective participation of the marginalized and vulnerable groups in policy processes to secure economic and social justice	<ol style="list-style-type: none"> <li>1. Provide strategic management that is effective and efficient to Hakikazi Catalyst programme.</li> </ol>	<ol style="list-style-type: none"> <li>1. Manage performance of HKC according to its vision, mission, and values of the Memorandum of Understanding and Articles of Association.</li> <li>2. Represent HKC for high visibility engagement.</li> <li>3. Lead process of formulating, implementing and monitoring performance of HKC strategic plans.</li> <li>4. Manage programme quality and performance that conform to stakeholders (including grassroots partners) required standards.</li> <li>5. Managing the overall budget of HKC</li> <li>6. Secretary to the Board</li> <li>7. Implement resolutions of Board of Directors</li> <li>8. Build strategic alliances with donors and peer partners to sustain HKC resource mobilization. This includes managing processes of internal income generation.</li> <li>9. Authorize financial, capital and human resource requirement through different management levels</li> </ol>	Executive Director
<b>Programme Services Unit</b>	Develop and maintain an effective institutional capacity which is responsive to strategic and operational needs	<ol style="list-style-type: none"> <li>1. Implement a staff development strategy to include formal and informal training, networking and exchange visits</li> <li>2. Strengthen organizational systems and procedures which include financial, human resources capital, and management of contractual obligations for effective performance</li> <li>3. Support processes of programme planning and fundraising.</li> </ol>	<ol style="list-style-type: none"> <li>1. Overall responsible in managing systems and procedures including work place policies.</li> <li>2. Overall responsible in generating financial information for Management decisions.</li> <li>3. Managing contracts according to agreed terms of reference for grants, services and consultancies.</li> <li>4. Managing staff working with HR and Finance units.</li> <li>5. Managing approval processes of accounts, budget lines, codes, petty cash, procurement, bank transactions and reconciliation.</li> <li>6. Maintain and update inventory of HKC movable and immovable assets.</li> <li>7. Work with Auditors when auditing HKC finances and asserts.</li> <li>8. Generate budgets</li> <li>9. Promote efficient and effective work environment</li> </ol>	Programme Services Manager (Units teams involved include: Finance Administration, Human Resource Management, Logistics)
<b>Monitoring and Evaluation Unit</b>	To build and maintain a culture of formulating plans on a rolling basis and apply participatory methodologies	<ol style="list-style-type: none"> <li>1. To promote accountability in project management.</li> <li>2. To use reports produced on status of project/programme</li> </ol>	<ol style="list-style-type: none"> <li>1. To organize office reflection sessions to review progress and lessons learned from HKC programmes.</li> <li>2. To ensure that during reflections HKC's key partners including donors, collaborating NGOs and CBOs and government partners are invited to</li> </ol>	Coordinator M&E

	to monitor and evaluate programmes and activities	implementation to help HKC make adjustments	participate and advise. 3. To work with HKC Management in organizing and commissioning specific independent evaluations and assessments.	
<b>Policy Analysis Unit</b>	To enable citizens to have increased access to policy and decision making information	<ol style="list-style-type: none"> <li>1. Conduct policy analysis which enables poor communities to influence meaningful changes on poverty-related policies and decisions.</li> <li>2. Conduct research on national and international policies that aim at revealing the risk of promoting an unsustainable development.</li> </ol>	<ol style="list-style-type: none"> <li>1. Policy profiling to produce HKC position and early warning messages</li> <li>2. Monitoring policy reforms through participatory research</li> <li>3. Conducting training on policy inputs, outputs and outcomes.</li> <li>4. Network and engage with lobby processes on national and international policies.</li> </ol>	Policy Analyst
<b>Unit</b>	<b>Purpose</b>	<b>Objectives</b>	<b>Key Functions</b>	<b>Head of Unit</b>
<b>Information and Public Engagement</b>	Citizens have increased access to policy and decision-making information	<ol style="list-style-type: none"> <li>1. Information on poverty-related policies and decisions accessible to citizens in user-friendly formats</li> <li>2. Participatory community debates on poverty-related policies and decisions are taking place.</li> </ol>	<ol style="list-style-type: none"> <li>1. Engage with the implementation of HKC 4D model processes involving design, digest/ demystify, disseminate and dialogue of policies.</li> <li>2. Generate materials for policy participation during formulation, monitoring and implementation</li> <li>3. Provide technical input in producing illustrations, cartoons, message boxes, captions, and quotes related to policy knowledge</li> <li>4. Establish a solid reputation for Hakikazi as a reliable source of information on development issues in general and as an organization able to provide detailed insights regarding issues in its operational area.</li> <li>5. Ensure that Hakikazi has the capacity to produce quality media materials on a regular and sustainable basis and to reply promptly and efficiently to requests for information.</li> <li>6. Manage the documentation and resource centre for Hakikazi Catalyst.</li> <li>7. Identify and liaise with other information sources at regional, national, and international levels in respect with acquiring and sourcing knowledge materials.</li> <li>8. Produce communication products such as press releases, newsletters and upload to website</li> <li>9. Coordinate public events including conferences, print media, TV, radio shows, and exhibitions.</li> <li>10. Build relations with like minded institutions through different forums and networks.</li> </ol>	Information and Public Engagement Manager
<b>Unit</b>	<b>Purpose</b>	<b>Objectives</b>	<b>Key Functions</b>	<b>Head of Unit</b>
<b>Accountable Governance for Economic and Social Rights Unit</b>	To influence the government to be more responsive to the economic and social rights of vulnerable groups.	<ol style="list-style-type: none"> <li>1. Democratic systems and practices strengthened</li> <li>2. Improved ethics and integrity of public leaders</li> </ol>	<ol style="list-style-type: none"> <li>1. Provide civic education on Citizenry Rights, Roles and Responsibilities.</li> <li>2. Build capacities of community groups to monitor and report on performance of democratic lower governance statutes – e.g. village</li> </ol>	Accountable Governance Manager (Unit Teams involved)

		<ol style="list-style-type: none"> <li>3. Effective implementation of frameworks through which communities engage with governments</li> <li>4. Positive attitude of government officials to the needs and rights of the vulnerable groups</li> </ol>	<p>statutes.</p> <ol style="list-style-type: none"> <li>3. Build capacity of community groups to promote inclusive and equitable development.</li> <li>4. Promote processes that address cultural impediments e.g. women empowerment, capacity to address Gender Base Violence.</li> <li>5. Facilitate Economic and Social Justice civic education through adult literacy.</li> <li>6. Build capacity of community dialogue platforms to analyze and provide interface feedback on good governance issues.</li> <li>7. Facilitate active functioning of Centres for Development Learning and Action (CEDLA) to share information, express opinions, promote events, announce decisions and communicate on topics related to local development.</li> <li>8. Provide training to community groups on the use of resource kits produced by other HKC units on democratic governance.</li> <li>9. Facilitate processes which enable citizens to monitor and feedback on Ethics and Integrity of Public Leadership e.g. monitor anticorruption strategy, response of leaders to issues addressed by communities etc.</li> <li>10. Work with government leadership to bridge governance knowledge gap between communities and government.</li> </ol>	<p>include: Governance, Civic Education and Capacity Building of Vulnerable Groups e.g. Pastoralists, PLHAs)</p>
<b>Unit</b>	<b>Purpose</b>	<b>Objectives</b>	<b>Key Functions</b>	<b>Head of Unit</b>
<b>Social Audit Unit</b>	To make contribution to the Poverty Monitoring Master Plan by providing evidence on whether or not poverty is changing and how Government's efforts to reduce poverty are making an impact	<ol style="list-style-type: none"> <li>1. To give an indication of how Poverty Reduction Policies are working.</li> <li>2. To ensure good governance and exact more accountability and transparency in resources allocated for poverty reduction strategy.</li> <li>3. To ensure the sharing of information in order to encourage greater transparency in terms of resource allocation versus actual expenditure</li> <li>4. To enable communities assess satisfaction on public service delivery.</li> </ol>	<ol style="list-style-type: none"> <li>1. Establish and strengthen participatory monitoring of public resources and evaluation capacities of focal NGOs/CBOs, and community based monitoring Committees. Tools to be used include Poverty Audit, PETs and Local Governance Barometer.</li> <li>2. Organise independent budget analysis &amp; tracking of central government transfers to local government authorities.</li> <li>3. Facilitate economic and budget literacy training.</li> <li>4. Facilitate Service Delivery Satisfaction Surveys using participatory approaches.</li> </ol>	Social Audit Coordinator
<b>Livelihoods and Resilience Unit</b>	Enhance the capacity of vulnerable groups for social protection and change.	<ol style="list-style-type: none"> <li>1. Effective and transparent engagement between citizens and government</li> <li>2. Strengthen formal and informal</li> </ol>	<ol style="list-style-type: none"> <li>1. Promote both intra and inter livelihoods diversification intervention for vulnerable groups (small producers and pastoralists) through training and linking</li> <li>2. Facilitate participation of vulnerable groups by strengthening their</li> </ol>	Livelihoods and Resilience Coordinator

		<p>networks that promote social protection systems for vulnerable groups</p> <ol style="list-style-type: none"> <li>3. Increase capacity of communities to organise groups to secure their rights, including the right to a fair reward</li> <li>4. Build the resilience of communities to manage climate change</li> </ol>	<p>voices and choices in policy reforms</p> <ol style="list-style-type: none"> <li>3. Training, linking, stimulating dialogue and advocacy for small vulnerable producers to take action on livelihood constraints and opportunities.</li> <li>4. Build capacity of vulnerable groups to claim and own priority capital asserts (human, social, political, natural, and financial).</li> <li>5. Build capacity of vulnerable groups to strengthen social capital and other protective safety nets</li> </ol>	
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### **Summary of the DCF Project 2016 - 2018**

The Decentralized Climate Finance (DCF) Project was being implemented by the Tanzanian President's Office – Regional Administration and Local Government (PO-RALG) which was the National Coordinator in collaboration with the Vice President's Office, Ministry of Finance and Planning, Institute of Rural Development Planning (IRDP), Local Government Training Institute (LGTI), Tanzania Meteorological Agency (TMA) and Hakikazi Catalyst. The project was funded by UKAID with technical support from International Institute of Environment and Development (IIED) and United Nations Capital Development Fund (UNCDF).

The project aimed at providing technical and financial support to the government of Tanzania to build its capacity to mainstream climate change into local government planning and financial systems and to prepare PO-RALG to be accredited as a National Implementing Entity (NIE) to the Green Climate Fund (GCF). The expected outcomes of the project after 5 years of its implementation were;

- i. PO-RALG to become a National Implementing Entity of the GCF, giving it Direct Access to climate finance
- ii. Establishment of an operational Performance-Based Climate Resilient Grant system – A Mechanism established for accessing and managing global/national climate finance and channeling to LGAs
- iii. Establishment of a functional decentralized climate finance and planning mechanisms in 15 LGAs – A Mechanism established for LGAs to mainstream climate change into planning & budgeting
- iv. Implementing public goods investments that build climate resilience of climate vulnerable people in 15 LGAs
- v. Generation of evidence and learning on the effectiveness of devolved climate finance investments for improving community resilience, differentiated by gender and used to inform policy

The project was designed as a pilot study in Monduli, Longido and Ngorongoro district councils and expected to scale up to other 12 district councils in Tanzania mainland. The following is a summary of DCF projects invested/implemented in the district councils of Monduli, Longido and Ngorongoro.

Some pictures showing the types of projects implemented through the decentralized climate funds. The projects were identified and prioritized by the communities.

Figure 9: Monduli District Council



Water storage tank constructed at Meseranijuu Village through a decentralized climate funds.



Water storage tank, water delivery points (DPs) and cattle trough in Irerendeni Village, Engaruka

Figure 10: Longido District Council



Rehabilitated cattle dip in Lerangwa village.



Food storage warehouse at Mairowa ward



The rehabilitated Mairowa veterinary laboratory.

Figure 11: Ngorongoro District Council





The Installed Meteorological Stations at Ngaresero Primary School, Digodigo Secondary School, district Council Headquarter, Ololosokuan and Malambo.

Annex 5: Proposed Memorandum of Understanding for EE

## **PROPOSED MEMORANDUM OF UNDERSTANDING**

MEMORANDUM OF UNDERSTANDING FOR EXECUTING THE KARATU CLIMATE RESILIENCE AND ADAPTATION PROJECT FOR HADZABE AND DATOGA COMMUNITIES” (KARAHADA)

BETWEEN

HAKI KAZI CATALYST of P.O.Box781 Arusha- Tanzania  
and  
KARATU DISTRICT COUNCIL of P.O.Box190 Karatu- Arusha

NOW THIS AGREEMENT WITNESSES THE FOLLOWING:

1. That, the parties shall jointly execute the project titled “Karatu Climate Resilience And Adaptation Project for Hadzabe and Datoga Communities” (KARAHADA)
2. The parties of this agreement shall establish the Project Steering Committee (PSC) which will consist fifteen members and among of these members two shall come from the Principle Executing Entity, two from the Co-executing entity, four members shall come from public institution such as Regional Administrative Secretary’s office, National Environment management Council, Sector ministries involved in the project and one member shall come from Tanzania Civil Society Forum on Climate Change.
3. That, the main function of the committee shall be to oversee project implementation.
4. That, the chairperson of Co-Executing Entity shall be the chairperson of the Committee whereas the Executive Director of the Principal Executing Entity shall be the Secretary of the Committee, while the Executive director of the Co-Executing Entity shall be the Co-secretary of the Committee
5. That, in this agreement the Principal Executing Entity shall lead and coordinate project implementation

6. That, the Co-Executing Entity shall provide staff for project implementation.

7. That, the parties in this agreement shall open a special bank account for the project.

8. That, such special project bank account shall consist of four signatories whereby two shall come from the Principal Executing Entity and the other two shall come from the Co-Executing Entity.

In witness, therefore the two parties have executed those present on the date and in the manner hereafter appearing

## **Annex 4: Proposed Terms of Reference for KARAHADA Project Coordinator**

### **1. Introduction**

Karatu District Council and Haki Kazi Catalyst HKC through NEMC are implementing the project titled “Karatu Climate Resilient and Adaptation project for Hadzabe and Datoga Communities”(KARAHADA) project funded by the Adaptation Fund (AF). This project will be implemented for three (3) years. The project seeks to reduce the vulnerability of Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities in Karatu district to climate change, focusing on the five key issues, water scarcity, tourism, forest restoration, diversified livelihoods and good governance. Climate change in Karatu is manifested in increased mean annual temperatures and increased variability in rainfall patterns. Climate change projections predict that mean annual temperatures will continue to increase in the district and that variability in rainfall patterns will be exacerbated. Over the past decades, the seasons appear to have been reduced in number of days and patterns, such that what was termed as good seasons has disappeared. Currently, experience shows that seasons are progressively being replaced by a more simplified pattern of events whose characteristics are predominantly hot (hotter) and wet. Rains are more erratic, coming at unexpected times in and out of the seasons. In particular, there is less predictability as to the start of rainy seasons. In most cases rainy seasons are shorter. Dry periods have increased in length and drought is more common. With recognizable seasons, unusual and “unseasonable” events are occurring more frequently, including heavy rains in dry seasons, dry spells in rainy seasons, and storms at unusual times and temperature fluctuations. It is now common to witness rains which are more violent and intense and punctuated by longer dry spells within the rainy seasons. The impacts of such shift in seasonality and climate

trends, have already severely disrupted food availability, led to the displacement of communities, loss of life and assets, and caused an overall reduction of community resilience.

The project will increase climate resilience of rural communities and will therefore reduce the impacts of climate change for communities in Karatu district particularly in Baray, Endamaghan and Mang'ola wards. This will be achieved through implementation of integrated concrete adaptation measures covering the following sectors: water, agriculture, livestock and forest management. In this way the project will adopt a comprehensive integrated approach in order to tackle the multiple effects of climate change as well as to enhance the population's adaptive capacity through the following five components:

- (i) Enhancing integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola in Karatu District
- (ii) Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghan Wards in Karatu District
- (iii) Improving climate change resilience of ecosystems and non- timber products for selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District
- (iv) Undertaking studies on climate risks and vulnerability with a particular focus on most vulnerable sectors including water, agriculture, nutrition in three wards of Baray, Endamaghan and Mang'ola in Karatu District
- (v) Enhancing capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang'ola to design and implement climate change adaptation interventions and improve level of understanding of climate change related issues

## **2.Objectives of the Assignment**

The objectives of the project coordinator will be to ensure well coordinated and effectively implemented project within the Tanzanian context but taking into account AFs financial management rules. The PC will be responsible for the overall management of the project, including the mobilization of all project inputs and the supervision of project

inputs and the supervision of the project staff, consultants and sub contractors. The PC will report to the District Executive Director (DED) for day to day project activities and for all of the projects substantive and administrative issues. From the strategic point of view will report on a periodic basis to the Project Steering Committee. The PC will perform a role with relevant district technical departments, NEMC implementing partners (activity/ sub project contractors) and other stakeholders. Additional details are in the approved project document.

### **3.Duties and Responsibilities**

The project coordinator (PC) will lead the project team and provide overall operational management for the successful execution and implementation of the project. The PC has the daily responsibility for management, coordination and supervision of the implementation of the project and delivery of the result in accordance with the full project proposal and agreed work plans. The PC will report to the Project Steering Committee (PSC). The responsibilities of the PM will include the following:

- Oversee and manage project implementation, monitor work progress and ensure delivery of output and within the specified constraints of time and cost outlined in the project document.
- Report to Karatu District/ HKC and PSC regarding project progress.
- Develop and facilitate implementation of a comprehensive monitoring and reporting system.
- Ensure timely preparation of detailed annual work plans and budgets for approval by the PSC.
- Assist in the identification, selection of consultants and other experts as required.
- Supervise, coordinate and facilitate the work of the administrative/ technical team (consisting of the assistant coordinator, finance/ administration staff and consultants).
- Control expenditures and assure adequate management of resources.
- Establish linkages and networks with on-going activities by other government and non-government agencies in the United Republic of Tanzania.
- Provide input to management and technical reports, and other documents as described in the M & E plan for the overall project. Reports should contain assessments of progress in implementing activities, including reasons for delays and recommendations necessary improvements.
- Inform the Karatu District Authorities/ HKC and PSC, without delay, of any issue or risk which might jeopardize the success of the project.



- Liaise and coordinate with NEMC on a regular basis.

#### **4. Qualifications and experience**

- Master's degree in environment and natural resource management, agriculture, climate change adaptation or a closely related discipline.
- A minimum of 10 years' relevant working experience with 5 years specific experience in climate change adaptation projects.
- Demonstrated solid knowledge of climate change adaptation management techniques, practices and technologies.
- Demonstrated solid knowledge of environment and ecological restoration with an emphasis on water resource management.
- Experience in the public participation and development process associated with environmental and sustainable development and asset.
- Demonstrated working experience with Adaptation Fund or other similar donor funded projects.

##### **Skills and competencies:**

- i)* Experience in working and collaborating within governments is an asset.
- ii)* Effective communication skills both written and oral in English.
- iii)* Creative and independent report writing skills and ability to structure persuasive arguments in a diplomatic way is highly desirable.
- iv)* Excellent interpersonal skills
- v)* Strong IT skills and should be computer literate in MS Office and project management software
- vi)* Strong team leadership skills.
- vii)* Good moderating skills (in workshops, facilitation and policy making skills), presentation (I high level meeting), communication (with flair and enthusiasm), in project and time management advisory skills and experience in empirical work.
- viii)* Ability to build consensus, collaboration and maintain effective working relationships within internal and external stakeholders, at all levels including in an international and cross- cultural context.

##### **Terms of Reference for a Project Advisor -PA**

The role of the project gender and climate change advisor will be to provide technical support of the implementation of the project by ensuring gender consideration are applied to project implementation at all times taking account of Tanzanian context and adhering to AF gender policy.

The PA will report to PMU for project implementation advise and will have linkages with the PSC secretariat and NIE for ensuring the right advise is provided.

From the strategic point of view the PA will report on a periodic basis to the PMU and PSC secretariat. The PA will also advise relevant district technical departments on how best to mainstream gender and climate change in their plans and projects. The PA will liaise with NEMC on gender related issues on a regular basis

### **5. Qualifications and experience for PA**

- Master's degree in gender and climate change related studies. A PhD in gender or women or rural development studies is preferred.
- A minimum of 10 years' relevant working experience with 5 years specific experience in climate change adaptation projects.
- Demonstrated solid knowledge of gender and climate change adaptation management techniques, practices and technologies.
- Demonstrated solid knowledge of building genderd community instituions.
- Experience in the stakeholder participation and development process associated with environmental and sustainable development.
- Demonstrated working experience with Adaptation Fund or other similar donor funded projects.

#### **Skills and competencies:**

- ix)* Experience in working and collaborating within governments is an asset.
- x)* Effective communication skills both written and oral in English.
- xi)* Creative and in dependent report writing skills and ability to structure persuasive arguments in a diplomatic way is highly desirable.
- xii)* Excellent interpersonal skills
- xiii)* Strong IT skills and should be computer literate in MS Office and project management software
- xiv)* Strong team leadership skills.
- xv)* Good moderating skills (in workshops, facilitation and policy making skills), presentation (I high level meeting), communication (with flair and enthusiasm), in project and time management advisory skills and experience in empirical work.
- xvi)* Ability to build consensus, collaboration and maintain effective working relationships within internal and external stakeholders, at all levels including in an international and cross- cultural context.

**Annex 7: Environmental and Social Management Plan (ESMP) for Karatu District Council**

**THE UNITED REPUBLIC OF TANZANIA  
KARATU DISTRICT COUNCIL**



**Karatu Climate Resilience and Adaptation project for Hadzabe and Datoga communities  
(KARAHADA)**

**ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FOR  
KARATU CLIMATE RESILIENCE AND ADAPTATION PROJECT FOR HADZABE  
AND DATOGA COMMUNITIES (KARAHADA)**

**September 2021**

## 1. INTRODUCTION

### 1.1 Project Background

The project will specifically target the most vulnerable groups who have less resource to adapt to climate change in Karatu and is built on the principles of local empowerment through engagement of vulnerable and grassroots communities such as Hadzabe (hunters and gatherers) and Datoga (blacksmith) tribes and village governments and community groups. The overall objective of this project is to enhance resilience and adaptive capacity to effects of climate change while reduce vulnerability of selected communities in Karatu District. Specifically, the project will address the following objectives:-

- (i) To Enhance integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola in Karatu District
- (ii) To enhance climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang'ola and EndamaghangWards in Karatu District
- (iii) To Improve climate change resilience of forests and non- timber products for selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District
- (iv) To Promote climate change resilience of health systems at three wards of Baray, Endamaghan and Mang'ola in Karatu District
- (v) To Enhance capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang'ola to design and implement climate change adaptation interventions and improve level of understanding of climate change related issues

The project has the following five (5) components:

**Component 1:** Enhancing integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola in Karatu District

**Component 2:** Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang'ola and EndamaghangWards in Karatu District

**Component 3:** . Improving climate change resilience of ecosystems and non- timber products for selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District

**Component 4:** 4. Undertaking studies on climate risks and vulnerability with a particular focus on most vulnerable sectors including water, agriculture, and nutrition in three wards of Baray, Endamaghan and Mang'ola in Karatu District

**Component 5:** Enhancing capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang'ola to design and implement climate change adaptation interventions and improve level of understanding of climate change related issues

The following are expected outcome of the project:

- a) Increased food security, income and resilience to climate change impact through Climate Smart practices in selected villages in the three wards of Baray, Endamaghan and Mang'ola
- b) Enhanced climate resilient rural water supply system in vulnerable communities of Hadzabe (gatherers and hunters) and Datoga (Blacksmith) in selected villages in the three wards of Baray, Endamaghan and Mang'ola
- c) Improved forests services and functions to sustain climate change resilient livelihoods in selected villages in the three wards of Baray, Endamaghan and Mang'ola
- d) Improved Health and sanitation infrastructure and services for Hadzabe (hunters and gatherers) and Datoga (blacksmith) in selected villages of the three wards of Baray, Endamaghan and Mang'ola
- e) Improved capacity of Karatu District Council and Hadzabe (hunters and gatherers) and Datoga (Blacksmith) communities in planning, implementing and monitoring climate adaption actions

## **1.2 Project Coordination and Implementation Arrangements**

### ***1.2.1 The National Implementing Entity (NIE):***

The project will be implemented by the National Environment Management Council (NEMC). NEMC has significant experience in Implementing projects and programs of this nature, with dedicated Unit for climate change adaptation and executions of the NIE mandate related to the AF operations in the United Republic of Tanzania. The following implementation services will be provided by NEMC under this project:

- i) Overall coordination and management of NIE functions and responsibilities;
- ii) Facilitate interactions with AF secretariat and other related stakeholders at global scales;
- ii) Oversight of project implementations and reporting on budget performance;
- iii) Quality assurance and accountability for outputs and deliverables during project development, implementation and on completion phases;
- iv) Receipt, management and disbursement of the AF's funds in accordance with the financial standards of the AF;
- v) Oversight and quality assurance of evaluation processes for project performance and ensuring that lessons learned/best practices are incorporated to improve future projects in the United Republic of Tanzania; and
- vi) General administration and support costs including legal services, procurement and supply management, IT and human resources management

### ***1.2.2. The Executing Entities:***

Haki Kazi Catalyst (HKC) jointly with Karatu District Council will be the overall coordinator of the project, through the services of a Project Management Unit (PMU), which will be staffed with a Project Coordinator, Monitoring and evaluation officer, a Project Driver and a Project Accountant who will also serve as Project Administrative Support Staff. Strong participation of other District staff will be at the project implementation level as activities involve cross-sectoral coordination. A Project Steering Committee will be set up to steer the project execution. The Committee will be chaired by the Chairperson of Karatu District Council. The Secretariat of the Committee will be the PMU through the District Executive Director and the Executive Director of HKC. The members of Project Steering Committee will be District Executive Director of Karatu, Chairperson of the Karatu District Council, one representative from each of the following sector ministries: the ministry responsible for rural

water supply (RUWASA) , the ministry responsible for local governments ministry responsible for agriculture, the ministry responsible for livestock, the ministry responsible for environment and climate change, the ministry responsible for forestry and natural resources, ministry responsible for energy, ministry responsible for industries, ministry responsible for tourism. Other members will an officer from National Environment Management Council (NEMC), two members from HKC, one member from the Tanzania meteorological Agency, and one member of Tanzania Forest Services Agency.

### **1.3 Project Beneficiaries**

The targeted project beneficiaries include mainly the local communities. Such communities include hunters and gatherers, blacksmith farmers, schools, health facilities, vocational college, other rural communities who are vulnerable to climate change effects in Karatu district council. The vulnerable groups including women, youth, the elderly, the physically challenged, flood and drought victims and HIV/AIDS orphans form a special category of beneficiaries whose interest should be safeguarded by the project implementation team/institutions.

## **2. COMPONENTS OF THE ESMP FOR THE KARATU CLIMATE RESILIENCE AND ADAPTATION PROJECT FOR HADZABE AND DATOGA COMMUNITIES-KARAHADA**

The ESMP for the KARAHADA-Project includes the following components:

- (a) Subproject activity;
- (b) Potential adverse effects/impacts;
- (c) Proposed mitigation measures;
- (d) Institutional responsibility for mitigation (including enforcement and coordination);
- (e) Monitoring requirements;
- (f) Responsibility for monitoring and supervision;
- (g) Implementation schedule; and
- (g) Cost estimates.

A template of the Environmental and Social Management Plan to guide implementation is provided as Table 2

### **3. PREVAILING POLICY LEGAL AND INSTITUTIONAL FRAMEWORK FOR ENVIRONMENTAL AND SOCIAL IMPACT MANAGEMENT**

This section highlights the policies, legal and institutional frameworks for environmental and social impacts management of the proposed projects in the United Republic of Tanzania..Generally, the implementation of this project will be governed by several national guidelines, policies and regulations including National Environmental Policy, 1997, National Water Policy, 2002, Forestry Policy 2002, the National Environmental Management Act 2004, Water Resource Management Act, 2009, National Agriculture Policy 2013, Livestock policy 2004, The National Gender Policy, 2002, Community Development Policy, 1996, The Supply and Sanitation Act, 2009, The HIV and AIDs (Prevention and Control) Act of 2008, Occupational Health and Safety Act, 2003, National Climate Change Response Strategy 2021, National Biodiversity Strategy and Action Plan (NBSAP) 2015-2020, Water Safety Plan – Resilient to Climate Change for Rural Water Supply Services (WSP-RCC-RWS) 2015, Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulation (2005) and Water Quality Management Standards Regulations 2007.

The National Environmental Management Act 2004 have provisions that protect and enhance the quality of natural and cultural environment of Tanzania for the benefit of both present and future generations, and assures all citizens a sound and safe environment adequate for their health and wellbeing. It is the overall guiding document on administration and management of environment matters and social safeguards. It provides for legal and institutional framework for sustainable management of environment in Tanzania. It outline principles for management, impact and risk assessment, prevention and control of pollution, waste management, environmental quality standards, public participation, compliance and enforcement. Sections 82(1) and 230(2) (h) and

(q) of EMA Cap.191 Of 2004 EIA and AE Regulations, 2005 provide for the procedures to conduct EIA and Audit; and identifies/categorizes projects which are mandatory and non – mandatory to conduct EIA. According to the National Environmental Management Act (2004) and the Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulation (2005) and Sectorial Regulations and Guidelines of the United Republic of Tanzania, this project do not do not fall within the First Category of projects that require full EIA, as the proposed interventions of the project possess no significant negative impacts on the environment and to the community. There is no activity under any component which require full EIA as magnitude of impacts are small and location of the interventions to do not require further assessments. However, Impact Assessment (EIA) and Environmental Audit (EA) Regulation (2005) will guide implementation of ESMP during executions of project activities under component 1 to component 5.

The National Water Resource Management Act, 2009, National Environmental Management Act 2004 , National Water Quality Management Standards and Regulations, 2007 and Water Safety Plan –Resilient to Climate Change for Rural Water Supply Services (WSP-RCC-RWS) 2015 , which provide for “Water Use Rights and Permit Standards”. The project shall comply with the relevant sections of the Acts, Standards and regulations to ensure sustainable utilization and conservation of water with regards to water supply and micro-irrigation related activities under component 2 as water supply activities will largely be dominated with construction of boreholes and development of supply systems. It is expected that, water user permits shall be required to be processed. Probable project micro-irrigation-related activities may require some letters and permits for water users, but this will easily processed by the Karatu District Authority through the Karatu Rural Water Supply Agency (RUWASA) Irrigation interventions in Tanzania are required to adhere to the National Irrigation Act, 2013 (No. 5 of 2013). The Act provides detailed standards and guidelines for farmers and block farming groups to form “Water User Associations) stressing the need for communities to work together and manage water resources sustainably. The project will abide to these standards and guidelines.

The project will abide to Forest Act, 2002 (Act No. 7 of 2002) as well and the Environmental management Act 2004 which provide guidance for reforestation, tree planting, restoration, reclamation and rehabilitation of ecosystems and all activities that involve planting of trees and environmental conservation. The project shall apply the standards under the Long term Perspective Plan 2010-2025 and its Five year development Plans particularly the Third National Five Year Development Plan 2020/21-2025/26. Community Development Policy 1996, National Water Policy 2002 and Cooperative Development Policy, 2002 for establishment of community cooperative their operational procedures and relevant gender policies, as well as other standards that protect women, the elderly, children and most vulnerable households. The project will also align with financial planning, management and audit guidelines of the United Republic of Tanzania.

Table below provides key policies, legislation and strategies which will guide the implementation of this ESMP.

Table 1: National Policies, legislation and strategies which implementation of this ESMP

Name of Policy	Relevance to the proposed project
National Environmental Policy, 1997	Although, the proposed project is viewed to promote social and environmental integrity, its implementation need to be guided by environmental management tools which promote environmental friendly technologies to support actions under component 2,3 and 1; and for stakeholders involved and gender considerations
National Water Policy, 2002	The policy identifies the importance of water resources to promote social and economic development including for irrigation and water supply for domestic use. It addresses the need to have strong institutional to ensure standards and guidelines are adhered for rural water supply in construction and service. The policy is more relevant to activities under component 2 and 1



The National Land Policy,1997	The policy statement provides for the strategic planning and rapid appraisal identification of key planning issues in land and environmental management, and in the provision of housing, infrastructure and services through participatory manner. The policy is more relevant to all activities described under component 1,2 and 3
The National Investment Promotion Policy, 1996	The policy identifies the need to conserve and protect the environment for sustainable development; but also the pledge for provision of environmental standards to be subscribed by all investment projects.
The National Energy Policy 2003	The Policy requires investors to promote environmental impact assessment as a requirement for all energy programmes and projects. Promote energy efficiency and conservation as a means towards cleaner production and pollution control measures. Promote development of alternative energy sources including renewable energies and wood fuel end-use efficient technologies to protect woodlands and biomass energy.
National Sustainable Industrial Development Policy, 1996	The policy advocates sustainable industrial production and waste minimization through cleaner production options
National Strategy for Growth and Poverty Reduction (MKUKUTA The NSGRP, 2008	The NSGRP paper recognizes the roles of industries in poverty eradication, therefore should strategically be established in that order bigger vision with mainstreaming environment as a crosscutting issues.
Tanzania Vision 2025	The Vision recognizes that, Tanzania's economy is highly dependent on the climate, because a large proportion of GDP is associated with climate-sensitive activities, particularly agriculture. It elaborates that, extreme weather related events such as droughts and floods have already led to major economic costs in the country, reducing long- term growth and affecting millions of people and their livelihoods and calls for adaptation actions
Community Development Policy, 1996	Community development is realized when people are enabled with strong and sustainable adaptive capacity to climate change effects and identify their climate related problems and plans ways toward solving them. Therefore community member should be involved in planning, decision-making and implementation of development and adaptation initiatives
The National Gender Policy, 2002	The Policy provides for guidelines in establishing and development of gender sensitive plans and strategies in all projects, sectors and institutions; while ensuring that there are equal and quality opportunities for both men and women. This project takes policy guidance on gender to foster its implementation in-line with the AF's environment and social policy
The National Health Policy, 2003	The document addresses the National goals on universal access to safe and clean water; with reduction of malnutrition diseases burden, infant and maternal mortality while increasing life expectancy by promoting environmental health and sanitation. For this to be realized improved environmental cleanliness and monitoring of water quality and safety are a key requirement.

National Agriculture Policy 2013	The objective of the Agriculture policy is to improve food security and alleviate poverty, while promoting integrated and sustainable use and management of natural resources such as land, soil, water and vegetation. It also recognizes and put guidance to promote adaptation and resilience actions in the sector. Activities under component 1,2 and 3 much very much with the directives of this policy.
Livestock policy 2004	Recognize that Tanzania is a low-income rural economy, with livestock contributing 30% to agricultural value added and 7% to and to Poverty reduction, and 99% of the livestock stock is in the hands of small farmers and pastoralists who are vulnerable to impacts of climate change. Activities under component 2 and 3 will be implemented in line with directives of this policy.
Forestry Policy 2002 under review	The policy recognizes that, climate change impacts affect many forest and ecosystem processes. It guides to protecting and conserving biodiversity through application of best practices in soil and water conservation; expanding forest cover and use of adaptive species as well as linking conservation areas as vital measures in adapting to climate change and ensuring continuity in the availability of ecosystem goods and services hence improving the livelihoods of Tanzanian. It also promotes bee keeping and tree planting as potential alternative for livelihood improvement as adaptation measures
National Climate Change Response Strategy 2021	This Strategy has been developed with a Vision to enhance climate resilience in Tanzania and reduce the vulnerability of natural and social systems to climate change. The Mission is to establish efficient and effective mechanisms to address climate change adaptation and achieve sustainable national development through mitigation actions with enhanced international cooperation. The goal of this Strategy is to enable Tanzania to effectively adapt to and participate in global efforts to mitigate to climate change with a view to achieving sustainable economic growth in the context of the Tanzania's national development blueprint, Vision 2025; Five Years National Development plans; and national cross sectoral policies in line with established international policy framework. The strategy aims to build the capacity of the nation to adapt to climate change impacts and to enhance resilience of ecosystems to the challenges posed by climate change including enhance public awareness on climate change issues
NDCs 2020-2025	Guided by the Paris Agreement Work Programme adopted at COP24 focusing on the NDCs of the Tanzania intends to contributing to reductions in climate vulnerability and enhance long-term resilience to the adverse impacts of climate change; In doing so, it will significantly reduce the impacts of spatial and temporal variability of rainfall including droughts and floods which have long-term implications to all productive sectors and ecosystems, particularly the agricultural sector. It puts, adaptation measures which are expected to significantly reduce the risks of climate related disasters compared to the current situation and enhance access to clean and safe water from 60% to above 90% of the total population in both rural and urban areas and call the government to put in place adaptation plans to all levels of government structures including at village levels

<p>National Environmental Management Act Cap 191 of 2004 (EMA, 2004)</p>	<p>An overall guiding document on administration and management of environment matters and social safeguards. It provides for legal and institutional framework for sustainable management of environment in Tanzania. It outline principles for management, impact and risk assessment, prevention and control of pollution, waste management, environmental quality standards, public participation, compliance and enforcement The Act, further provides the basis for implementation of international instruments on environment. The proposed project do not conflict with any provisions of this Act. However, EMA, 2004 will guide its implementations as it promotes actions geared to enhance climateresilient in Tanzania</p>
<p>National Biodiversity Strategy and Action Plan(NBSAP) 2015-2020</p>	<p>Tanzania is one of the twelve mega-diverse countries of the world endowed with different natural ecosystems that harbor a massive wealth of biodiversity. The country hosts 6 out of the 25 world renowned biodiversity hotspots hosting more than one-third of the total plant species on the continent and about 20% of the large mammal population. The Biodiversity wealth contributes significantly to the sociocultural, economic and environmental goods and services to the country and peoples` livelihood.</p> <p>The NBSAP 2015-2020 highlights the value and contribution of biodiversity to human well-being; the causes and consequences of biodiversity loss; legal and institutional framework; lessons learned; national biodiversity targets; strategies and actions needed to mainstream biodiversity into development, poverty reduction and natural resource management plans. NBSAP 2015-2020 has goals to: a) <i>Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society;</i> b) <i>Reduce the direct pressures on biodiversity and promote sustainable use</i> c) <i>To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity;</i> d) <i>Enhance the benefits to all from biodiversity and ecosystem services;</i> and e) <i>Enhance implementation through participatory planning, knowledge management and capacity building. This project will promote ecosystem and biodiversity conservation through actions under component 1,2,and 3</i></p>
<p>Water Resource Management Act, 2009</p>	<p>The Act provides for the principles of integrated sustainable water resources management (precautionary approach, polluter pays principle, principle of ecosystem management, principle of public participation, principle of international cooperation and the principle of common but differentiated responsibilities). The Act, in Sect.8 and Sect.9 further provides for Strategic Environmental Assessment and Environmental Impact Assessment practice with respect to EMA Cap.191 of 2004. It also identifies the importance of water resources to promote social and economic development including for irrigation and water supply for domestic use. It addresses the need to have strong institutional to ensure standards and guidelines are adhered for rural water supply in construction and service. Water Resource Management Act, 2009 is more relevant to activities under component 2 and 1</p>

<p>The Water Supply and Sanitation Act, 2009</p>	<p>This Act has several provisions on the right of every citizen to have access to efficient, effective and sustainable water supply and sanitation services; while taking into account the need to protection and conservation of water resources. It also addresses provisions of safe and clean water for rural villages and combat the effects of climate induced water scarcity in vulnerable communities.</p>
<p>Employment and Labor Relation Act, 2004</p>	<p>Prohibits employment of children less than 18 years of age, stipulated types of contracts that can be entered with employees. The Act makes provisions for core labor rights; establishes basic employment standards, provides a framework for collective bargaining; and provides for the prevention and settlement of disputes. Activities under Component 1,2,3 and 4 will involve employment of communities hence this Act will be adhered and obeyed by the Project Management Unit</p>
<p>Occupational Health and Safety Act, 2003</p>	<p>The law deals with the protection of human health from occupational hazards. Among other provisions, it requires the employer to ensure safety of workers by providing appropriate safety gear at work place. Part V of the Act emphasizes the provision of adequate clean, safe and wholesome drinking water, sufficient and suitable sanitary conveniences and washing facilities in work places. This project will adhere to all relevant provisions of this Act</p>
<p>The National Land Act Cap113, 2002</p>	<p>The administration of land, land allocation and occupation in to public land and general land, village land and reserved land. The Act provides that hazardous land is characterized of danger or degradation of or environmental destruction, if developed. Under this Act, the right to occupancy is liable; though require prompt payment fees or compensation in case of acquisition from owner. The proposed project will not occupy any land for investments. It is not planning to resettle any person during its implementations or its any phase of its lifetime.</p>
<p>The HIV and AIDs (Prevention and Control) Act of 2008</p>	<p>Employer is required to coordinate a workplace programme on HIV and AIDS, for the purposes of prevention the spread but also serving the already infected without stigma. Activities under component 1, 2, 3 and 4 empowers vulnerable and marginalized groups and girls who are vulnerable for new HIV and AIDS affections. This project improve the life quality and living standards of those community groups through income generating activities, water supply and improved farming systems</p>
<p>Workers Compensation Act No.20, 2008</p>	<p>The Act provides for compensation to employees for disablement of death or injuries or resulting from injuries or diseases sustained or contracted in the course of employment. Workers may be exposed to unforeseen hazards or environment risk during execution of activities under Component 1, 2 and 3, therefore the Act is relevant to this project and will guide executions of project activities.</p>

EIA and Audit Regulations,2005	Made Under Sections 82(1) and 230(2) (h) and (q) of EMA Cap.191 Of 2004, these Regulations provides for the procedures to conduct EIA and Audit; it categorizes the EIA mandatory and non – mandatory projects EIA. The Regulations, further depicts the writing and contents of EIS document. However, since this project has no significant negative impacts on the environment and to the community, no EIA is proposed to be conducted.
Environmental HazardousWaste Regulation, 2009	The Regulations provides that hazardous wastes should be managed properly during storage, packaging, labeling, transport and disposal processes. It should be treated at factory level before disposal or discharge. This project will not use any hazardous materials to attract any disposal attentions.
Water Quality Management Standards Regulations 2007	These Regulations sets procedures for protecting human health and conservation of the environment; enforce minimum water qualitystandards prescribed by the National Environmental Standards Committee (NESC); enable NESC to determine water usages for the purposes of establishing environmental quality standards and values for each usage; and ensure all the discharges of pollutants take account the ability of the receiving water to accommodate without detriment to the uses specified for the waters concerned. The proposed water supply is expected to meet the standards described in these regulations

**Table 3: Relevant regional and International Conventions**

Name of International Conventions , Protocols and Agreement	Relevance to the proposed project
<p>United Nations Convention on Biological Convention (UNCBD)</p>	<p>The United Nations Convention on Biological Diversity (CBD) was negotiated under the patronage of the United Nations Environment Programme (UNEP). It was opened for signature at the June 1992 UN Conference on Environment and Development (UNCED) and entered into force on 29 December 1993, ninety days after the 30th ratification. As of October 1998, more than 170 countries had become Parties. The three goals of the CBD are to promote the conservation of biodiversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising out of the utilization of genetic resources. All partner States are signatory of this convention which was ratified by the government in 1993.</p> <p>The convention calls for the adoption of national strategies, plans and programmes for the conservation and sustainable use of biological diversity into their relevant sectoral and cross-sectional plans, programmes and policies. One of the tools that are prescribed for the management of biodiversity is environmental assessment.</p> <p>Article 14 of the convention deals with impact assessment and minimizing of adverse impacts of activities that are likely to cause significant adverse effects on biological diversity (Glowka, L, et al, 1992).</p> <p>The Convention contains a number of provisions of particular importance to indigenous peoples. These provisions are contained in Articles 8(j), 10(c), 17.2 and 18.4. Of these, Article 8(j) is regarded as the core provision. It calls upon Contracting Parties to respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biodiversity, subject to national legislation. The Convention encourages Parties to promote the wider application of such knowledge, innovations and practices with the approval and involvement of the indigenous peoples concerned. Article 8(j) also requires that benefits arising from the application of traditional knowledge, innovations and practices should be shared equitably with the indigenous communities concerned.</p> <p>The Convention does not use the term “indigenous peoples”, but refers to them in terms of “indigenous and local communities embodying traditional lifestyles”. This phrase is interpreted to include the people around the world who have not adopted industrialized practices to exploit agricultural, forest, animal and fisheries resources.</p> <p>Article 10, which deals with the sustainable use of components of</p>

	<p>biological diversity, requires that each Contracting Party protect and encourage the use of biological resources in accordance with traditional cultural practices that are compatible with conservation and sustainable use requirements. This Article has important implications for cultural survival, since particular species form the spiritual and economic focus of many indigenous cultures. The continued customary use of such species is therefore essential to the existence of such cultures.</p> <p>This project is expected to conserve biodiversity and promote improved ecosystem functions and services, mainly through the proposed actions under component 3 and 4</p>
<p>United Nations Framework Convention on Climate change (UNFCCC)</p>	<p>The United Nations Framework Convention on Climate Change (UNFCCC) provides the basis for global action "to protect the climate system for present and future generations".</p> <p>The Convention on Climate Change sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner. The convention promotes parties to take both adaptation and mitigation actions. The proposed project is well in line with actions proposed under the UNFCCC</p>
<p>United Nations Convention to Combat Desertification</p>	<p>The objective of the United Nations Convention to Combat Desertification (UNCCD) is to combat desertification and to mitigate the effects of droughts in seriously affected countries, especially those in Africa. It seeks to achieve this objective through integrated approaches to development, supported by international cooperation and partnership arrangements, in affected areas. It lays emphasis on long term strategies to focus on improved productivity of land and the rehabilitation, conservation and sustainable management of land and water resources, leading to improved living conditions, in particular at the community level. The proposed project is designed to implement the requirements of the UNCCD)</p>

The Paris Agreement	The Paris agreement Acknowledge that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity and promotes actions towards adaptation and mitigation contributions, and establishes the Nationally Determined Contributions (NDCs). This project is well reflecting the needs and guides of the Paris Agreement through Components 1,2,3,4 and 5. It is contributes to global adaptation and mitigation efforts.
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### 3. GUIDANCE FOR IMPLEMENTING ENTITIES ON COMPLIANCE WITH THE ADAPTATION FUND ENVIRONMENTAL AND SOCIAL POLICY

The Adaptation Fund (AF) has developed guidance on Environmental and Social Policy (ESP), approved in November 2013 and revised in March 2016, which ensures that projects and programmes supported by the Fund promote positive environmental and social benefits, and mitigate or avoid adverse environmental and social risks and impacts. “Managing these risks is integral to the success of the projects/programmes and the desired outcome”. The guideline has 15 principles. Out of these 15 principles; this project found the following 11 principles are relevant to the proposed project. These are Principle 1: Compliance with the Law; Principle 2: Access and Equity; Principle 3: Marginalized and Vulnerable Groups; Principle 5: Gender Equality and Women’s Empowerment; Principle 8: Involuntary Resettlement; Principle 9: Protection of Natural Habitats; Principle 10: Conservation of Biological Diversity; Principle 11: Climate Change; Principle 12: Pollution Prevention and Resource Efficiency; Principle 13: Public Health; Principle 14: Physical and Cultural Heritage; and Principle 15: Lands and Soil Conservation. This ESMP describes how this project will address and be compliance to the AF guidelines.

#### THE ENVIRONMENT AND SOCIAL MANAGEMENT FRAMEWORK

The Environmental and Social Management Plan outlined here below consists of a set of measures for: (a) screening (i.e. determination of potential adverse environmental and social impacts); (b) mitigation; (c) monitoring; and (d) institutional arrangements to be undertaken during planning, design, procurement, implementation stages of the planned activities to be financed out of proceeds of the project, to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels.

Some of the projects interventions / investments to be supported may have adverse environmental and social impacts that must be addressed before they are implemented. This ESMP is necessary to prescribe project arrangements for the preparation, review, approval and implementation of



activities to adequately address AF and national environmental and social safeguards issues and principles. It provides distinct arrangements for addressing environmental and social issues associated with the implementation of the project. **Table 5** provides a template for developing an ESMP that includes the actions needed to implement proposed mitigation measures.

**OBJECTIVES OF THE ESMP FOR KARATU CLIMATE RESILIENCE AND  
ADAPTATION PROJECT FOR HADZABE AND DATOGA COMMUNITIES  
(KARAHADA)**

The overall objective of this ESMP is to provide an Environmental and social screening for the projects. It is intended to be used as a practical tool during project implementation. It explicitly describes the steps to be undertaken in the implementation of the planned subprojects under the project. This will ensure that the implementation of the sub-projects is carried out in an environmentally and socially sustainable manner. It will also provide a framework to enable communities/beneficiaries screen sub-projects, identify measures and implement measures to address adverse environmental and social impacts.

Specifically, the ESMP will aim to:

- i) Establish clear procedures and methodologies for environmental and social planning, review, approval and implementation of activities to be executed under the project;
- ii) Assess the potential environmental and social impacts of envisaged projects activities;
- iii) Propose mitigation measures which will effectively address identified negative impacts;
- iv) Specify appropriate roles and responsibilities, and outline the necessary reporting procedures for managing and monitoring environmental and social concerns related to this projects; and
- v) Determine the training, capacity building and technical assistance needed successfully implement the provisions of the ESMP by the various stakeholders.

**GENERAL VIEW OF POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS**

**a) Positive Impacts:-** Implementation of the proposed project is expected to have the following positive environmental and social impacts:

- i. Integration of livelihoods system i.e. small animal keeping, more improved varieties agricultural crops, modern bee keeping and improved jewelry and blacksmith as well as supply and access of water profoundly reduces the supply and demand pressure on natural resources
- ii. Establishment of FFS demonstration center will facilitate learning and experience sharing across all project components, which in long-term increase capacity of extension services and rural institutions while promoting decentralized service provision and innovation
- iii. Provision of water supply and access, will contribute to climate resilience and sustainable diversified livelihood strategies and better management of natural resources.

- iv. Rehabilitating fragile areas such as degraded lands, forests and riverbanks, will contribute to ecosystems and ecological restoration hence increase the resilience to the communities against climate change impacts
- v. Awareness raising on environmental and climate change issues will contribute to better management of environment for both communities and Karatu district council staff

b). **Negative Impacts:-** The following are negative environmental and social impacts likely to happen if the project is implemented:

- i. Delineation of degraded areas for rehabilitation may shift the pressure to non- degraded areas
- ii. Water supply and access at household level if not well addressed may result into water borne diseases like malaria in the project area.
- iii. Presence of large spectrum of project beneficiaries may cause conflict, if not well handled.
- iv. Promotion of exotic trees plantations in natural forest thickets
- v. Overall activities related to project implementation may contribute to disturbance of natural systems

While measures will be taken to promote the positive impacts of the proposed project, similarly, negative impact will be given equal attention to ensuring adverse impacts likely to happen are minimized as much as possible, the matrix below provides detail on mitigation and enhancement program

Table 4: Enhancement and mitigation measures

Item	Environmental	Enhancement/Mitigation	Responsibility	Site of	Implementation	Responsibility	Monitoring
<b>Enhancement of Program Positive Impacts</b>							
1	Increased alternative livelihood opportunities	Introducing livelihood systems that will contribute to reduction of pressure on natural resources	HKC Karatu district council and the project management unit	Project sites associated with the benefiting communities	Throughout the project cycles	Project management Unit, HKC and Karatu District,	Improved incomes Livelihoods created
2	Enhanced availability of water sources and access	Improved livelihood systems and food security	Karatu District Council, HKC and NEMC,	In all villages involved in the project	Throughout the project cycle	Project management Unit, District environmental, water and agricultural officers	Number of structures established
3	Rehabilitation of degraded environmental systems	Rehabilitating degraded areas such as forests, wetlands, riverbanks, will contribute to ecosystems restoration and reduce the risk of floods and landslides	Karatu District Council, HKC and NEMC	Project sites	Throughout the program cycle	Project management Unit, District environmental, water and agricultural officers	acres of the areas restored and rehabilitated
4	Reduction of deforestation	Introduction of closure and planting trees to reduce deforestation	Karatu District Council, HKC and NEMC	Project sites	Throughout the program cycle	Project management Unit	Rehabilitated and restored areas

Table 5: Environmental and social impacts of the different activities under project have been identified as summarized in the table below.

PROJECT COMPONENTS/ ACTIVITIES	EXPECTED IMPACTS ON THE EF PRINCIPLES											
	Compliance with the Law	Access and Equity	Marginalized and Vulnerable Groups	Gender Equality and Women's Empowerment	Involuntary Resettlement	Protection of Natural Habitats	Conservation of Biological Diversity	Climate Change	Pollution Prevention and Resource Efficiency	Public Health	Physical and Cultural Heritage	Lands and Soil Conservation
<b>Component 1.</b> Enhancing integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola in Karatu District												
<b>Outcome 1.</b> Increased food security, income and resilience to climate change impact through Climate Smart practices in selected wards												
<b>Output 1.1.</b> Sustainable bee keeping initiative for food security and increased household income in selected village of the three wards of Baray, Endamaghan and Mang'ola improved												
1.1.1 Training hunters and gatherers on sustainable bee keeping practices	√	X	X	X	N/A	√	√	X	X	√	X	√ X
1.1.2 Provision of at least 1500 modern beehives and related equipment.	√	X	X	X	N/A	√	√	X	X	√	X	√
1.1.3 Building capacity on honey marketing	√	X	X	X	N/A	√	√	X	X	√	X	√ X

1.1.4 Building capacity for communities to establish honey producer's cooperative society	√	X	X	X	N/A	√	√	X	X	√	X	√
<b>Output 1.2</b> Use alternative source of biomass energy promoted for Datoga (Blacksmith) communities in the three wards of Baray, Endamaghan and Mang'ola												
1.2.1 Training Datoga (blacksmith) communities on the use of sustainable source of energy	√	X	X	X	N/A	X	X	X	X	X	X	X
<b>PROJECT COMPONENTS/ ACTIVITIES</b>	<b>EXPECTED IMPACTS ON THE EF PRINCIPLES</b>											
	<b>Compliance with the Law</b>	<b>Access and Equity</b>	<b>Marginalized and Vulnerable Groups</b>	<b>Gender Equality and Women's Empowerment</b>	<b>Involuntary Resettlement</b>	<b>Protection of Natural Habitats</b>	<b>Conservation of Biological Diversity</b>	<b>Climate Change</b>	<b>Pollution Prevention and Resource Efficiency</b>	<b>Public Health</b>	<b>Physical and Cultural Heritage</b>	<b>Lands and Soil Conservation</b>
1.2.2. Training Datoga on how to make energy saver cooking stoves for cooking and forging tools	√	X	X	X	N/A	X	X	X	X	X	X	X
1.2.3. Training Datoga (blacksmith) on making alternative energy products e.g briquettes	√	X	X	X	N/A	X	X	X	X	X	X	X

1.2.4 Facilitating Datoga (blacksmith) communities to engage into a business venture for selling energy saver cooking stoves and briquettes	√	X	X	X	N/A	X	X	X	X	X	X	X
1.2.5 Supporting Datoga (blacksmith) to establish and operate energy saver community group	√	X	X	X	N/A	X	X	X	X	X	X	X
<b>Output 1.3</b> Use of local and improved breeds of rabbit and poultry for food security and income generation for selected villages three wards of Baray, Endamaghan and Mang'ola improved												
1.3.1 Training women men and youth on Poultry and rabbit production	√	X	X	X	N/A	X	X	X	X	X	X	X
1.3.2 Construction of simple poultry and rabbit houses	√	X	X	X	N/A	X	X	X	X	X	X	X
1.3.3 Provision of startup capital in form of local pullet, cocks, does and buck to the communities	√	X	X	X	N/A	X	X	X	X	X	X	X
1.3.4 Provision of feed, supplements, veterinary drugs and equipment/utensils	√	X	X	X	N/A	X	X	X	X	X	X	X
<b>Output 1.4</b> Production of diversified cultural and nature-based tourism products for Hadzabe (hunters and gatherers) and Datoga (blacksmith) women, men and youth improved.												

1.4.1 Train women and youth on jewelry and leather quality and marketing	√	X	X	X	N/A	X	X	X	X	X	X	X
1.4.2 Promote the jewelry and leather business amongst women and youth	√	X	X	X	N/A	X	X	X	X	X	X	X
1.4.3 Provide support and capacity for women and youth to form jeweler's and leather makers groups	√	X	X	X	N/A	X	X	X	X	X	X	X
<b>1.6 Output</b> Identification and production of suitable traditional and modern crops for enhanced food security and increased household income in selected villages of Baray, Endamaghan and and Mang'ola promote												
1.5.1 Training of men, women and youth on production of selected traditional and modern crops	√	X	X	X	N/A	X	X	X	X	X	X	X
1.5.2 Establishment of at least 20 acres as demonstration farms (Field Farm School-FFS) across 8 villages within the targeted three wards	√	X	X	X	N/A	X	X	X	X	X	X	X
<b>Component 2</b> Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu												
<b>Outcome 2</b> Enhanced climate resilient rural water supply system in vulnerable communities of Hadzabe (gathers and hunters) and Datoga (Blacksmith) at Baray and Endamaghang Wards												
<b>Output 2.1</b> At least 10 boreholes drilled in Hadzabe (gathers and hunters) and Datoga(blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District for improved water availability												
2.1.1 Conducting hydro geological survey	√	X	X	X	X	√	√	X	X	X	X	X
2.1.2 Drill boreholes in drought prone and water scarce villages and install solar driven water pumps at Baray, Mang'ola and Endamaghang Wards	√	X	X	X	X	√	√	X	X	X	X	X



<b>Output 2.2</b> Water supply systems constructed in Hadzabe (gathers and hunters) and Datoga (blacksmith) communities at Baray, Mang 'ola and Endamaghang Wards in Karatu District for improved water quality													
2.2.1 Design and Construct water storage tanks, distribution network systems and pump system at Baray, Mang'ola and Endamaghang Wards	√	X	X	X	X	√	√	X	X	X	X	X	X
2.2.2 Construct community water points/ community water Kiosks for network systems	√	X	X	X	X	√	√	X	X	X	X	X	X
<b>Output 2.3</b> Hadzabe (hunters and gathers) and Datoga (blacksmith) facilitated, trained and supported to operate and maintain the water infrastructure.													
2.3.1 Conduct awareness raising meetings with community stakeholders on operation and maintenance of water infrastructure and supply	√	X	X	X	X	√	√	X	X	X	X	X	X
<b>Output 2.4</b> Climate resilient behavioral change and water governance for Hadzabe and Datoga communities in the three wards of Baray, Endmagahan and Mang'ola enhanced													
2.4.1 Conduct awareness raising meetings with community stakeholders on behavior change and water governance	√	X	X	X	X	√	√	X	X	X	X	X	X
<b>PROJECT COMPONENTS/ ACTIVITIES</b>	<b>EXPECTED IMPACTS ON THE EF PRINCIPLES</b>												

	Compliance with the Law	Access and Equity	Marginalized and Vulnerable Groups	Gender Equality and Women's Empowerment	Involuntary Resettlement	Protection of Natural Habitats	Conservation of Biological Diversity	Climate Change	Pollution Prevention and Resource Efficiency	Public Health	Physical and Cultural Heritage	Lands and Soil Conservation
<b>Component 3.</b> Improving climate change resilience of ecosystems and non-timber products for selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District												
<b>Outcome 3 .</b> Improved ecosystem services and functions to sustain climate change resilient livelihoods at selected villages in baray, Endamaghan and Mang'ola wards												
Output 3.1. Adoption of integrated climate smart forest management practiced for selected villages of Baray, Endamaghan and Mang'ola wards promoted.												
<b>3.1.1</b> Identify types of ecosystems in three wards of Baray, Endamaghan and Mang'ola to identify degraded ecosystems	√	X	X	X	X	X	X	X	X	X	X	X
<b>3.1.2.</b> Mobilise enclosures in degraded ecosystem by using existing local and traditional knowledge and institutions to strengthen management of fragile ecosystems including establishment of Ecosystem Management Plans	√	X	X	X	X	X	X	X	X	X	X	X
<b>PROJECT COMPONENTS/ ACTIVITIES</b>	<b>EXPECTED IMPACTS ON THE EF PRINCIPLES</b>											

	Compliance with the Law	Access and Equity	Marginalized and Vulnerable Groups	Gender Equality and Women's Empowerment	Involuntary Resettlement	Protection of Natural Habitats	Conservation of Biological Diversity	Climate Change	Pollution Prevention and Resource Efficiency	Public Health	Physical and Cultural Heritage	Lands and Soil Conservation
<b>3.1.3</b> Establish and implement ecological restoration and rehabilitation plans including developing of bylaws and enforcing implementation in the wards of Baray, Endamaghang and Mang'ola landscapes	√	X	X	X	X	X	X	X	X	X	X	X
<b>3.1.4</b> Engage Hadzabe and Datoga communities in tree planting and maintenance campaign for different types of native and fruit trees	√	X	X	X	X	√	√	X	X	X	X	X
<b>3.1.5</b> Support women and youth to establish and operate Community integrated Forest Management Groups	√	X	X	X	X	√	√	X	X	X	X	X
Component 4. Undertaking studies on climate risks and vulnerability with a particular focus on most vulnerable sectors including water, agriculture, nutrition in three wards of Baray, Endamaghan and Mang'ola in Karatu District												
Outcome 4. <i>Climate resilient actions in climate sensitive sectors informed by both local knowledge and science to respond to climate vulnerability and risks in Karatu District</i>												
Output <b>4.1</b> <i>Climate Risk and Vulnerability and KAP assessment for a comprehensive action plan in climate sensitive sector at Karatu District Council conducted.</i>												

PROJECT COMPONENTS/ ACTIVITIES	EXPECTED IMPACTS ON THE EF PRINCIPLES											
	Compliance with the Law	Access and Equity	Marginalized and Vulnerable Groups	Gender Equality and Women's Empowerment	Involuntary Resettlement	Protection of Natural Habitats	Conservation of Biological Diversity	Climate Change	Pollution Prevention and Resource Efficiency	Public Health	Physical and Cultural Heritage	Lands and Soil Conservation
4.1.1 Hire consultant to conduct a Risk and Vulnerability assessment and KAP for Karatu District	√	X	X	X	X	√	√	X	X	X	X	X
<b>Output 4.2</b> Gender and climate change issues mainstreamed into relevant sector projects and programmes such as nutrition, health, agriculture, water at Karatu District t												
4.2.1 Prepare a comprehensive multi sectoral action plan	√	X	X	X	X	√	√	X	X	X	X	X
4.2.2 Prepare a comprehensive multi sectoral action plan	√	X	X	X	X	√	√	X	X	X	X	X
4.2.3 Mainstream gender and climate change considerations into District plans, projects and programmes	√	X	X	X	X	√	√	X	X	X	X	X
4.1.4 Monitor mainstreaming process and report progress	√	X	X	X	X	√	√	X	X	X	X	X

<b>Output 4.3</b> Community awareness on climate adverse impacts and adaptation options to address them in three wards of Baray, Endamaghan and Mang'ola in Karatu District													
<b>4.3.1</b> 4.3.1 Conduct training need assessment	√	X	X	X	X	√	√	X	X	X	X	X	X
<b>4.3.2</b> Prepare campaign materials	√	X	X	X	X	√	√	X	X	X	X	X	X
<b>4.3.2 3</b> Conduct awareness campaign	√	X	X	X	X	√	√	X	X	X	X	X	X
<b>4.3.4</b> Provide training on the adverse impacts of climate change and adaptation options to address them	√	X	X	X	X	√	√	X	X	X	X	X	X
<b>Component 5:</b> Enhancing capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang'ola to design and implement climate change adaptation interventions and improve level of understanding of climate change related issues													
<b>Outcome 5:</b> Improved capacity of Karatu District Council, Hadzabe (hunters and gatherers) and Datoga (Blacksmith) communities in planning, implementing and monitoring climate adaption actions													
<b>Output 5.1</b> The capacity of Karatu District Council in facilitating public awareness and understanding of climate change related issues and the adoption of resilient climate livelihood practices strengthened													
<b>5.1.1</b> Conduct training needs assessment	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>5.1.2.</b> Develop training materials and Supporting Community Based Trainers (CBT) in training peer community members	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>5.1.3</b> Training of local government officials in Karatu district on climate resilient livelihood practices including mainstreaming of climate change into development plans and budgeting process	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>5.1.4</b> Disseminating project results and share lessons learnt to District, Regional and National stakeholders	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Output 5.2</b> Community institutions to assist in collecting climate related local knowledge (including traditional knowledge) and disseminate relevant climate change adaptation knowledge and information to communities in three wards of Baray, Endamaghan and Mang'ola established.													

<b>5.2.1</b> Facilitate community exchange visits/study tours	X	X	X	X	X	X	X	X	X	X	X	X
<b>5.2.2</b> Build and equip community resource centers for communities, CHW and others to use as their meeting space and where climate change related capacity building and skills development training will conducted for both men, women and youth. Humanitarian aid can also be organized from these centers	X	X	X	X	X	X	X	X	X	X	X	X
<b>Output 5.3.</b> Capacity of the hunters, gatherers and blacksmith communities in planning and decision making for undertaking climate resilient livelihood practices is strengthened												
<b>5.3.1</b> train community committee members on planning and decision making for undertaking climate resilient livelihood practices	X	X	X	X	X	X	X	X	X	X	X	X
<b>Output 5.4</b> Upgrade Karatu District metrological services and its network and infrastructure for provision of essential data for climate service and early warning systems to the areas surrounding the three wards of Baray, Endamaghan and Mang'ola												
<b>5.4.1</b> Train Karatu District Council staff on importance of data for climate change services and early warning systems	X	X	X	X	X	X	X	X	X	X	X	X
<b>5.4.2</b> Install automatic agro-weather station	X	X	X	X	X	X	X	X	X	X	X	X

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<sup>i</sup> Marlowe, F(2010), *the hadza Hunter- Gatherers of Tanzania*. University of California Press, Ltd London, England

<sup>ii</sup>

<sup>iii</sup> Blurton Jones, N. G., Hawkes, K. and O'Connell, J. F (2002), "The antiquity of post-reproductive life": Are there modern impacts on hunter-gatherers postreproductive life span. *American Journ*

<sup>iv</sup> Mwandosya M. K (2007), Report to plenary session of the United Nations high level meeting on adaptation to climate change, Permanent mission of the United Republic of Tanzania to the United Nations 24, September 2007

<sup>v</sup> IPACC (2007), Briefing note on the threat to the Hadzabe people of Yaida Valley, Karatu District, United Republic of Tanzania

<sup>vi</sup> National Censors , National Bureau of Statistics 2012

<sup>vii</sup> Mabulla, A. Z. P (2007), "Hunting and Foraging in the Eyasi Basin, Northern Tanzania: Past, Present and Future Prospects", *Afr Archaeol Rev* (2007) 24:15–33. Springer Science + Business Media, LLC 2007