ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category: ***Regular Project***
Country/ies: ***United Republic of Tanzania***
Title of Project/Programme: ***Enhancing Climate Change Adaptation for Agro-Pastoral Communities in Kongwa District***
Type of IE (Entity: *NIE/MIE):* ***National Implementing Entity (NIE)***
Implementing ***National Environment Management Council (NEMC)***
Executing Entity/ies: ***The Foundation for Energy, Climate and Environment / Kongwa District Council***
Amount of Financing Requested: ***1,200,000 (In U.S Dollars Equivalent***

Project Background

Description of the problem which the project aims to solve

With the emerging challenges of climate change and climate variability, many socio-economic sectors in Tanzania are vulnerable to climate related risks. These include water, where there is a general drying trend of natural water springs and rivers, energy where the hydropower performances are frequently interrupted by drought events, agriculture where crops and livestock suffer the impacts of drought and flooding and increasing occurrences of epidemics from pests and diseases in the health sector[1]. In general, more than 70% of natural disasters in Tanzania are climate related. They are linked to droughts and floods and these have become more frequent as a result of climate change and climate variability. Several studies conducted in various regions and districts in the United Republic of Tanzania, indicate that rural areas especially agro-pastoral communities have been experiencing the effect of climate change through crop failures, decreased crop yields, increased water scarcity and sometimes shrinkage and drying of grazing lands/pastures due to increased and intensified drought periods[2]. The predominance of more bad years as commonly referred by communities in rural areas of Tanzania have negatively impacted farmers' livelihoods, their economies and social life[3]. In Kongwa district for example, worryingly, farmers are reporting that both the timing of rainy seasons and the pattern of rains within seasons are changing. These observations of change in climate are striking in that they are widespread throughout the district and are pronounced in remarkably consistent terms in almost all villages of the district.

Over the past decades, the seasons appear to have shrunk in number and variety, such that what was termed as good seasons are truncated or have disappeared. Nowadays, people's experience in most villages of Kongwa district including other parts of the country is that seasons are progressively being replaced by a more simplified pattern of events whose characteristics are predominantly hot (hotter) and dry or hot (hotter) and wet[4]. Rains are more erratic, coming at unexpected times in and out of seasons. In particular, there is less predictability as to the start of rainy seasons. Generally, in most cases rainy seasons are shorter. Dry periods have increased in length and drought is more common. Within recognizable seasons, unusual and "unseasonable" events are occurring more frequently, including heavy rains in dry seasons, dry spells in rainy seasons, 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

[1] TMA, (2014).Climate change projection for Tanzania: A report Submitted to the Government of Tanzania. Dar es Salaam33p.
[2] Ahmed, S.; Deffenbaugh, N.; Hertel, T.; Lobell, D.; Ramankutty, N.; Rios, A.; Rowhani, P. Climate volatility and poverty vulnerability in Tanzania. Glob. Environ. Chang. 2011, 21,46–55.
[3] Bwire, M.K. (2016).Impact of climate change and variability on coastal Penaeid shrimp abundance in Rufiji delta, Tanzania. PhD thesis, submitted to the University of Dar esSalaam 295 pp
[4] URT 2014. Agriculture Climate Resilience Plan 2014-2019

spells within the rainy seasons. These kinds of rains, they may also come at unusual times[5]. The impacts of such shift in seasonality and climate trends, have already severely disrupted food production, led to the displacement of communities, loss of life and assets, and caused an overall reduction of community resilience. This is because, the timing of rain, and intra-seasonal rainfall patterns are critical to smallholder farmers/agro-pastoral communities. Seasonality influences farmers' decisions about when to cultivate and sow and harvest. It ultimately contributes to the success or failure of their crops and livestock. In Ugogoni and Mtanana Wards of Kongwa district for example, villagers witness that formerly the growing season had about five months commencing from December to April, but in recent times, this duration had decreased to less than three or two months[6]. This shrinkage of the seasons has confirmed the disappearance of short rains which previously used to appear around October to December. Rowhani et al[7] for instance specified that a 20% increase in intra-seasonal precipitation variability reduces agricultural yields by 4.2%, 7.2%, and 7.6% for maize, sorghum, and rice respectively. Due to this, food insecurity remains significant in most places in the country. For example, in the year 2015, the country registered 28.5 on the Global Hunger Index, with 32% of the population under-nourished. As a result, food insecurity is responsible for more than 130 child deaths every day, making it the greatest contributor to under-five deaths in the country. About 42% of children under five years of in Tanzania are stunted, and this number has only decreased by 2% between 2005 and 2010. This chronic under-nutrition affects more rural children (45%) than urban children (32%) and is more common in less educated and poorer families in rural areas for districts like Kongwa in Dodoma region with the highest prevalence (50% or higher) of stunting children.

Consequently, the negative effects of climate change to the pastoral and agro-pastoral communities' livelihoods are intolerable in Kongwa. High level of livestock mortality associated with climate failures and bad seasons is continuously being recorded. Data indicates that in Ugogoni Ward for example, there has been progressive mortality record of livestock deaths due to dried pastures. In 2013, there were about 332 livestock deaths, 525 livestock deaths in 2014, 414 livestock deaths in 2015 and 595 livestock deaths in the year 2016[8]. Likewise, the same Ward received reasonable food quantities in thousands tons of maize as aid support given to households with critical food shortage from the Government and other donor agencies. Therefore, both the government in the District and the Central government recognizes that no meaningful reduction in poverty can be achieved without addressing the deleterious impacts climate change. Thus, it is indicated in the strategic policy documents such as the National Strategy for Growth and Reduction of Poverty 2010-2015; National Climate Change Strategy 2012, Tanzania Vision 2025 and in the National Adaptation Programme of Action (NAPA) 2007, that in responding to climate change and poverty challenges, there is a need to implement a number of concrete adaptation actions at grass root levels , including focusing on activities which ensure effective provision of quality livelihood and socio-economic systems. In this case, multi- disciplinary and integrated measures need to be implemented in Kongwa district to build and enhance adaptive capacity of poor agro-pastoral communities in selected villages. Hence the principle objective of this project is to reduce the impacts of climate change in agro-pastoral communities of Kongwa District. This will be achieved through implementation of integrated concrete adaptation measures covering the following sectors: water, agriculture and livestock. In this way the project will adopt a comprehensive integrated approach in order to tacle the multiple effects of climate change as well as to enhance the population's adaptive capacity through the following four components:

i) *Enhance climate resilient rural water supply system in vulnerable agro-pastoral communities at Mtanana and Ugogoni Wards;*

[5] TMA 2014.Climate change projection for Tanzania: A report Submitted to the Government of Tanzania. Dar es Salaam 33p

[6] Mkonda M.Y 2017. Are Rainfall and Temperature Really Changing? Farmer's Perceptions, Meteorological Data, and Policy Implications in the Tanzanian Semi-Arid Zone. Sustainability: 9- 1412

[7] Rowhani, P.; Lobell, D.B.; Linderman, M.; Ramankutty, N 2011. Climate variability and crop production in Tanzania. Agric. For. Meteorol. 15, 449–460.

[8] Kongwa district report, 2017

ii) *Support transformation of exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods; and*
iii) *Improved ecological functions to sustain climate sensitive livelihoods in Kongwa District.*
iv) *Capacities of institutions, extension services and trainers strengthened to reduce risks associated with climate- induced livelihood failures in Kongwa district*

I.2. Brief information on socio-economic, Development and environmental context in which the project would operate

Location, Landforms and topography

Kongwa district is located in the drought prone semi-arid area of Dodoma region, which is considered to be the heart of Tanzania. Kongwa district lies between latitude 5°30' to 6°0'S and longitude 36°15' to 36°E with an area of about 4041km^2. The administrative area of the district comprises a total of 22 wards, 87 villages, 383 suburbs and 2 township authorities. The distribution of wards include Sejeli, Kongwa, Sagara, Chamkoroma, Pandambili, Lenjulu, Chiwe, Kibaigwa, Mtanana, Njoge, Ngomai, Mkoka, Matongoro, Makawa, Chitego, Hogoro, Songambele, Zoissa, Iduo, Mlali, Nghumbi and Ugogoni. The district is characterized by both high plateau and hills with steep slopes and an escarpment to the east-west. To the south, the escarpment is very steep and is therefore situated in what is sometimes considered as the southernmost fringe of the Maasai steppe. Similar topography stretches for countless miles up to the Kilimanjaro region. For example in Mtanana Ward and Ugogoni Wards, the area is characterized by gentle slopes, rarely exceeding 5%, but still stand out from the surrounding areas that are rather flat. The contrast is rendered more evident by the contraposition with the lubiri Mbuga to the east. The Mbuga is an ancient valley that once contained a lake. Through sediment deposition the lake slowly was filled with silts to reach the present morphology. Seasonally, the Mbuga is flushed with water and the lower part of it can be under water for several months. Not only the Mbuga does not have a natural drainage at its southern tip, but is also dammed by the Dodoma/Dar es Salam highway that further impedes water drainage (Figure 2). The underlying rocks of Kongwa district generally belong to the lower basement complex. The original rocks were predominantly sandstones traversed by dolerite sills. While buried deeply these rocks were subjected to thermal metamorphism and to injection by feldspar forming fluids. The resultant rocks are predominately granitic gneiss but are traversed by strata of metadolerite and quartz-granulite which escaped the injection and only suffered the thermal metamorphism. Much of the metadolerite consists of coarsely crystalline plagioclase-amphibolite (plagioclase and hornblende). Local vein-like segregations of feldspar and of quartz and feldspar together are also found[9]. It is from these rocks where the district is drilling boreholes. From the data recorded from 1948 – 1960 the bore holes were drilled to depth ranging from 52.6 metres to 175.4 metres and horizons of striking water ranged from 29.8 to 82.2 metres. The water bearing horizons are fractured Granites. Weathered and fractured bed rock of granites and metamorphic rocks such as granites and schist‘s are at great depths and are the water bearing rocks.

[9] Temperley, B.N., 1938, The Geology of the County Around Mpwapwa, Department of Land and Mines – Geological Division, Tanganyika territory.

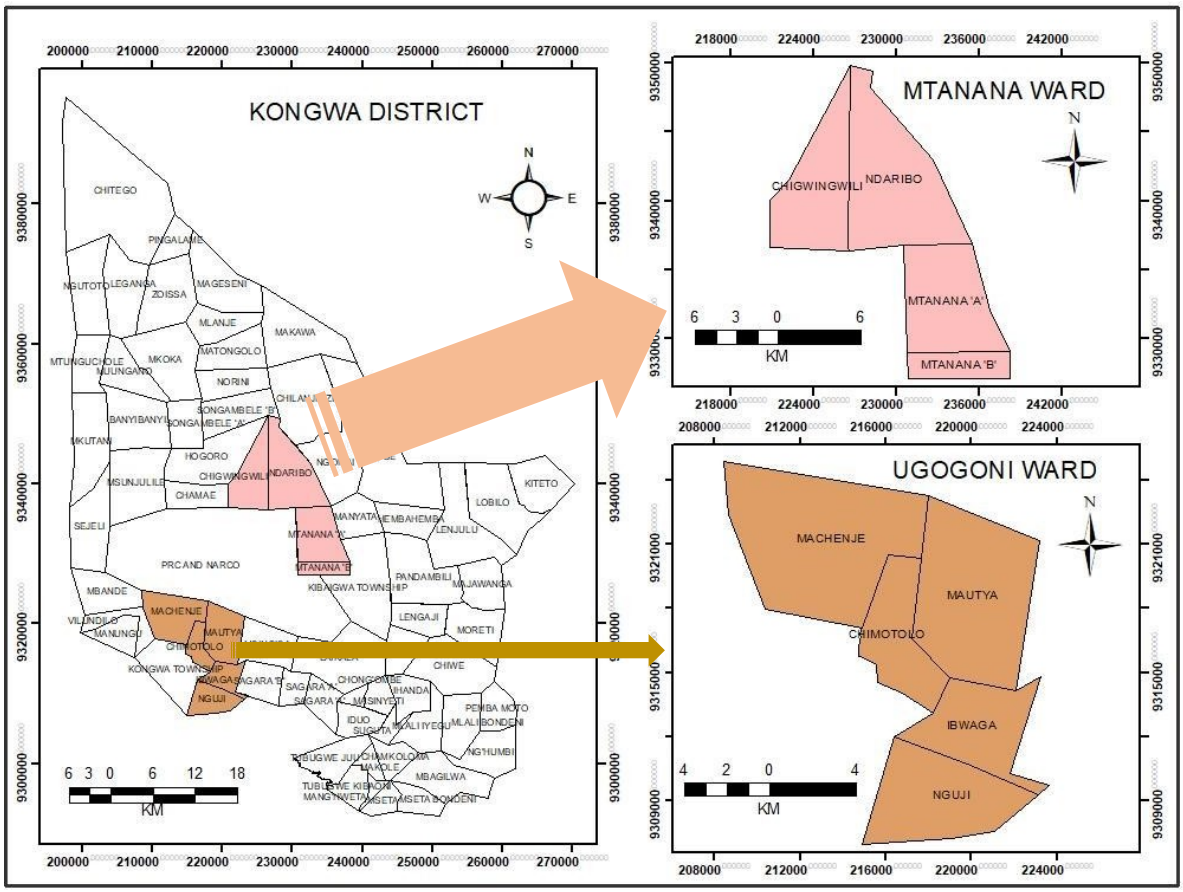


Figure 1: Kongwa District; village boundaries and two specific wards (Mtanana and Ugogoni) where the projects will be implemented. Note the location of the Kongwa ranch (PRC and NARCO)

Figure 2: Seasonally flooded Mbuga area where the Dodoma –Dar es Salam road acts as a barrier to drainage.

Figure 3: Flooded pump house at Mbuga area in Mtanana village

Historical overview of the proposed project sites

Mtanana and Ugogoni Wards and Kongwa area at large have a long and relatively well documented history. Kongwa areas were originally a single entity, which was established under colonial rule as a central point of the by the then known ‒groundnut scheme‖. The groundnut scheme was established by the British colonial administration as an effort to curb edible fat scarcity in the Second World War aftermath. At the time, in 1948, the area was predominantly covered with thick savannah thicket characterized by acacia trees and baobab. The area was cleared with the use of heavy machinery and the cleared bushes were heaped along contour windrows to protect the land from wind and water erosion. To date, the windrows, or what it remains of them, can be seen in parts of the landscape. The initial plan was to clear and put under cultivation 450,000 acres. Due to technical, logistical and management challenges the plan was scaled down by a factor of 5-6. At the end, only 80,000 acres were cleared and a minimal fraction of it was under groundnut cultivation. By 1960 industrial groundnut production was halted.

Figure 4: Windrows established during the groundnut scheme under the Oversea Food Corporation (Source: the Groundnut Affair. 1950)

The windrows were established at a vertical distance of 9 feet (2.73 m). The organic material that constituted the windrows decomposed in the years leaving space to gentle, but wide bunds, which in most cases resemble grass strips. Therefore, the bunds that now characterize the gently undulating slopes of the Mtanana and Ugogoni hills are

the remain of this massive effort from colonial time. The interviewed community members, are partly aware that the bunds help in checking soil erosion, but even more importantly they see these contour measures as a demarcation between fields. Of these enormous efforts only few areas are still farmed while keeping the contour structures in place. Mtanana hills is one of such rare cases. The contour lines are still clearly visible from satellite imagery and 50 years on are still respected if not actively maintained.

Figure 5: Aerial view of the current existing windrows portion at Mtanana village (Source: Field survey during the preliminary project design, 2018)

Figure 6: A bund being farmed (left side) and Spot failure along a bund Right side) (Source: Field survey during the preliminary project design)

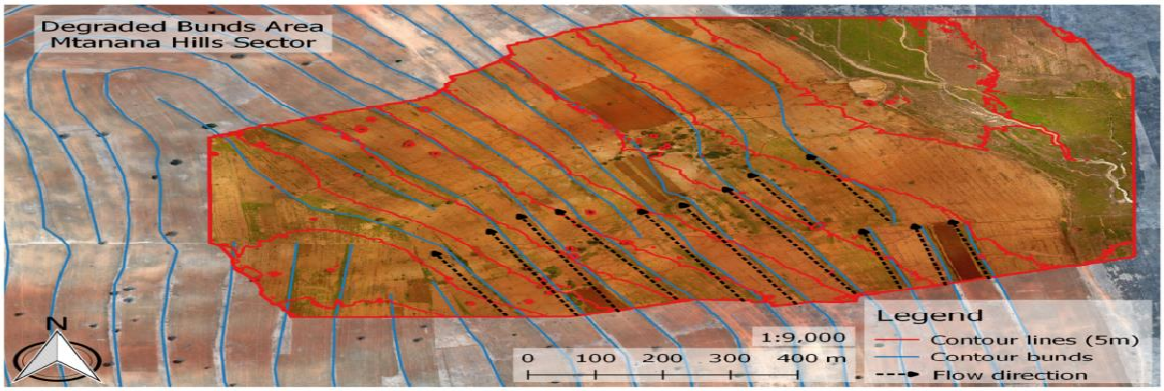


Figure 7: Example of the reflection on degraded bunds area at the project sites The red lines represent contour lines with a vertical interval of 5 m. The blue lines are the existing contour bunds (design vertical distance 2.7 m). In the southern section of the image the contour bunds have a side slope that convey runoff (see black dotted lines) towards the midsection of the area where water concentrates and all main gullies and collapsed bunds are found. (Source: field survey, 2018)

1.2.1.1 Selection of the proposed project sites

Pre-design of the proposed project started in August 2018 with a first visit to various villages in the district. The project areas ware selected and agreed upon with local stakeholders and district experts. In September 2018, a second visit took place, to discuss more in and around the selected villages of Mtanana and Ugogoni Wards to get the full picture of the landscape interactions and needs and challenges of the local communities. In these field works, workshops and detailed discussions were made to inform a no regret project design. Elders from both Mtanana and Ukogogoni wards led the group discussions. The discussions were moderated by experts from Kongwa district council. The design is based on the inputs gathered from the field visits, interviews, community discussions, key informants, but also by carrying out transect walks in all landscape, observing environmental and ecological systems, vegetation cover, farming practices and livestock keeping systems in the villages.

Figure 8: Detailed analysis of the project sites by design team during the field works
(Source: Field survey 2019)

Socio-economic and environmental profile of Kongwa District

Socio-economic context

The current population of Kongwa District is estimated to be 318,995 with growth rate of 2.4% per annum. The District has 299,100 ha of arable land which is suitable for rainy agriculture and 5,811 hector (1.9% of total arable land) apposite for irrigation. The number of households is 60,301 with approximately 98 percent of its population lives in rural areas with the majority engaged in smallholder - rain-fed agriculture, and who overwhelmingly rely on climate sensitive sectors for their livelihoods, with overuse and environmental harm only perpetuating the cycle of poverty. The district is economically and socially backward with acute poverty and society ridden with outmoded traditions and even superstitions. The status of women is coupled with discrimination against girl child[10]. The women suffer from all kinds of social disabilities and at the same time handling each and every responsibility of domestic work as well as collection of fuel wood and water for domestic uses from distant places. Gender inequity is the project site is normally based on community enlightenment which is configured by education level, cultural bondage, individual characteristics and society dynamics. All these factors adversely affect educational development of girls especially of vulnerable villagers and poorer sectors of the society. Illiteracy; which is high in women, (District literacy rate is 61.7%) and cultural bondage in Kongwa still play a pivot role in gender imbalance particularly in remote/peripheral rural areas. 51.75% of the populations in the proposed project sites are dependants.

All the farmers are highly dependent on rains for agricultural activities as there is no any irrigation facility. As a result, average annual income per household in the area is well below the National poverty Line. Annual income per house hold is below USD$1per day. Agriculture and to certain extent livestock are main income generation activities

[10] Kongwa district socio-economic profile, 2016-2021

for nearly 95% of the households. Livestock are indigenous breeds of low productivity and hence undetermined contribution to households‘ income. Rain fed agriculture being primary occupation of the communities which expose them to greater risk and make them more vulnerable to climate change effects. Thus, Supporting productive high value and market-driven small scale agriculture and livestock sectors is both the national and district priority documents National Development Vision 2015, Five Year National Development Plan 2016/2021, Kongwa District Socio-Economic Profile (2016-2021), while environmental integrity and gender equality are cross-cutting issues. Equally, the District recognizes the threats posed by climate change which is the effect multiplier, is therefore committed to implementing improved climate resilient and adaptation actions. The District is also actively striving to promote gender equality and equity through proactive plans and strategies that support women participation in all areas of socio-economic development and social wellbeing.

Table 1: Kongwa district population distribution by age group and sex in 2016 (2012 Projection)

Age Group	Total	Male	Female
All ages	341,206	164,256	176,949
0 – 4	58,054	28,828	29,226
5 – 9	58,781	29,386	29,395
10 – 14	46,506	23,104	23,402
15 – 19	32,782	16,156	16,626
20 – 24	26,854	11,989	14,865
25 – 29	22,907	10,166	12,741
30 – 34	21,250	9,828	11,423
35 – 39	17,171	8,026	9,145
40 – 44	14,068	6,645	7,422
45 – 49	9,825	4,709	5,116
50 – 54	8,839	4,172	4,667
55 – 59	5,458	2,654	2,804
60 – 64	5,487	2,528	2,959
65 – 69	3,533	1,619	1,914
70 – 74	3,734	1,731	2,002
75 – 79	2,004	939	1,066
80+	3,953	1,777	2,176

Source: *The United Republic of Tanzania 2012 Population and housing census*

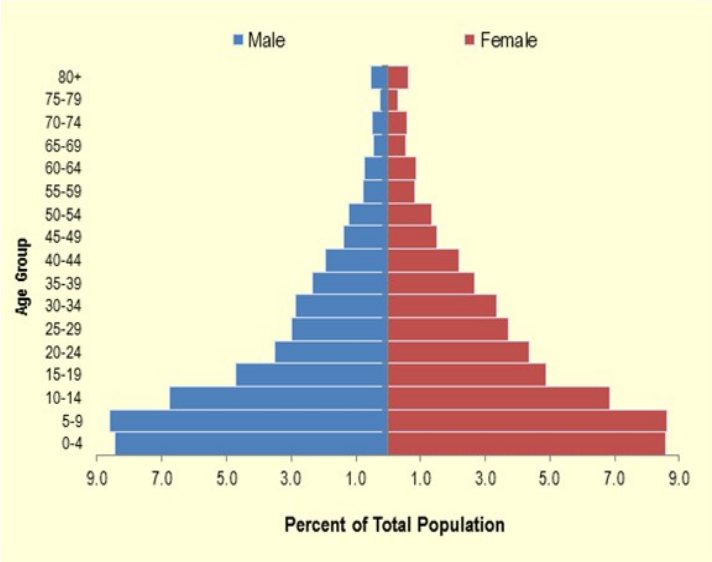


Figure 9: Population pyramid of Kongwa district (Source Kongwa district Council, 2018)

Environmental context

In the past 70 years, Kongwa district was predominantly covered with thick savannah thicket characterized by acacia and baobab trees. Also, tall savannah type of grassland rich in wildlife was dominating the area. However, such environmental integrity was degraded following the decision by colonial government to establish groundnut plantations in the area, by clearing almost everything, in late 1940s. Since, 1948 onwards, with the advent of the groundnut scheme the natural vegetation was cleared in a continuous crescendo. Whereby the bush was cleared to give away for crop production and grazing land (figure8). Within the groundnut scheme only few areas were left with a good plant cover. Other human induced drivers for environmental degradation like persistent slash and burn farming methods and overgrazing are also common in the area during dry periods. This decision together with the current environmental degradation trend coupled with climate change effects turned the area to be almost bare, with the vegetation cover generally consisting of only shrubs and spots of acacia and baobab trees. Owing to the land being almost bare, flooding and stronger winds are now more frequent. It can be said clearly here that, the effects of climate change being witnessed today in the area emanate from the induced and inherited environmental problems from British colonial masters to the subsequent generations since pre- independent era. The environmental failure is related to poverty and poor life quality of the population in most villages. Thus, challenges caused by climate change have multiplier effects which worsen the living condition and failures of environmental systems. Nevertheless, still the forests and environment sub-sector plays an important role in maintaining ecological balance, protect soils from erosion and conserve water including socio-economic services and reducing income poverty. For instance wooded grasslands and bush lands are sources of domestic energy (about 99.5% of households in the district use charcoal and firewood for cooking) and also provide a range of goods and services such as pastures for livestock, useful non-wood products mainly honey and traditional medicines.

Figure 10: Representation of vegetation cover in Ugogoni and Mtanana wards to date after the introduction of groundnut scheme in 1948 (Source: Field survey 2018)

Climate change context

The climate of Kongwa district

Like any other places in Tanzania, Kongwa has a tropical climate while its microclimate is largely influenced by its topography/altitude. It is a district within the central Dodoma region with a unimodal climatological condition, implying that the district receives a single intense rainfall season that has commonly resulted into flood episodes. The mean annual temperature is about 28.5° C, 20° C - 33° C. The main rain season is from November - April with an average annual rainfall of 400 - 600mm. The temperatures get slightly lower in the months of May to July. The mean annual rainfall is 700mm. The rain season is normally between December and April. Generally, the climate in Kongwa fluctuates on time scales from inter-.annual to decadal and further beyond, and displays a high degree of chronological variability in most villages in the district. The climate is highly characterized by "drought and flooding rains", a variability that is driven by a complex mix of climate systems, mainly by the migration of the Inter-Tropical Convergence Zone (ITCZ) and the Indian Ocean Dipole (IOD) oscillations. Due to the variability of the ITCZ, the area experiences one wet season (unimodal) per year, which starts in October and continues to April or May. Despite these natural variations, the past and recent climate and weather data trends show that, the climate of Kongwa has varied and changed significantly since 1950s up to now.

Trends of increased temperatures and lengthened dry periods in Kongwa

Analyses of the past and recent climate information indicate significant increasing trend of air temperatures. Since late 1950s to date all villages in Kongwa district continued to experience rising in temperature (figure 9). Analyses of climate data in the area agree with peoples‘ view that Kongwa is getting hot and hotter and warmer every year, and one can now count the number of cold days than before. Severe and intensified lengths of dry periods are becoming more common and usual phenomena. For example, the district experienced prolonged droughts during La Nina period of 1999-2001, January-March 2006 and 2008-2009 and the drought period of 2016 significantly caused death of livestock, crop failure and reduced yields compromising food security and leading to famine, human migration including displacements. The average number of _hot‘ days in district has only increased significantly in December- January –February (DJF). Likewise studies indicate the increase of the average number of _hot‘ nights per year by 50 days. Like in other parts of the United Republic of Tanzania, the rate of increase is seen most strongly in DJF when the average number of hot DJF nights has increased by 19.8% of DJF nights between 1960 and 2003. The frequency of cold days has not changed discernibly, despite the observed increases in mean temperature. The frequency of cold nights has, however, decreased significantly in all seasons. The average number of _cold‘ nights per year has decreased by 34 (9.3% of days). This rate of decrease is most rapid in DJF when the average number of cold DJF nights has decreased by 3.6 nights per month (11.5% of DJF nights) over this period.

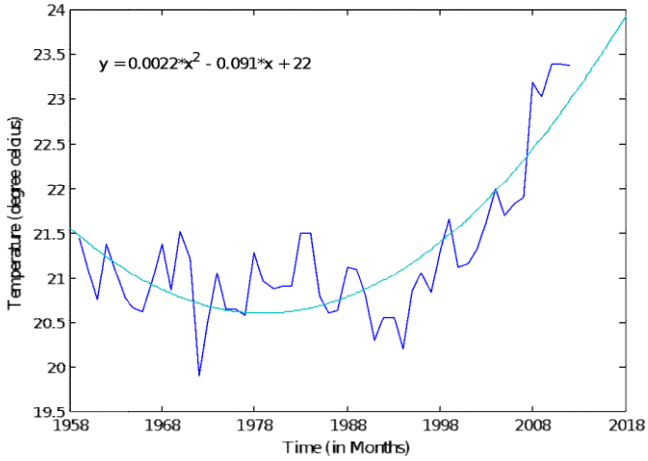


Figure 12: Annual mean temperature trend in the Kongwa over the past 30 years (1958-2011) (source: Msafiri, 2017)

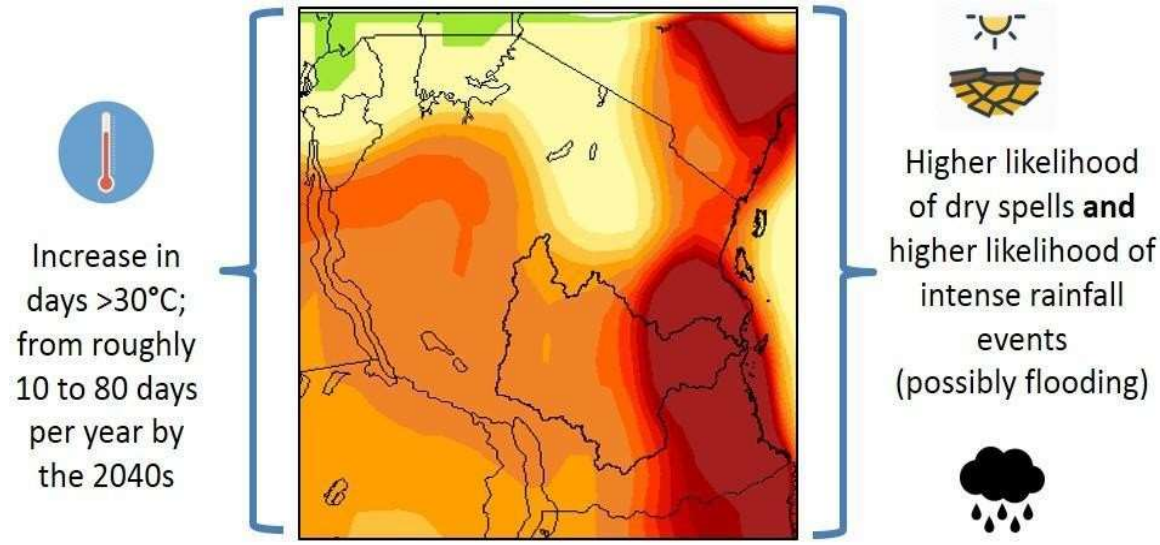


Figure 13: Pattern of increase in number of days with temperature above 30° C in Tanzania (Dark shading indicates greater increase. Source: UMFULA project 2017)

Trends of unseasonable events and erratic rains in Kongwa District

Different compiled reports on rainfall pattern of Dodoma region by the Tanzania meteorological Authority (TMA)[11][12] for both short term and long term indicate a worsening trend. It is a fact that this region receives less rainfall to support agricultural activities. Both long-term climatological assessment (1981 – 2012) and short term assessment of 2015 (Figure) indicated Kongwa district to have an average annual rainfall between 101 – 200 mm even during heavy rainfall season. This is less especially with consideration of the fact that, this is a unimodal

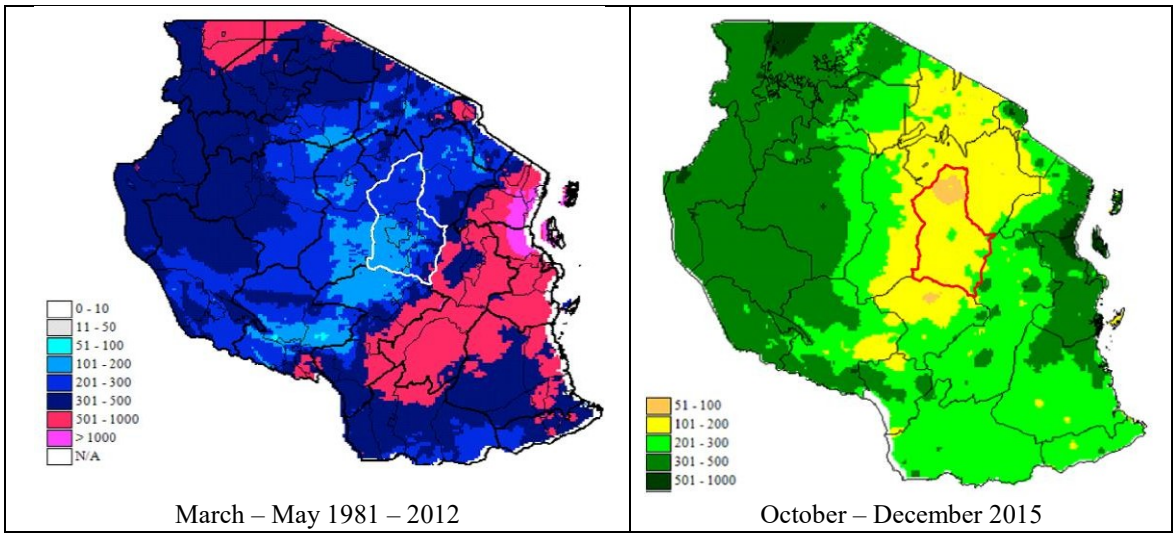
[11] TMA, 2015. Climate outlook for october – December, 2015 rainfall season

[12] TMA, 2016. Climate outlook for tanzania March–May, 2016 rainfall season (masika)

region. Rainfall in Kongwa like many other parts of the country has already highly varied in amount and seasonality[9]. For instance, during pre-designing meetings in Mtanana and Ugogoni wards villagers are wondering on what is happening to the rain seasons. They said rains are no longer having a clear pattern and seasons. Sometimes they come early when people have not prepared, sometimes they end too soon and the crops wilts and sometimes they experience very, very heavy rains that last up to two days which washes away everything. The timing of wet seasons and dry seasons has also varied significantly. These views reflect very well the reality of rainfall behaviors in the district as studies confirm that rainfall patterns are increasingly unpredictable and expected to become increasingly variable in most parts of Tanzania including Kongwa. Unpredictable weather has always presented serious problems for smallholder farmers in poor rural communities. The most common reflection is that the changes are ―shortening‖ the growing season. Farming is now becoming even more difficult, pernicious and risky because of the greater unpredictability in seasonal rainfall patterns. Lack of water at crucial times, pests, and diseases are serious problems in Kongwa nowadays that climate change appears to be exacerbating. These all interact with ongoing and inherited environmental and other socio-economic related challenges on land, soils, and water resources that exist regardless of climate change.

Informal discussions with communities around Kongwa showed that fluctuation in rainfall patterns and erratic, unpredictable, unseasonable rains is more and is a serious problem on their wellbeing than simply drought or heavy rain as used to be considered by the Government authorities. In fact, the effect of changed seasonality in most villages around Kongwa is having major effects on agriculture, farming practices and livelihood choices. For example, farmers who previously considered themselves to be strongly connected to seasons and rainfall behaviors are now baffled by the ongoing changes. They are being confused on understanding to what particular date they may need to plant seeds in the ground as everything are keeping on changing each year. Crops are drying, yields are showing declining trends, and livestock systems are also being affected by the changing climate and therefore are not reliable. In villages, people struggle for everything, food is getting more expensive forcing the majority into deeper poverty line than before[13].

[13] URT,2014: Agriculture Climate Resilience Plan 2014-2019



March – May 1981 – 2012 October – December 2015

Figure 14: Long term and short-term average annual rainfall pattern (mm) in the country. Dodoma region is highlighted in both cases showing lower average rainfall pattern.

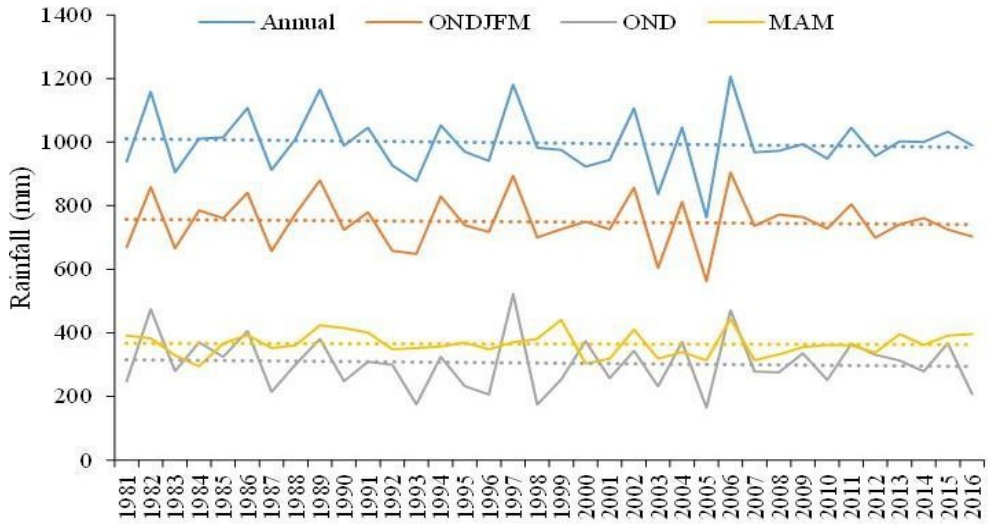


Figure 15: Graphical presentation of the observed mean annual rainfall in Tanzania for the period covering 1981-2010 (Source: UMFULA project 2017)

The predicted future climate of Kongwa District

Available climate model predictions of rainfall in Kongwa and other distrcits in the Dododma show slightly higher future rainfall amount and increased temperatures[14]. All projections of future precipatation suggest more variability in rainfall with both likelihood of dry spells and higher likelihood of intense rainfall events, more often associated with flooding. As in many districts in the central zone of the United Republic of Tanzania, mean annual rainfall is projected to increase, but the seasonal patterns of change will be more complex and unpredictable. Timing of rainy seasons will be more uncertain. In future, Kongwa district will be drier and hotter. Dry spell periods will be stronger than wet spells. Like in many regions and places in Tanzania, the temperature will rise by 1.0 to 2.7˚C by the 2060s, and 1.5 to 4.5° C by the 2090s. Hot‘ days will be at around 19 - 40% of days by the 2060s, and 19 - 65% of days by the 2090. Likewise, nights that were considered _hot‘ for the annual climate between of 1970 - 1999 are projected to increase more quickly that hot days, occurring on 30 - 68% of nights by the 2060s and 35 - 91% of nights by the 2090s. Events of cold days and nights are expected to become exceedingly rare, with cold days occurring on 0-4%

[14] TMA 2014, Climate change projection for Tanzania.

of days and cold nights occurring on a maximum of 1% of days, and not at all under higher emission scenarios, by the 2090s[15].

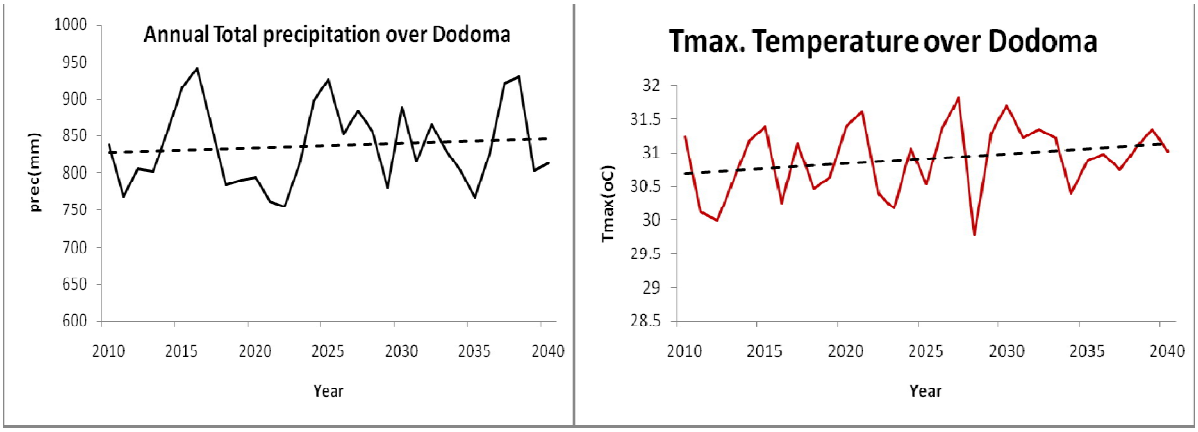


Figure 16: a) Observed and predicted precipitation and b) Observed and predicted maximum air in the temperature Dodoma region (including Kongwa district)

The observed and future effects of climate change in Kongwa

Observation of the past and current climate change impacts including records in literature show that, over three decades now, Kongwa district have been suffering from myriad adverse effects of climate change and variability. Recently, Kongwa has been experiencing significant rainfall changes and variations coupled with calamitous drought and prolonged dry spell periods[16]. The drought periods for example such as of 2003, 2005, 2006, 2008, 2009, 2010 , 2011, 2015 and 2016 seriously affected most of the vulnerable economic sectors in the district such as water, agriculture and livestock with distressing social and economic consequence to rural communities[17]. Experienced erratic heavy rains at different times has led to recurrent floods, causing damage and substantial losses both socially and economically and sometimes loss of people's life. For instance, the floods recorded in 2009, 2010, 2011 and 2016 were largely stressful on people's livelihoods, property and infrastructure[18]. The District has been witnessing increased conflicts among human communities of different livelihood systems. For example increased droughts and unpredictable rains have triggered the recently experienced conflict on land and water-access and use, by instigating competition between groups of people practicing different economic activities, such as livestock keepers and farmers. This kind of weather related vagaries has sometimes stemmed inter-village/inter-house fighting, especially where members of the involved villages/houses are from different ethnic groups.[19] As a result, the predicted increase in the frequency of intense rainfall events, flooding and increased frequency of droughts and dry spell periods are expected to increase in future. The future decline in rainfall volume per season, coupled with increased variability in rainfall, is expected to cause serious crop failures and reduce the productivity of farming about more than 30% of total food crop production in most villages of the District. Future climate change is most likely to disrupt almost all life forms in the district and will intensify food insecurity and livelihood failures due to the reason that people and their life firms in Kongwa are heavily reliant on the climate sensitive sectors.

[15] URT 2012, Climate change strategy

[16] Drafted NAP stock taking report, 2018

[17] Annual Report for Kongwa District Council, 2018

[18] Drafted NAP stock taking report, 2018

[19] Mkonda Y.M 2017. Are Rainfall and Temperature Really Changing? Farmer's Perceptions, Meteorological Data, and Policy Implications in the Tanzanian Semi-Arid Zone, Journal of sustainability 9: 1412;

Observed effects of climate change on gender issues in Kongwa district

Available reports in Kongwa district show that women are more vulnerable to the effects of climate change than men in most villages. Although they constitute the majority of population in villages, they still suffer high level of illiteracy. Norms and traditional systems in these communities, expose women to struggle mostly with domestic issues and to keep domestic matters of families going. Also, they are more dependent for their livelihood on sectors sensitive to climate shocks. Above all they face social, economic and political barriers that limit their coping capacity[20]. It has been observed that these roles such as to be charged with the responsibility to secure water, food and fuel for cooking and heating make them to suffer the most whenever climate calamities happen. Ideally, available information on gender based conflicts available at the district are linked to climate change issues such as water scarcity and food shortage. Water scarcity and continued food crisis in villages of the targeted project sites have also instigated conflict within households, including incidents of abandonment or separation of couples. The proposed project will integrate gender roles and special needs of marginalized groups in various activities/interventions.

Project objectives

The proposed project seeks to pilot practical and cost effective and community rooted solution to improve livelihood of poor people, restore and habilitate ecological systems, support agriculture and livestock production in Kongwa district. The objective is to enhance climate resilience of more than 320,000 people living in the area and improve livelihood actions towards climate adaptation and transformed environmental actions. Specifically, the proposed project will be addressing the following objectives;

i) *To enhance climate resilient rural water supply system in vulnerable agro-pastoral communities at Mtanana and Ugogoni wards;*
ii) *To support transformation of exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods;*
iii) *To improve ecological functions to sustain climate sensitive livelihoods in Kongwa District.*
iv) *To strengthen capacities of institutions, extension services and trainers to reduce risks associated with climate- induced livelihood failures in Kongwa district*

[20] Kongwa district Ciuncil,2018

1.4. Project Components and Financing

Table 2: Logical framework for the proposed project including indicative activities and budget estimates per components

Project Components	Expected Concrete Outputs	Indicative activities	Expected Outcomes	Amount (US$)
1.Enhant climate resilient rural water supply system in vulnerable agro-pastoral communities at Mtanana and Ugogoni wards	*1.1: Climate resilient rural water supply system established in agro-pastoral communities at Mtanana and Ugogoni Wards in Kongwa district*	1.1.1 Drill three boreholes in drought prone and water scarce villages and Install solar driven water pumps at Mtanana and Ugogoni wards	Enhanced climate resilient rural water supply system in vulnerable agro-pastoral communities of Mtanana and Ugogoni wards, Kongwa district	*330,000.00*
		1.1.2.Construct water storage tanks and distribution network systems at Mtanana and Ugogoni wards		
		1.1.3. Construct community water points/ community water Kiosks for network systems		
		1.1.4. Construct cattle troughs for livestock water system in in agro-pastoral communities in selected villages at Mtanana and Ugogoni wards, in Kongwa district		
	1.2 *Community Owned Water Supply Organization(COWSOs) established, facilitated and committee members trained on operational and maintenance*	1.2.1 Conduct awareness raising meetings with community stakeholders to facilitate Atwater management system at Mtanana and Ugogoni wards in accordance to the Water supply and sanitation Act, 2009.		
		1.2.2 Establish gender sensitive water governance arrangements for COWSOs at Mtanana and Ugogoni Wards		
		1.2.2. Promote formulation of water governance/by laws to regulate effective use of water and protection of water sources		
		1.2.3.Conduct Technical Trainings of Trainers on maintenance and operations; management of finance, accounting and group dynamics issues to selected community members of COWSOs for both Matanana and Ugogoni wards		
2. Support transformation of exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods	2.1 Best agricultural –climate smart practices enhanced to improve food security in the selected villages of Mtanana and Ugogoni wards, Kongwa district	2.1.1. Construct and establish atleast three drip irrigation structures/schemes at Mtanana and Ugogoni wards in Kongwa district	Number of agro-pastoral communities transformed from exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods in selected wards of Kongwa district	430,000.00
		2.1.2. Rehabilitate the existed pre independence contour bands/windrows, and promote other soil and water management techniques (terracing, tie ridging) in-situ techniques for sustained agriculture/crop productivity at Mtanana and Ugogoni wards		
		2.1.3.Train selected members of farmer and women groups on Operation and Maintenance (O&M) of drip irrigation facilities at Mtanana and Ugogoni wards		
		2.1.4.Facilitate increased use of climate smart crops and promoting intercropping with drought resistant varieties like sorghum, sunflower, simsim, pigeon peas, cassava, cereals, sweet potatoes and early maturing crops to increase climate resilience farming systems at Mtanana and Ugogoni wards.		
		2.1.5 Improve knowledge on best farming practices		

		and transform traditional farming system through solid farmers tailored trainings using Farmer Field School Approach.		
		2.1.5 Establish women based gardens and poultry houses and trainings on FFFS (Female Farmer Field School) – provision of seeds and tools to diversity gender based livelihood systems		
	2.2 Natural pasture, local breeds and livestock management systems improved to enhance adaptive capacity of livestock keepers to climate induced droughts in Kongwa district.	2.2.1 Establishing drought resistant pasture species and enhance range management and transform traditional grazing system.		
		2.2.2 Improve livestock management to control pests and diseases through cattle dips, feeding systems and cross breeding local breeds with improved breeds available at Kongwa National Ranching Company (NARCO)		
	2.3 Improve market value chain of agro-pastoral products on farm and off farm products to strength their competition power in the market and diversify livelihood systems in the project sites	2.3.1 Facilitate and train farmers and livestock keepers on value addition and packaging techniques of their agricultural products and link them to competitive markets and finance institutions		
		2.3.2 Facilitate provision of value addition and packaging tools, equipment and machines		
3.Improve ecological functions to sustain climate sensitive rural livelihoods at Mtanana and Ugogoni wards and in selected rural communities of Kongwa district	3.1.Integrated ecological and management systems implemented in Kongwa district to sustain climate sensitive rural livelihoods in vulnerable communities	3.1.1 Establish and implement ecological restoration and rehabilitation plans (such as shrub/grasses, mangoes, cashew nuts establishment on contour bands/windrows, woodlots and woodland restoration) in selected Wards and Villages of Kongwa District	Improved ecological functions to sustain climate sensitive rural livelihoods in Kongwa district under the changing climate and variability of seasonal weather events	*198,285.00*
		3.1.2. Promote bee keeping activities as income diversification and demonstration of adaptation benefits generated from ecological restoration areas under activity 3.1.1 to increase adaptive capacity of vulnerable marginalized groups (such as women, girls, old people)		
		3.1.3 Promote tree planting (trees with both environmental and socio economic values in mid-and long-term such as fruit plants and wood plants for timber) activities in residential areas, along streets and roadsides and in the degraded areas		
		3.1.4 Promote scaling ups of projects' Best Techniques (BT) and Best Practices (BP) on ecological restoration and rehabilitation in other areas of the district including in Dodoma region		
4. *Strengthen capacities of institutions, extension services and trainers in to reduce risks associated with climate- induced livelihood failures*	4.1 Institutional and technical capacity of the district and communities in Kongwa is strengthened to be able to with stand impacts of climate change and variability	4.1.1 Develop a detailed training plan to guide the capacity building program for the Project. A consultant will be hired to develop a detailed training plan highlighting the specific content with relevant examples to the prevailing conditions in Kongwa district, each ward and villages involved in the project implementation.	Strengthened institutional and technical capacity to reduce risks associated with climate-induced livelihood	60,000.00
		4.1.2 Develop training modules to build capacity of stakeholders on a continuous basis in all project sites		

in Kongwa district		4.1.3 Review and mainstream climate change adaptation measures into sustainable development plans at district, wards to village levels and KDCRP Toolkit will be developed to support district planners and villagers review, implement, monitor and to update the reviewed plans in future	failures in Kongwa district	
		4.1.4 Document and disseminate lessons learnt and best practices from project interventions through video and other documentaries, public media, meetings and public websites		
		4.1.5 Facilitate provisional of project monitoring and evaluation facilities, tools and equipment		
1. Project execution cost				95,160.77
2. Total Project cost				1,018,285.00
3. Project cycle Management Fee charged by the Implementing Entity				86,554.23
4. **Amount of financing requested**				**1,200,000.00**

1.5 *Projected Calendar*

Table 3: Projected milestone dates of the proposed project

Milestones	**Expected Dates**
Start of Project Implementation	September2020
Terminal Evaluation	August 2023
Project Closing (4 months after project completion)	February 2024

PART II: PROJECT JUSTIFICATION

PART II A: *Describe the project components, particularly focusing on the concrete adaptation activities, how these activities would contribute to climate resilience. For the case of a programme, show how the combination of individual projects would contribute to the overall increase in resilience*

All project components and activities proposed under this project are focusing on the concrete adaptation activities, and will be implemented on the ground to build resilience and the adaptive capacity of vulnerable agro-pastoral communities including promoting climate actions on gender issues in Kongwa district. The proposed project has four components, the details of how these will contribute the climate resilience are provided here below.

Component 1: Enhance climate resilient rural water supply system in vulnerable agro-pastoral communities at Mtanana and Ugogoni wards, Kongwa ditsrict

Outcome 1: Enhanced climate resilient rural water supply system in vulnerable agro-pastoral communities of Mtanana and Ugogoni wards, Kongwa district

Output1. 1: Climate resilient rural water supply system established in agro-pastoral communities at Matanana and Ugogoni Wards in Kongwa district

Rural communities in Kongwa district rely 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. In the two wards, community members are forced to fetch supplementary water about 25 kilometres away from their residences using different facilities dragged by cattle and donkeys (Figure 13).

Figure 17: Common water collecting method for distant transportation in Kongwa district.

The supplementary water for most villages of Mtanana and Ugogoni wards is also obtained from traditional shallow 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 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 Kongwa is stable to seasonal rainfall variability, dry spells and drought. The indicative activities to be implemented under Output 1.1 are:

Drill boreholes in drought prone and water scarce villages and Install solar energy driven water pumps at Mtanana and Ugogoni wards

Construct water storage tanks and distribution network systems at Mtanana and Ugogoni wards

Construct community water points/ community water Kiosks for network systems in the project sites

Construct cattle troughs and charcoal-dams for livestock water system in in agro-pastoral communities in selected villages at Matanana and Ugogoni wards, in Kongwa district

Output 1.2 Community Owned Water Supply Organization (COWSOs) established and facilitated and committee members trained on operational and maintenance

This output is proposed to put good and sustainable institutional structure to manage rural climate resilient water supply system at Mtanana and Ugogoni wards. The project proposes establishment of operational committee for the COWSOs, which will be trained on maintenance and operational issues including financial, accounting procurement and group dynamic issues in relation to COWSOs. The technical Trainings to be conducted for Trainers on maintenance and operations; management of finance, accounting and group dynamics issues to selected community members of COWSOs for both Matanana and Ugogoni wards aimed to demonstrate the values capacity building and transformation of communities in rural areas while avoiding maladaptation and adaptation deficit practices at local community levels. Establishment of COWSOs 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 1 in longer term, beyond project lifetime. The indicative activities to be implemented under this output are:

Formula water governance structures (COWSOs) and promote 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 COWSOs for both Mtanana and Ugogoni wards

Component 2: Support transformation of exploitive agro-pastoral practices into diversified climate smart and sustainable livelihoods

Outcome 2: Transformed exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods in selected wards of Kongwa district

Output 2.1 Best agricultural –climate smart practices enhanced to improve food security in the selected villages of Mtanana and Ugogoni wards, Kongwa district

Like in many other rural settings in Tanzania and in other least developed countries, agricultural activities including farming systems in Kongwa area are facing several challenges including poor farming practices and reliance on rainfall. As already described, over the past three decades now rain seasons have varied and shifted its trends such that droughts and dry spell periods are more common that wet spells. Rains are more erratic, coming at unexpected times in and out of seasons. Within recognizable seasons, unusual and ―unseasonable‖ events are occurring more frequently. These make individuals in these areas to suffer the most and are more vulnerable to food insecurity and death of livestock including drying of pastures and grazing lands for the cattle. Therefore, under this output, the project intends to increase resilience of farmers and livestock keepers to effects of climate change and variability by improving farming and livestock keeping systems in the selected villages. Indicative activities to be implemented under this output 2.1are:

- Construct and establish atleast three drip irrigation structures/schemes at Mtanana and Ugogoni wards in Kongwa district
- Rehabilitate the existed pre independence contour bands/windrows, and promote other soil and water management techniques (terracing, tie ridging) in-situ techniques for sustained agriculture/crop productivity at Mtanana and Ugogoni wards
- Train selected members of farmer and women groups on Operation and Maintenance (O&M) of drip irrigation facilities at Mtanana and Ugogoni wards
- Facilitate increased use of climate smart crops and promoting intercropping with drought resistant varieties like sorghum, sunflower, simsim, pigeon peas, cassava, cereals, sweet potatoes and early maturing crops to increase resilience farming systems at Mtanana and Ugogoni wards.
- Improve knowledge on best farming practices and transform traditional farming system through solid farmers tailored trainings using Farmer Field School Approach.
- Establish women based gardens and poultry houses and trainings on FFFS (Female Farmer Field School) – provision of seeds and tools to diversity gender based livelihood systems

Output 2.2 Natural pasture, local breeds and livestock management systems improved to enhance adaptive capacity of livestock keepers to climate induced droughts in Kongwa district

The negative effects of climate change to agro-pastoral communities‘ livelihoods are intolerable in Kongwa district. High level of livestock mortality associated with climate failures and bad seasons is continuously witnessed year after year. In Ugogoni ward for example, there has been progressive mortality record of livestock deaths due to dried pastures and lack of water for cattle. Due to this in 2013, there were about 332 livestock deaths, 525 livestock deaths were in the year 2014, 414 livestock died in the year 2015 while in 2016 about 595 livestock died. Likewise, the same Ward received reasonable food quantities in thousands tons of maize as food aid given to households with critical food shortage from the Government and other donor agencies. Displacement and forced migrations from these villages are also being witnessed. Indicative activities to be implemented under output 2.2 are:

- Establishing drought resistant pastures species and enhances range management and transform traditional grazing system.

Improve livestock management through cross breeding local breeds with improved breeds available at the National Ranching Company (NARCO)

Output 2.3 Improve market value chain of agro-pastoral products on farm and off farm Products to strength their competitive power in the market and diversify livelihood systems in the project sites

Activities proposed under this output aim to solve the existing market challenges of agro-pastoral products and capital issues to promote market based community innovations. Implementation of these activities will leverage and facilitate building climate resilience and adaptive capacity to poor communities especially women. The indicative activities under Output 2.3 are:

Facilitate and train farmers and livestock keepers on value addition and packaging techniques of their agricultural products and link them to competitive markets and finance institutions
Facilitate provision of value addition and packaging tools, equipment and machines

Component 3: Improve ecological functions to sustain climate sensitive rural livelihoods at Mtanana and Ugogoni wards and in selected rural communities of Kongwa district

Outcome 3: Improved ecological services and functions to sustain climate sensitive rural livelihoods in Kongwa district

Output 3.1: Integrated ecological and environmental management systems implemented in Kongwa district to sustain climate sensitive rural livelihoods in vulnerable communities

Over the past 70 years, ecological systems in Kongwa have been impaired by a combination of both human induced and climate change related drivers[21][22]. 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 poor farming methods, deforestations, charcoal making and overgrazing are common in the area. Unless novelty approaches which integrate community and ecosystem based solutions to tackle climate change be 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. For instance, activity 3.1.1, 3.1.2, 3.1.3 are expected to contribute to multiple adaptation benefits and climate resilience of rural communities directly and indirectly through values and products of the improved ecological functions and services, reverse land degradation for improved soil fertility and crop yields, weather amelioration and control stronger winds and dusts in the restored sites. 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, timber, various fruits obtained from fruit plants and selling forest products obtained from woodlots (ngitili) and folders. Farmers already use traditional bee hives and practices. There is much room for improvement and the opportunity to link honey production to Dodoma's market. 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 and by taking aerial photos. The total areas for ecological restoration and

[21] Mkonda Y.M 2017. Are Rainfall and Temperature Really Changing? Farmer's Perceptions, Meteorological Data, and Policy Implications in the Tanzanian Semi-Arid Zone, Journal of sustainability 9: 1412;

[22] The Groundnut Affair. 1950

rehabilitation are yet to be numerically quantified at this stage but expected to be about 30% of the approximately 5,000 hectors potential for restoration activities.

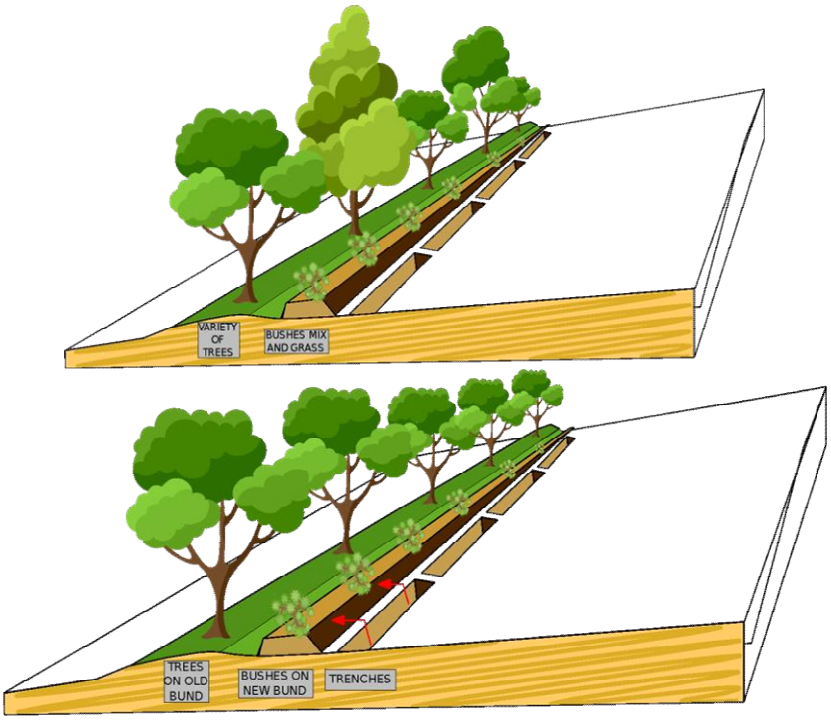


Figure 18: Trees and bushes layout along contour bunds after rehabilitation. On the contour bunds, between the planted trees the farmers will plant a variety of multipurpose trees and bushes. Pigeon peas, fodder grass and others. Very important that the native grass on the bunds is not disturbed

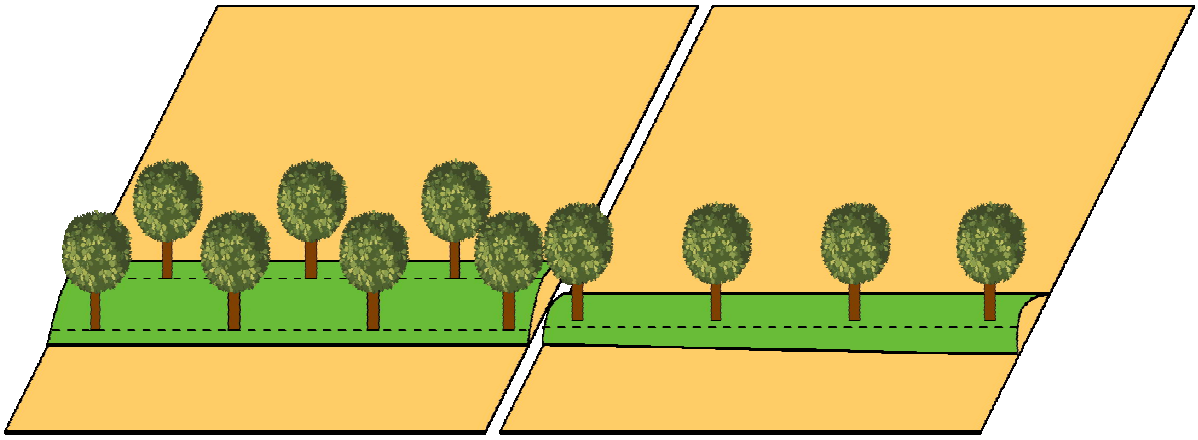


Figure 19: Proposed fruit and timber trees layout along contour bunds after restoration/rehabilitation.

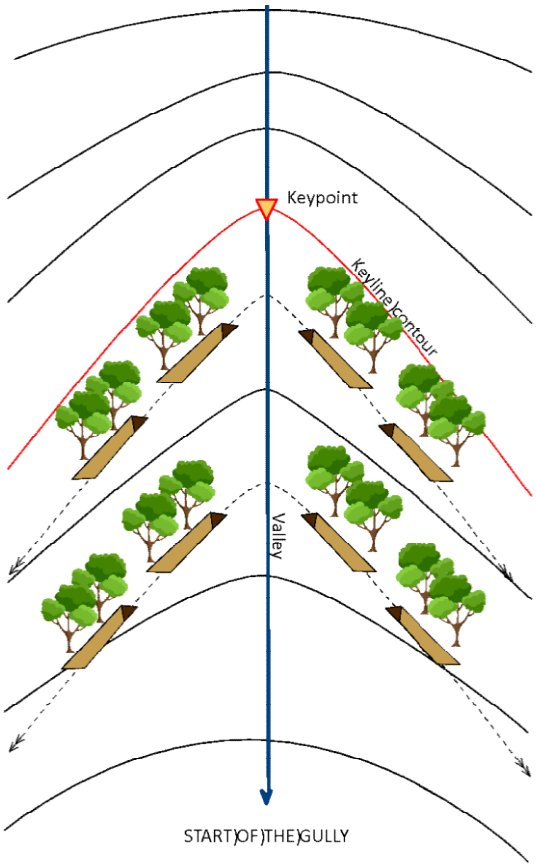


Figure 20 a: Using graded percolation trenches to capture water out of the valley and grow trees. Beeking is also possible after better performamce of the trees.

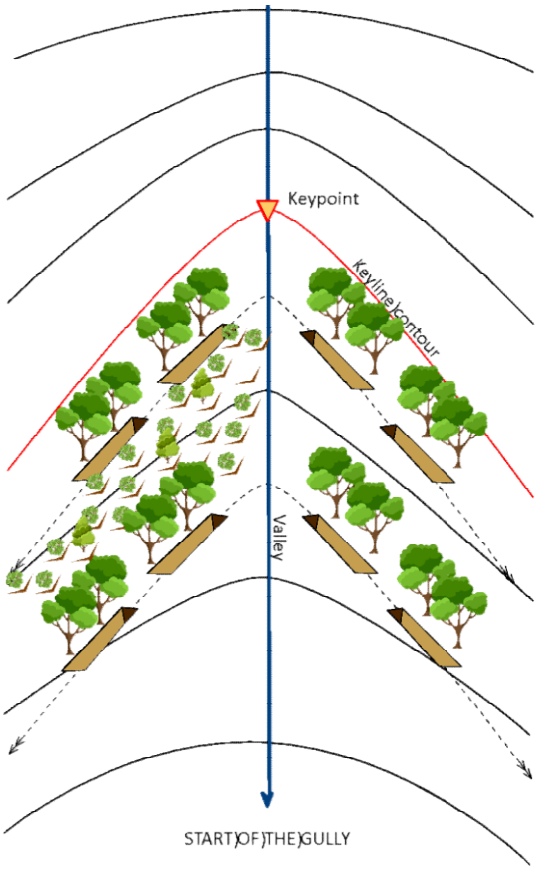


Figure20 b: Once the trenches are constructed using the keyline principle contour structures (on contour lines) can be marked and constructed to grow additional trees, bushes and grass

Figure 21: Hardpan area: In these areas only very limited grazing activities can be sustained. After rehabilitation activities such as beekeeping, folders and woodlot activities can be sustained as alternative income generating activities

The indicative activities to be implemented under Output 3.1are:

Establish and implement ecological restoration and rehabilitation plans (such as shrub/grasses establishment on contour bands/windrows, woodlots and woodland restoration) in selected Wards and Villages of Kongwa District

Promote bee keeping activities as income diversification and demonstration of adaptation benefits generated from ecological restoration areas under activity 3.1.1 to increase adaptive capacity of vulnerable marginalized groups (such as women, girls, old people)

Promote tree planting (trees with both environmental and socio economic values in mid-and long-term such as fruit plants and wood plants for timber) activities in residential areas, along streets and roadsides and in the degraded areas

Promote scaling ups of projects‘ Best Techniques (BT) and Best e Practices (BAP) on ecological restoration and rehabilitation in other areas of the district including in Dodoma region

Component 4: Building capacities of extension services and institutions at District, Ward and Village levels to support local communities and knowledge management

Outcome 4: Capacities of institutions, extension services and trainers strengthened to reduce risks associated with climate- induced livelihood failures in Kongwa district

Output 4.1 ***Institutional and technical capacity of the district and communities in Kongwa is strengthened to be able to with stand impacts of climate change and variability***

Factors for vulnerability of communities in Kongwa includes limited financial resources as well as limited capacity of the district management structures and extension services workers in supporting the local communities in the sustainable livelihood improvement and environmental related resources. The project will address some of these challenges through capacity building of district and village management structures, extension workers, famers groups and individuals, women and youth groups through workshops and trainings that will be provided through the project's established demonstration sites, Farmer Field Schools (FFS), Female Farmer Field School (FFFS) and Eco-schools and other specialized trainings centers such as specialized bee-keeping center at Mtanana. The outcome and output activities of this component are designed to strengthen technical and institutional capacities required to implement adaptation measures at the district and at village levels. This component will contribute to build sustainability of the projects' outcomes and impacts. The output will promote mainstreaming of adaptation issues into development plans in the district and at village levels. In addition, documentation and dissemination of lessons learned and best practices will be a critical aspect of the project. These lessons will support replication of some of the interventions with better and higher adaptive effects to the impacts of climate change. At the same time, documentation will enhance up-scaling and out-scaling to other district in Dodoma region or any other regions in Tanzania. The project will develop communication materials with informative material for instance in form of posters, flyers and brochures that are intended to facilitate knowledge transfer as well as sustain project interventions. Study tours between villagers and women groups and other relevant villagers and districts will be organised. A comprehensive training plan detailing the specific trainees, content and duration of the training will be developed to guide the capacity building programme. In this way knowledge management will be enhanced across levels and will also be fostered across the departments and sectors in the districts.

The review of district and village plans will therefore allow integration of climate elements and climate change adaptation issues into their development plans. To ensure integration of climate elements and climate change adaptation issues into district and village plans, a specific Kongwa District Climate Resilient Planning (KDCRP) Toolkit will be developed. KDCRP Toolkit helps planners at Kongwa district and village levels to consider where vulnerabilities may exist along the service delivery chain and reflect on the best ways to increase resilience from both a component and a systems perspective. It will also provide guidance for systematically integrating climate change and disaster risks into intervention planning and implementation and provides a generic framework that assists planners and users at community levels in: *Determining the level of need and priority for designing and/or delivering a more resilient intervention at village and local levels*; *Taking stock of which hazards affect the livelihoods of communities in the villages and development interventions through assessing the service components (hardware, consumables and people)present in villages and at Kongwa district, understanding the degree*

of vulnerability for villages to a range of climate extremes and disasters; and how to priorities them in terms of the consequences should they fail, be damaged or become unavailable; Thinking through and developing measures to mitigate risks to service deliver; and Putting together a participatory plan that helps integrate resilient measures into village and district developments plans and into the service delivery projects at village levels.

KDCRP Toolkit will save as amonitoring and evaluation tool to determine and understand levels of how reviewed district, ward and village plans mainstreamed climate change issues. As only one Strategic Development Plan span for 5 years, only one Plan will be review and monitored but all future annual development plans informed and monitored by KDCRP Toolkit. The KDCRP Toolkit will contain various indictors to guide monitoring the plans at district and village levels. Indicators such as number of district plans and villages reviewed to integrated climate change considerations, number of village institutional frame work established including clear roles and responsibilities, to address climate change at villge levels, number of financial and expenditure reports with climate resilience expenditures at village and district level. Detailed M&E result frame work with monitoring indicators and means of verifications will be developed together in the KDCRP Toolkit and in the comprehensive project monitoring and evaluation plan. In this way is expected that, climate change sensitivity culture will be built within the veins of development planning processes at lower levels. Lessons emerging from the mainstreaming process will help to up- scale climate risk management into the medium and long term development plans to enhance climate resilience in local communities outside the project sites in Kongwa district and will be a key practical lesson to be replicated in other local government authorities in Tanzania and during development of the overall National Adaptation Plan (NAPs).

The indicative activities to be implemented under Output 4.1 are:

Develop a detailed training plan to guide the capacity building program for the Project. A consultant will be hired to develop a detailed training plan highlighting the specific content with relevant examples to the prevailing conditions in Kongwa district, each ward and villages involved in the project implementation.

Develop training modules to build capacity of stakeholders/famers/village groups on a continuous basis in all project sites

Review and mainstream climate change adaptation measures into sustainable development plans at district, wards to village levels and KDCRP Toolkit will be developed to support district planners and villagers review, implement, monitor and to update the reviewed plans in future

Documenting and disseminating lessons and best practices from project interventions

Facilitate provisional of project monitoring and evaluation facilities, tools and equipment

The improved adaptation practice is highly dependent on behavioural change and is thus suggested to have a solid campaign of farmers tailored trainings using the Farmer Field School Approach, maintenance and operations of water and micro irrigation infrastructures, bee-keeping techniques, folder management, modern livestock keeping practices, tree planting and tree nursery management, woodlots management, honey processing, crop management and climate smart crops, good agriculture practices and agricultural produce processes and packaging and marketing. The trainers will be selected from among the experienced district experts and other government experts from relevant ministries, research and higher

learning institutions. Both trainees will be evaluated in each training session. The trainees will be evaluated mainly through questions and answers, practices in practical sessions in the field, simple tests, group works and presentations, while trainers will be evaluated mainly through checklists given to both trainees, district Authorities and Project management teams. The topics to be covered should be defined together with farmers, but must at least cover the following aspects:

The topics to be covered should be defined together with stakeholders during development of a detailed training plan to guide the capacity building program for the Project, but must at least cover the following aspects:

Table 4: The proposed training topics and modules

S/No	Topic and modules of the trainings	Persons to be trained	Objective	Estimated number of trainings and workshops and trainers
1	Technical Trainings of Trainers on maintenance and operations of water infrastructures; management of finance, accounting and group dynamics issues to selected community members for both Matanana and Ugogoni wards	5 district experts and engineers, 2 Technical Staff from FECE, 2 water experts from Kongwa NARCO COWSO members from villages, each village 10 members of which at least 4 must be women per each village, among the nine (9) villages participating in the project implementation in Mtanana and Ugogoni wards (90 members)	Formulate water governance structures and promote 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 village water sources, conduct Technical Trainings of Trainers on maintenance and operations; management of finance, accounting and group dynamics issues to selected community members for both Matanana and Ugogoni wards in Kongwa District	Estimated to be five (5), but will be confirmed by activity 4.1.1 and 4.1.2 Number of trainers estimated to 6.
2	Management of micro irrigation infrastructures, Operation and Maintenance (O&M) of drip irrigation facilities at Mtanana and Ugogoni wards,	Selected members of farmer and women groups 15 from each villages involved in drip/micro irrigation project activities and 8 experts from Kongwa districts,	Capacitate farmers on Operation and Maintenance (O&M) of drip irrigation facilities at Mtanana and Ugogoni wards	4 intensive and practical based trainings and 2 workshops Number of trainers will be 8 experts from Kongwa district

				2 experts from the National Irrigation Commission and 2 experts from the Ministry of Agriculture and Food Security, 2 Experts from FECE, 1 expert from the VPO and 1 expert from RAS office Dodoma
3	Best farming practices and transform traditional farming system through solid farmers tailored trainings using Farmer Field School Approach, Female Farmer Field School (FFFS) and Eco-schools and other specialized trainings centers at Mtanana and Ugogoni wards, crop management and climate smart crops, good agriculture practices and agricultural produce processes and packaging and marketing, soil and water conservation, crop rotation, intercropping, home gardens and packaging and marketing of bee-agricultural products	Selected members of farmer and women groups 20 from each villages involved in drip/micro irrigation and project activities in the district.	Improve knowledge on best farming practices and transform traditional farming system through solid farmers tailored trainings using Farmer Field School Approach established demonstration sites, Farmer Field Schools (FFS), Female Farmer Field School (FFFS) and Eco-schools and other specialized trainings centers at Mtanana and Ugogoni wards	10 trainings and workshops, 20 sessions of farmers field schools 20 sesions of Female Farmer Field School (FFFS) and Eco-schools and other specialized trainings centers (actual needs will be established during the inception workshop) Trainers will be 8 experts from Kongwa districts, 2 experts from the National Irrigation

				Commission and 2 experts from the Ministry of Agriculture and Food Security, 2 Experts from FECE, 1 expert from the VPO and 1 expert from RAS office Dodoma
4	Bee-keeping practices, tree planting and tree nursery management, woodlots management, honey processing, packaging and marketing of bee-keeping products	Selected members of farmer and women groups 15 from each villages involved in restorations and bee keeping activities and project activities in the district,	Promote bee keeping activities as income diversification and demonstration of adaptation benefits generated from ecological restoration areas to increase adaptive capacity of vulnerable marginalized groups (such as women, girls, old people), Promote tree planting activities in and Promote scaling ups of projects' Best Techniques (BT) and Best e Practices (BAP) on ecological restoration and rehabilitation in other areas of the district including in Dodoma region	Estimated to be six (6), but will be confirmed by activity 4.1.1 and 4.1.2 Trainers will be 5 experts from Kongwa districts, 2 experts from bee keeping divisions, 2 Experts from FECE, 1 expert from the VPO and 1 expert from RAS office Dodoma
5	Bush and folder grass establishment, grazing land management and improvement, value addition and packaging techniques of their livestock products and link them to competitive markets and finance institutions	Selected members of livestock keepers and women groups 15 from each villages involved in livestock related project activities,	Facilitate and train livestock keepers on value addition and packaging techniques of their products and link them to competitive markets and finance institutions	Estimated to be six (4), but will be confirmed by activity 4.1.1 and 4.1.2 Trainers will be 3 experts from Kongwa districts, 2 experts from Kongwa

				NARCO, 1 experts the MoLFD 2 Experts from FECE, 1 expert from the VPO and 1 expert from RAS office Dodoma

PATR IIB. *Describe how the project / programme 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 / programme will avoid or mitigate negative impacts, in compliance with the* ***Environmental and Social Policy of the Adaptation Fund.***

All four components will considerably contribute to economic, social and environmental benefits at village, district, national and at the international level. The proposed interventions under this project will improve adaptive capacity of the most vulnerable communities in Tanzania. Each component activities are well linked to both environmental and socio-economic to improve the wellbeing of the people and their supporting natural ecosystems. Equally, the project is well informed by the Environmental and Social Policy of the Adaptation Fund to avoid and mitigate unseen negative impacts including considering gender issues. The following description below entails how economic, social and environmental benefits have been integrated in the designing of this project. Through these economic gains, the project will also deliver significant social benefits.

i. Economic benefits

Economic baseline situation

Average annual income per household in Kongwa district is well below the National poverty Line. Annual income per house hold is below USD$1per day. Agriculture and to certain extent livestock are main income generation activities for nearly 95% of the households. Livestock are indigenous breeds of low productivity and hence undetermined contribution to households‘ income. 51.75% of the populations in the proposed project sites are dependents. Livestock and crop cultivation which are major economic activates are being affected by bad weather and seasons. Drought periods has caused high level of livestock mortality associated with climate failures and bad seasons. Data indicates that in Ugogoni and Mtanana wards for example, there has been progressive mortality record of livestock deaths due to dried pastures. In 2013, there were about 332 livestock deaths, 525 livestock deaths in 2014, 414 livestock deaths in 2015 and 595 livestock deaths in the year 2016. Likewise, the same Ward received reasonable food quantities in thousands tons of maize as aid support given to households with critical food shortage from the Government and other donor agencies. In 2017, the two Wards received 256 tons of maize as aid support for the decrease crop yield due to severe drought. Currently adaptive capacity of communities in Mtanana and Ugononi wards to climate change impacts is very low and any slight change in climatic factors causes serious problems to the people and their livelihoods.

Economic benefits of the project

The project components will extensively contribute to economic benefits, and it is seen that, when perfectly implemented, this project will lastingly transform livelihood systems and quality of life in the project sites and beyond. The project components proposed here will improve and transform agro-pastoral systems and water supply to be more adaptive to climate shocks and more sustainable. In particular, the activities outlined in each output of the components will lead to increased agriculture and livestock production and move vulnerable communities beyond subsistence farming to selling

excess crops and livestock products. For instance, the project will directly improve adaptation capacity of 74,000 farmers through establishment of cashew nuts as alternative cash crops, more than 2 million cashew nut crops/trees will be given to farmers and capacity building on cashew nuts trees and farm management will be key benefits to farmers. The project will facilitate 200 women to establish women based gardens and poultry houses and trainings 440 women from 88 women based groups on FFFS (Female Farmer Field School) – provision of seeds and tools to diversity gender based livelihood systems. 100 kilograms of improved sorghum seed, 150 kilograms of improved sunflower seed, 50 kilograms of improved pigeon peas, 2 tons of improved cassava cuttings, 100 of improved cereals seed, 2 tons of improved sweet potatoes seed will be provided to vulnerable farmers and women groups as early maturing crops to increase climate resilience farming systems at Mtanana and Ugogoni wards.

The project will facilitate establishment of 3 drip irrigation structures/schemes at Mtanana and Ugogoni wards in Kongwa district for massive production of horticultural crops including vegetables through 8 farmer groups including 10 women and youth groups. A total of 300 farmers will benefit from the drip irrigation as climate resilient actions to improve income and their adaptive capacity. Trainings and capacity building will also contribute to economic benefits. Bee-keeping and fruit -tree planting and trees for timber activities are alterative income generating activities under the current project. It is expected that, 400,000 fruit trees will be grown and 400 farmers will be involved in bee keeping and honey production. The project also aim at building on impressive gains from agricultural, livestock and bee keeping production by organising the farmers into sustainable marketing and credit cooperatives known as Cooperative SACCOs. A total of nine (9) SACCOs will be formulated. This is because the livelihoods of smallholder farmers are often constrained by poor access to markets and limited entrepreneurial skills which skills, which hinders the economic development hence limiting the economic base of the most vulnerable communities. The business cooperative approach has proven to be the strongest driver of income generation. The cooperative will also benefit their members through skills training in agricultural techniques and business practices. In addition, activities such as apiculture, local chickens keeping will also contribute to improvement of social welfare and economic standards of the most vulnerable groups. Thus, the combine economic benefits of this project is huge at a rate that the invested US $1 will yield a net benefit of atleast US $4.

ii. Environmental benefits

Environmental baseline situation

The project areas are faced with rampant ecosystem and environmental degradation, soil loss, and reduction in biodiversity, which contribute to low resilience to climate change with high risk floods. Degraded forests occupy about 68.2% of the total vegetation cover in Kongwa district, while in Mtanana is about 74. 5% of the total vegetation cover. As described at section 1.2.2, in the past 70 years, Kongwa district was predominantly covered with thick savannah thicket characterized by acacia and baobab trees. Tall savannah type of grassland rich in wildlife was dominating in the area. Such environmental integrity was degraded following the decision by colonial government to establish groundnut plantations in the area, by clearing almost everything, in late 1940s. Since, 1948 onwards, with the advent of the groundnut scheme the natural vegetation was cleared in a continuous crescendo. Whereby the bush was cleared to give away for crop production and grazing land (figure 8). Within the groundnut scheme only few areas were left with a good plant cover. Other human induced drivers for environmental degradation like persistent slash and burn farming methods and overgrazing are also common

in the area during dry periods. This decision together with the current environmental degradation trend coupled with climate change effects turned the area to be almost bare, with the vegetation cover generally consisting of only shrubs and spots of acacia and baobab trees. Owing to the land being almost bare, flooding and stronger winds are now more frequent. The environmental failure is related to poverty and poor life quality of the population in most villages. Thus, challenges caused by climate change have multiplier effects which worsen the living condition and failures of environmental systems.

Environmental benefits of the project

This project will have several environmental benefits, including contribution to climate change mitigation, ecosystem management, biodiversity conservation, land management and conservation agriculture. This project have special component on improving functions and services of ecological systems which aims to increase availability of trees for planting, restoration and rehabilitation of the colonial contour bands/windrows. 150 acres with contour bands/windrows will be restored to control soil erosion and land degradation. The project will also invest in reforestation and restoration of degraded ecosystems in Kongwa including hills and river systems. 1 million trees for timber and 400,000 fruit trees including more than 2 million cashew nut crops/trees will be planted in the project areas. Activities like woodlot establishment and reversing the ongoing degradation of ecological systems and enhancing adaptation activities through linked project components is expected to contribute over 40% of forest regeneration and cover including establishing beekeeping activities in villages‘ forest lands and implementing village environmental related by laws. The project will contribute to reverse bad practices of livestock keepers and farmers as explained under component 2 and 3, including contributing to adaptation benefits for village communities. Environmental benefits of this project is also expected to contribute to climate resilience of rural communities through improved ecological functions and services, reversed land degradation weather amelioration, creation of alternative income of vulnerable communities specially women and girls through selling bee keeping products such as honey, timber, fruits from fruit plants and other forest products and folders for livestock.

Capacity building through trainings such as FFS, FFFS and village workshops such as bee-keeping techniques and best agricultural and livestock keeping practices for local communities at village levels will ensure environmental benefits are understood and supported. The increased commitment to ecosystem-based approaches is likely to foster better stewardship of environmental resources. Thus, activities proposed by the project under component 1, 2 and 3 will result everlasting positive impact and benefits to the local and global environment including climate change mitigation potentials, biodiversity and human communities.

iii. Social Benefits

Social Baseline situation

The district is economically and socially backward with acute poverty and society ridden with outmoded traditions and even superstitions. The highly vulnerable groups in the community (women, children and youth) are entrenched in poverty due to limited options for improving their livelihoods. The status of women iscoupled with discrimination against girl child[23]. The women suffer from all kinds of social disabilities and at the same

[23] Kongwa district socio-economic profile, 2016-2021

time handling each and every responsibility of domestic work as well as collection of fuel wood and water for domestic uses from distant places. Gender inequity is the project site is normally based on community enlightenment which is configured by education level, cultural bondage, individual characteristics and society dynamics. Illiteracy; which is high in women, (District literacy rate is 61.7%) and cultural bondage in Kongwa still play a pivot role in gender imbalance particularly in remote/peripheral rural areas. Rain fed agriculture being primary occupation of the communities which expose them to greater risk and make them more vulnerable to climate change effects. Available information on gender based conflicts at the district are linked to climate change issues such as water scarcity and food shortage. Water scarcity and continued food crisis in villages of the targeted project sites have also instigated conflict within households, including incidents of abandonment or separation of couples. For instance, since 2014 to 2016 about 258 cases of couple separation was registered, the reasons for separations and abandonment were linked with water scarcity and food shortage. Thus, they need to be supported to have alternative income generation activities to help improve their livelihoods.

Social benefits of the project

The social benefits that will be gained as a result of implementing this project are manifold. All activities suggested under each component offer multiple social benefits with positive multiplier effect to marginalize and poor vulnerable rural communities including women and school girls. The project inspires to improve rural water systems, foster food security, and transform farming practices and livestock keeping systems including improvement of folder, rangeland and pastures. All these have multiple benefits and positive contribution to the existing social systems in Kongwa solving climate driven social and gender related problems.

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 (training and community based management). Some activities of the project are specifically targeting woman and vulnerable groups. The proposed project targets supporting 88 women groups, targeting massive production of horticultural crops including vegetables through 18 farmer groups including 10 women and youth groups about with about 300 farmers, 60% being women. Gender based challenges linked to climate change effects such as water scarcity such as conflict within households including incidents of abandonment or separation of couples due to time spent for looking for drinking water form longer distances, will be largely reduced and solved through 100% availability of safe drinking water. The project will also contribute to invent competing demand for water among livestock keepers and farmers, reverse school children dropout including controlling recurring water borne diseases like cholera.

Indirect socio-benefits of this project will also be observed among women and girls through raising their income and build their climate adaptive capacities, such that they will gradually be transformed and graduate from norms and traditional systems which create social, economic and political barriers as described in the results on gander analysis against each project components in Table 5.

Gender analysis against project components

At the stage of full proposal formulation, the project formulation team conducted a gender analysis study. Its findings were analyzed and discussed in the stakeholders workshop conducted on 28th August 2019 at Kongwa district headquarters. As it is indicated at section 1.2.3.5, 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 communities especially widows, orphans and girls to poverty and severe hunger. Poverty and hunger, in return, 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 Kongwa confer more power to men over women. 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 the district, and are, relatively more vulnerable to climate change-induced risks, when compared to approximately only 40 percent for men. In addition, their heavy workload that combines exploitive agriculture, household and domestic works as well as non-farm earning activities such as intensive tasks of child-care, fetching water and fuel wood from far 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 male/female participation at meetings and training events in order for the meeting/training to be quorate, the target for women/men ration should be encouraged to no less than 50%; and develop implementation plan which ensure targets for male/female participation in project activities be atleast 50% women. See Table 5 for summary of results on gender analysis against project components

Table 5: Summary of results on gender analysis against project components

Project Component	**Gender Risks/Challenges**	**Proposed mitigation strategies**	**Benefits**
Component1: Enhance climate resilient rural water supply system in vulnerable agro-pastoral communities at Mtanana and Ugogoni Wards	● Climate induced challenges related to water scarcity are forcing people (more often women and children) to travel longer distances looking for unsafe water ● The existing un-protected traditional wells in Mtanana and Ugogoni wards expose mostly children and women mostly to water borne diseases especially cholera and dysentery when compared to men. ● Gender based conflicts including incidents of abandonment or separation of couples linked to climate change issues such as water scarcity and food shortage ● Low level of	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	● Gender sensitive water management institutional structures strengthened /established and functioning ● Water governance/by laws to regulate effective use of water and protection of water sources formulated and functioning. The proposed COWSOs will have 10 members in each village. Atleast 50% of the members will be women such that in the 9 villages, there will be 45 women representative in COWOSOs.
		Enable improved access to rural water supply systems and technologies	● Gender based conflict related to waterscarcity will be reduce as the project target 100% of water availability in the project sites

	representation of gender groups in water management system as the current system in the district is dominated by men.		
Component 2: Support transformation of exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods	• Low adoption rates of the transformative agricultural interventions by all gender groups • Elites hijacking the transformative and climate sensitive agricultural interventions • 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	Proper guideline for selection members of farmer and women groups 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	• Enable improved access to Agricultural tools and technologies with aim of transforming exploitive their agricultural practices to women and girls including be alteast 50% of the beneficiaries • Establish women based gardens and poultry houses and trainings on FFFS (Female Farmer Field School) – provision of seeds and tools to diversity gender based livelihood systems • Increased use of climate smart crops and promoting intercropping with drought resistant varieties like sorghum, cashew nuts, sunflower, simsim, pigeon peas, cassava, cereals, sweet potatoes and early maturing crops to increase resilience farming systems

		practices	
Component 3: Improved ecological functions to sustain climate sensitive livelihoods in Kongwa District.	● Inactive and low participation of women and girls in ecological and environmental based activities and ecological based income generating activities especially marginalization of Women, youth and vulnerable groups	Clear guidelines and by laws on management of the environment and village ecosystems Ensure that all groups are equally represented on managing ecological and environmental quality and involved in restoration activities Proper and inclusive criteria for selection of beneficiaries to ensure 50% of all people	● Increased alternative income generating options, contributing to reduction of income poverty and building climate resilience of vulnerable communities specially women and girls

		involved to implement activities under this component are women	
Component 4: Strengthen local institutions capacity for effective adaptation strategies and reduce risks associated with climate-induced socio-economic failures in Kongwa district	• 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 • Low participation by vulnerable groups due to low literacy levels and existence of groups with special/individual interest over others	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	• Improved knowledge of village communities, technical staff of Kongwa District Council and civil societies on climate change, its impacts and adaptation strategies • Capacities of beneficiaries to implement concrete adaptation actions for climate resilient and sustainable livelihood systems strengthened • Demonstration centers, eco-schools and eco-villages for ecosystems management and alternative income generating activities established • Review and mainstream climate change adaptation measures into sustainable development plans at district, wards to village levels

		project interventions	

PART IIC. *Describe or provide an analysis of the cost-effectiveness of the proposed project programme.*

a) Cost effectiveness from a technical perspective

It is believed that enhancing direct engagement of vulnerable communities in villages to implement climate actions empowers local communities to conceive and drive local adaptation responses directly, build their adaptive capacity to climate and seasonal weather shocks, foster transformation of their livelihood systems to be more climate resilient and allow them to scale up successful climate adaptation actions. This enhanced direct implementation approach using force account modality and self-reliance (ujamaa) spirit existing in villages is a perfect time sensitive, efficient and new cost-effective way to deliver concrete adaptation projects with direct benefits at the local level in the United Republic of Tanzania. The costly conventional way, the top-down approach of designing and implementing adaptation project from central government, usually from ministry headquarters, facilitated by multilateral-implementing entities would not permit this level of local ownership, design and implementation.

For instance, adaptation projects such as the Adaptation Fund Project – ―Implementation of Concrete Adaptation Measures to Reduce Vulnerability of Livelihood and Economy of Coastal Communities in Tanzania‖ – which is currently under implementation in Dar es Salaam and the Least Developed Countries Fund (LDCF-GEF) project- Ecosystem-Based Adaptation for Rural Resilience in Tanzania , both implemented under the United Nations Environmental Program (UNEP); and the LDCF-project under the United Nations Development Program (UNDP)-Strengthening Climate Information and Early Warning Systems in Tanzania for Climate Resilient Development and Adaptation to Climate Change‖ used top-down approach and their running cost when quantified using elements like fuels costs from ministry headquarters to project sites in villages and districts, international consultant fees and un-trapped force account and Ujamaa work force/benefits offered my rural communities in Tanzania, are perceived to be extremely higher(more that 40%) when compared to the proposed project. This project will enable financial resources from Adaptation Fund (AF) to flow directly to activities that will be implemented by vulnerable communities themselves in Mtanana and Ugogoni wards, and will provide an important complementary adaptation response to higher level in the district and the nation at large.

The Africa Adaptation Program (AAP) which was also implemented through UNDP funder by JICA, had limited community involvement and engagement of government machinery at district and village levels. Through had strong concrete adaptation, yet appeared to be reactive and costly as communities as didn‘t trap the in-kind cost contribution from communities using the popular force account modality. In-contrast the project funded by the African Development Bank (AfDB)- Institutional Support for Climate And Seasonal Weather Information for Adaptation Planning in Mwanga and Same districts, Northern Tanzania, had concrete adaptation intervention which used Force Account and Ujama spirit to deliver activities at local levels. The cost recovery in-terms of monetary was estimate to be about 40%. However, its management is being coordinated from the Vice President‘s Office, more than 500 km away to the project sites in Mwanga and Same districts. In that way project administration/execution cost amounts up to 30% of the total project cost, but this project was able to promote transformation of traditional agriculture and water supply in Jipe and Mabilioni villages and increased adaptive capacity of local communities to current and future climate risks. The proposed project, tried to harness the best experience from this project while recognized that the administrative costs should remain well below 9.5%.

Table 6: Comparison of proposed interventions with alternative options

Component 1: Enhance climate resilient rural water supply system in vulnerable agro-pastoral communities at Mtanana and Ugogoni wards, Kongwa ditsrict ***Expected Outcome : Enhanced climate resilient rural water supply system in vulnerable agro-pastoral communities of Mtanana and Ugogoni wards, Kongwa district*** ***Resource allocated: USD 330,000.00***	
Proposed interventions: .These are centered around community levels, focusing on the concrete adaptation activities, and will be implemented on the ground to build resilience and the adaptive capacity of vulnerable communities including promoting climate actions on gender issues by solving climate induced water scarcity. Rural communities in Kongwa district rely heavily on climate sensitive water resources and infrastructures for their water supply, which have proven to be incapable of withstanding the effects of climate change and even increased water demands. This component would promote climate resilient rural water supply, through investing in borehole drilling and establish COWSOs as are the only reliable options considered to be more stable to climate shocks when compared to seasonal rivers which disappear every dry seasons. Under this component will t, climate resilient rural water supply and reliable water distribution networks will be established. 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 costly burden to peoples life quality in both aspects beyond economic reasoning.	
Benefits of proposed intervention	**Alternative intervention and reason for not opting for this**
The proposed interventions under Component 1 will benefit over 10,000 of the most vulnerable communities especially women and children across villages of Mtanana and Ugogoni Wards through: ● Drill four boreholes in drought prone and water scarce villages and Install solar energy driven water pumps at Mtanana and Ugogoni wards ● Construct water storage tanks and distribution network systems at Mtanana and Ugogoni wards ● Construct community water points/ community water Kiosks for network systems in the project sites ● Construct cattle troughs and charcoal-dams for livestock water system inin agro-pastoral communities in selected villages at Matanana and Ugogoni wards, in Kongwa district ● Formula water governance structures (COWSOs) and promote equitable water allocation for all uses and revenue collection. ● Conduct Technical Trainings of Trainers on maintenance and operations; management of finance, ● accounting and group dynamics issues to selected community members of	Introduce of water supply from Lake Victoria about 600 kilometers or extending water supply system from the existing borehole water sources for Dodoma Municipality about 15 kilometers will be extremely costly and difficult to achieve under the current funding, and such investment could not financially and economically viable. These are extremely costly and there are high recurrent costs associated with maintaining the infrastructure. Moreover, water sources from Dodoma is this type of is not guaranteed to be a long-term solution as water demand is Dodoma is equally high. Investing to improve supplementary water sources, traditionally used community members could not result cost effectiveness and viable solution. These are traditional wells and seasonal streams which dry few days after the rain season, mainly from July – November. They provide contaminated water with biological pathogens, thus exposing people to water borne diseases (e.g. cholera, dysentery), which occurs almost every year. Treatment of such high turbid and contaminated water would be costly and operation could not possible and affordable to COWSOs

COWSOs for both Mtanana and Ugogoni wards ● Promote formulation of water governance/by laws to regulate effective use of water and protection of water sources Thus, investment for 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 Kongwa is stable to seasonal rainfall variability, dry spells and drought as compared to any alternatives available. Earthworks for constructions of water storage tanks and distribution network systems, constructions of community water points/ community water Kiosks and constructions of cattle troughs for livestock water system will be enhanced through Force Account Modality and Self-reliance (Ujamaa) spirit existing in these villages. This approach is a perfect time sensitive, efficient and new cost-effective way to deliver concrete adaptation projects with direct benefits to communities. It is expected that, this approach will increase the project value up to over 40%as compared to the alternative standard contractual works.	● Alternative standard contractual works for constructions of water storage tanks, distribution network systems, community water points/ community water Kiosks and constructions of cattle troughs for livestock water system would be costly for laborers and salaries.
Component 2: Support transformation of exploitive agro-pastoral practices into diversified climate smart and sustainable livelihoods ***Expected outcome : Transformed exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods in selected wards of Kongwa district*** ***Resources allocated (USD 330,000)***	
Proposed interventions: The proposed interventions intend to increase resilience of farmers and livestock keepers to effects of climate change and variability by improving farming and livestock keeping systems in selected villages in Mtanana and Ugogoni wards. A major part of this component will enhance best agricultural –climate smart practices to improve food security, enhance adaptive capacity of livestock keepers and value-chain of agro-pastoral products-on farm and off farm and diversify livelihoods of vulnerable groups (women, youth and school children)	
Benefits of proposed intervention	**Alternative intervention and reason for not opting for this**
The proposed interventions under Component 2 will ● Benefit over 74000 in the district through establishment of cashew nuts as alternative cash crops, establishment of more than 2 million cashew nut crops/trees and management of cashew nuts nurseries, capacity building on cashew nuts trees and farm management. ● Construct and establish atleast three drip irrigation structures/schemes at Mtanana	● Continue to keep farming and livestock system without support for alternative livelihoods and build climate resilience of farmers and livestock keepers to effects by improving farming and livestock keeping systems. This option would lead to increased levels of poverty and vulnerability to climate change. Many vulnerable people, particularly women and youth will continue to witness increased food insecurity and livestock deaths This is because, over the past three decades rain seasons have varied and shifted its trends such that droughts and dry spell periods

and Ugogoni wards in Kongwa district ● Rehabilitate the existed pre independence contour bands/windrows, and promote other soil and water management techniques (terracing, tie ridging) in-situ techniques for sustained agriculture/crop productivity at Mtanana and Ugogoni wards ● Facilitate increased use of climate smart crops and promoting intercropping with drought resistant varieties like sorghum, sunflower, simsim, pigeon peas, cassava, cereals, sweet potatoes and early maturing crops to increase resilience farming systems at Mtanana and Ugogoni wards. ● Improve knowledge on best farming practices and transform traditional farming system through solid farmers tailored trainings using Farmer Field School Approach. ● Establish women based gardens and poultry houses and trainings on FFFS (Female Farmer Field School) – provision of seeds and tools to diversity gender based livelihood systems ● Establishing drought resistant pastures species and enhances range management and transform traditional grazing system.	are more common than wet spells. Without intervention individuals in these areas will continue to suffer the most and be more vulnerable to food insecurity and death of livestock including drying of pastures and grazing lands. ● Leave people to continue depending for food aid from the donors and the government, whenever, crop failure and livestock death occurs due to bad seasons. This would be costly and unreliable option for transformation for social livelihood transformation. Moreover, dependence syndrome could be created and promoted among youth and in the society. ● Leave people to continue farming traditionally in the riparian and degraded windrows and farms. This will continue the process of soil and land degradation and increase the risk of crop failures and low productivity. Moreover, the ever-declining returns from farming unproductive soils will ultimately lead to degraded land being abandoned, increased of shifting agricultural practices and increase the cost of restoration. ● Leave people to continue with the existing traditional livestock keeping systems. This alternative will accelerate high level of livestock mortality associated with climate failures and bad seasons in than before, and thus could be costly due to compassion by the government, which in most cases do not afford.
Component 3: Improve ecological functions to sustain climate sensitive rural livelihoods at Mtanana and Ugogoni wards and in selected rural communities of Kongwa district ***Expected utcome : Improved ecological services and functions to sustain climate sensitive rural livelihoods in Kongwa district*** ***Resources allocated USD 198,28)***	
Proposed interventions: The proposed interventions under this component provide innovations which promote conservation measures linked to economic benefits to the people for tackling climate change effects. Interventions will contribute to multiple adaptation benefits and climate resilience of rural communities directly and indirectly through values and products of the improved ecological functions and services, reverse land degradation, improved soil fertility and crop yields, weather amelioration and control stronger winds and dusts in the restored sites. The interventions will also provide excellent alternative income generating options, contributing to reduction of income poverty especially women and girls through selling bee keeping products, timber, various fruits obtained from fruit plants and selling forest products obtained from woodlots (ngitili) and folders. The total area available for ecological restoration and rehabilitation under this component is more than 1,000 hectors potential for restoration activities.	
Benefits of proposed intervention	**Alternative intervention and reason for not opting for this**
The proposed interventions under Component 3 will benefit more than 20,000 villagers in the 9 village of Mtanana and Ugogoni wards and other areas in Kongwa district through ● Rehabilitation of degraded contour will allow activities such as planting multipurpose trees and bushes along contour bunds after rehabilitation. On the contour bunds, between the planted trees the farmers will plant a Pigeon peas, fodder grass and others, but native grass on the bunds will not be disturbed to promote conservation	● Continue doing nothing without support for rehabilitation of the degraded contour bands/windrows. This option would lead to continue degradation and make these areas be unsuitable land systems for production. Their functions on controlling and preventing soil erosion and strong winds will remain untapped. Additional benefits such planting multipurpose trees, pigeon peas, and bushes along bunds after rehabilitation will be not realized. Doing nothing option will also attract additional costs associated with abandonment of the degraded contour bands and shifting agriculture.

agriculture and avoid the cost which would be associated with abandonment of the degraded contour bands and shifting agriculture ● Promotion of tree planting (trees with both environmental and socio economic values in mid-and long-term such as fruit plants and wood plants for timber) activities in residential areas, along streets and roadsides and in the degraded areas will stimulate sustainable income generating activities which are stable to climate effects. ● Establishment of ecological restoration and rehabilitation in pilot village lands and promote bee-keeping activities in the restored ecosystems, will be cost effected as these areas will be used for income generation by all groups. Groups will be trained on manufacturing modern bee-hives through the bee-hives manufacturing workshop to be established at Mtanana A village ● Creation of alternative livelihoods will reduce dependency on farming and alleviate pressure on fragile ecosystems allowing the restoration of essential ecosystem services. This will reduce the risk of flooding and land degradation and the costs associated with disaster relief and rehabilitating affected areas.	● Without tree planting (trees with both environmental and socio economic values in mid-and long-term such as fruit plants and wood plants for timber) activities in residential areas, along streets and roadsides and in the degraded areas, future cost due to continued environmental and livelihood failure will be high and unaffordable to the district and village governments. This option, would be translated into leaving marginalized communities especially women and school children without sustainable income generating activities which are stable to climate effects. ● Purchasing modern bee-hives from market prices would be expensive and unsustainable alternative compared to sustainable, local based approach of training bee-keepers/farmers on manufacturing modern bee-hives through bee-hives workshop to be established at Mtanana A village. Future maintenance and operation cost would be expensive and un-affordable to the majority of vulnerable groups including women and youth groups
Component 4: Building capacities of extension services and institutions at District, Ward and Village levels to support local communities and knowledge management ***Expected outcome 4: Capacities of institutions, extension services and trainers strengthened to reduce risks associated with climate- induced livelihood failures in Kongwa district*** ***Allocated resources USD 60,000***	
Proposed interventions: This component builds the capacity of local institutions to plan and implement climate resilient interventions and scale up effective adaptation strategies in other villages beyond the project sites. Component 4 activities project thus facilitate capacity building of district and village management officers, rural extension workers in the villages, famer groups and individuals, women and youth groups through workshops and trainings that will be provided through the project's established demonstration sites, Farmer Field Schools (FFS), Female Farmer Field School (FFFS), Eco-schools and other specialized trainings centers such as specialized bee-keeping center at Mtanana. This component will contribute to build sustainability of the projects' outcomes and impacts. It will also share project results and lessons learned	
Benefits of proposed intervention	**Alternative intervention and reason for not opting for this**
● Awareness raising and training will increase understanding of climate threats and how to manage these risks by communities in the villages and promote learning and cooperation among different sectors and communities. This will contribute to minimising damage and losses associated with hazard events through increased awareness and capacity at grass root levels ● The training of farmers, women groups, COWSO Members, Livestock keepers and government officials at village and district level in addressing climate change will help to mainstream climate change and enable them to incorporate adaptation planning into future activities and will enable the replication of activities in other parts of Kongwa and Tanzania. This will protect climate resources from building climate resilience which can be easily avoided plans with climate information. ● Development of KDCRP Toolkit will support district planners and villagers review, implement, monitor and to update the reviewed plans in future and make them more climate resilience.	● The project could focus all the resources from this component on only district level awareness and capacity building. However, this would leave a gap in knowledge and understanding at the village and community level where climate effects are being experienced and resources are needed and deployed to improve their adaptive capacities. ● The project could concentrate all funding resources entirely on the target individuals but this approach would fail to capitalize on the potential for secondary uptake of good practices that lead to wider climate resilience in and beyond the target village communities. ● District and village plans could be reviewed withough informed or supported by KDCRP Toolkit. This would an option that may result plans which may have insufficient climate information, thus refinement would be needed with additional cost. Future review and monitoring of such plans wpuld be disfficult.

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Cost-effectiveness of this project will also be delivered through socio-economic and income improvement in communities, efficiency way of timely delivering actions on the ground including effectiveness and sustainability of the proposed climate interventions. For example, current approach to climate related risk management and poverty reduction projects in Kongwa have been mostly reactive, based on time events which in most cases are not sustainable. Options like supplying food aid to communities as adaptation actions to respond on the vagaries in climate and seasonal weather is mostly reactive and costly relative to promotion of climate resilient – drip irrigation with the view of transforming rural agriculture and improving crop production. Socio-economic and income generation expected from ecological restoration will be effective, efficiency and economical way to realize adaption benefits compared to traditional ecological restoration project in the United Republic of Tanzania in the 1980s, like the costly HADO program which failed due to limited integration of livelihood activities. For example, preliminary socio-economic analysis on the proposed project activities (climate resilient-rural water supply, small scale-drip irrigation, bee keeping, restoration of ecosystems), when implemented using Force Account Modalities have highest internal rates of return beyond 40 –80% (but when strong reanalysis performed my yield more larger number) higher benefit: cost ratios, currently estimated to be up to 27:1500 for concrete actions under components 1, 2 and 3. It is therefore obvious that, the proposed project is cost-effective and the project‘s investment will accrue large benefit for life and livelihood quality improvement vis-à-vis the traditional and existing way of implementing adaptation projects in the United Republic of Tanzania.

b) Cost effectiveness from a project management perspective

The Project Management Unit (PMU) is proposed to be based in the project area at the district headquarters. As maximum possible the project will use and enjoy the existing government staff available at the district and at the Foundation for Energy, Climate and Environment (FECE) including to be hosted in the buildings of the district headquarters. No new staff is expected to be hired; no pensions and insurances will be paid by the requested resources from Adaption, only allowance/top-up salaries will be given to few staff like the Project Manager, Monitoring and Evaluation Expert, an Accountant of the project, Driver and Personal Secretary. Other technical staff will not require allowances as day to day activities will be responsibility of the PMU.. This is viewed to be cost effective and promote best use of resources by reducing project management costs. All utility bills for project staff will be covered by FECE and Kongwa District Council. This will cut-off the project running cost by around 40-50%. .

PART11D: *Describe how the project / programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, 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 villages, 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 (NDCs, 2019) to be pursued by the United Republic of Tanzania by 2030. For agricultural related 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 agriculture interventions; Providing accessible mechanisms for small-holder farmers against climate related shocks, including crop insurances; and Strengthening knowledge systems, extension services and agricultural 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 pasture and rangeland management systems and practices; enhance climate resilient livestock infrastructure and services; promote livelihood diversification of livestock keepers,; and Increasing livestock production through (livestock related) climate-smart 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 four components of this project and their output activities are strongly supporting implementation of the NDCs as all of them are consistence 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 Strategy (URT, 2012) that are most vulnerable, which need urgent and integrated adaptation measures. The project is also in consistence with the Tanzania Development Vision 2025, National Second Five Year Development Plan (NSFYDP 2016/2021), the First and the Second National Communication submitted to the United Nations 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) and Kongwa District Strategic Plan (2016/2021). All these national and district documents take account and recognize the challenges and negative effects posed by climate change. In this way they propose and call for the need to implement climate actions at local levels, where vulnerable people, particularly women who suffer the most and are now being forced into deer 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 well-being for all at all ages; 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 subnational/district policies and other poverty reduction strategies can be easily seen at each component.

The project is also inconsistence with the current district plans, which thrive to reducing poverty among communities in this climate impacted area, a strategy to introduce cashew nuts farming as a permanent cash crop that will ensure reliable income and resistance to drought. This is a plan that has been approved at district council level together with improvement of local cattle breeds in order to increase milk production animal marketability. Improved cattle breeds will similarly improve income amongst communities as cross-breed are expected to have fast growth. The project will support implementation of this strategy and a plan is sought to have satisfactory extension services

PART IIE. *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***

The proposed project is aligned with relevant national technical standards and meets requirements/standards stipulated by Environmental Management Act (Cap.191 of 2004) and its subsequent Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulations (G.N. No. 349 of 2005). Since the project is mainly aiming at improving the state of the environment in Kongwa district as well, it will not generally have negative environmental impacts. It is clearly expected to have positive environmental impacts through improving the environment and ecosystems of the area, through improving sustainable management of land, terrestrial and other environmental systems through addressing issues of community resilience to climate change and improving community livelihoods.

The project also took into consideration of the broader objective of the National Guidelines for the Preparation of Water Safety Plans-Resilient to Climate Change (2015), theWater Quality Management Standards Regulations (2007), Air Pollution Prevention and Management Regulations (2007), the Environmental Hazardous Waste Regulation (2009), Supply and Sanitation Act (2009), Employment and Labor Relation Act (2004), Occupational Health and Safety Act (2003), Workers Compensation Act (2008),the HIV and AIDs (Prevention and Control) Act (2008), Water Resource Management Act (2009), National Climate Change Strategy (2012), The National Land Act (2002). Other pertinent national standards for rural water supply, agriculture, forestry and beekeeping, environment, agriculture and food security and village land use planning/ rural land tenure systems are highly considered by this project and will guide implementations as described in the ESMP (see Annex 7).. In that way, the proposed project will be fulfilling vital national policies, plans, strategies and programmes set by the United Republic of Tanzania including plans and bylaws formulated by District Council. Similarly, this project is relevant to the Environmental and Social Safeguard policy of the Adaptation Fund (AF).All activities under each component will facilitate social security of the riparian communities and veracity of the environment. However, the executing entities (FECE and Kongwa District Council) have adequately screened the project concept note and placed this project at C category under classification criteria of Environmental and Social Safeguard Policy of the Adaptation Fund. This is because there is no any component of this project which indicates any serious risk to the environment or social systems and on the public health. Nevertheless, an environmental and social risk assessment was conducted, see Annex 7for the summary of ESMP.

PART IIF. 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 the United Republic of Tanzania, in the related thematic areas. Preliminary meetings and discussions with various stakeholders at district and national levels, 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 district‘s ongoing district development programming as operationalized through its investment and operational budgets. Kongwa 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 and bee keeping, livestock development, water resources and irrigation. This will also build on more targeted projects on climate change adaptation being implemented in Tanzania like; the on-going project under the GEF/IFAD project – ―Reversing Land Degradation trends and increasing Food Security in degraded

ecosystems of semi-arid areas of Tanzania‖ which is being implemented in Kondoa, Mkalama, Magu and Nzega districts in Tanzania main land; and Micheweni district in Zanzibar; The GEF/UNEP project –
―Supporting the implementation of integrated ecosystem management approach for landscape restoration and biodiversity conservation in Tanzania‖, and the LDCF/UNEP project, ―Ecosystem-Based Adaptation for Rural Resilience‖, currently being implemented in Kishapu, Mpwapwa, Simanjiro, Mvomelo districts of Tanzania main land and in Kaskazini A in Zanzibar. The Dryland Development Project (DDP) for mainland Tanzania under the lead of the Ministries of Agriculture, Fishery and Livestock Development and in collaboration with IFAD which work with livestock keepers, agro-pastoralists and other land users in Tabora, Shinyanga Ruvuma regions to support integrated dryland-based livelihoods including linkages to markets and income generation while providing ecologically sound strategies for resolving conflicts between farmers and pastoralists. Other project like the project funded by the African Development Bank (AfDB)- Institutional Support for Climate And Seasonal Weather Information for Adaptation Planning in Mwanga and Same districts, Northern Tanzania, 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. See Annex 6 for additional analysis for complementarity to avoid duplications with other funding sources.

PART IIG. 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 four; which aims to strengthen local institutional capacity for effective adaptation strategies and reduce risks associated with climate-induced socio-economic failures in Kongwa 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 4.1.1 and 4.1.3 issues of learning, trainings and communicating results will be effectively implemented. In this way, issues on climate change education and awareness raising will be well addressed. Participatory approaches and community involvement through volunteering to implement project activities, their in-kind contribution, trainings, tour and visits and on farm/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 four. Positive project results and outcomes will be also communicated and disseminated at national and international levels through 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.

PARTII 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 of the Adaptation Fund.***

a) Consultation during development of the concept note

A wide range of stakeholders, particularly local communities, have been consulted during preparation of the concept note and the full proposal of this project At the beginning of the pre-design process, a series of consultations with key stakeholders was held at the Kongwa District headquarters, Matanana and Ugogoni wards between 20th August and 29th September 2018 to solicit viewpoints and to better understand the problem, it's root causes and potential interventions that would achieve greater resilience to climate change shocks in Konwa district. At the concept note stage, the project formulation team, conducted a two intra - and inter-departmental meetings in the district with senior officials and technical experts in Kongwa as well as at FACE offices in Dar es salaam to share and exchange views on the concept, and to jointly identify and align priorities for the development of the project idea and the full proposal. Thereafter, a series of joint weekly technical meetings among key technical and legal staffs between Kongwa district council and FECE were also conducted. The district and council leadership and head of departments were also key in site selection of the project. Relevant meetings at the district council at preliminary and advanced stage of the project formulation and the site selection processes involved, experts from accounting, procurement, planning, agriculture, water, forestry and beekeeping, land use and settlements, livestock, environment and cooperatives sections. The meeting also involved Kongwa National Ranch staff, a government specialized sector under the National Ranching Company (NARCO), where specific climate-related impacts that need intervention were established together with respective priorities (the list of district experts involved in the process is attached as Annex 3

This process was complemented by field visits in the villages in August 2018 with a first visit to two villages of Mtanana ward and five villages in Ugogoni wards. In September 2018, a second two weeks visit took place, to discuss more in and around the selected villages of Mtanana and Ugogoni Wards to get more physical observations and eye witness on the full picture of the landscape, socio-economic interactions and vulnerabilities, needs and challenges of the local communities. In these preliminary visit in the villages, the techniques used included meetings with village leaders/administrators and village executive committee (VEC) members, Women Groups, Focus Group Discussions, structured interviews and key informants. Also transect walks were carried out for observing environmental and ecological systems, vegetation cover, farming practices and livestock keeping systems in the villages. Meetings with women representatives, leaders of village and ward governments, representatives of farmers and livestock keepers and influential people and elders in these villages at the earlier stage of the concept note development assisted better to understand the problem, whereby they explained its root causes and proposed activities and project components. These meeting for pre-designing this project assisted to perform quick analytical scanning of gender and environmental related issues as well as qualitative analysis and reviews on how climate change affects women and men differently to facilitate proposing gender sensitive actions. Then, the concept note was presented in the four days national workshop where it 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 in October 2019 (see annex 3for list of participants in the workshop).

b) Consultation undertaken during full proposal development stage

During the development of the full proposal of the project detailed consultations were conducted in Kongwa district aimed for: detailed involvement of stakeholder and direct beneficiaries for project planning and implementation; appraising interventions; conducting gender analysis including contribution of gender inequalities to observed vulnerability; and *Environmental assessment and complies with the* Environmental and Social Policy of the Adaptation Fund. During these consultations the roles and responsibilities of key stakeholders and the specific mechanisms and strategies for their direct involvement in project activities were identified. Considerations of vulnerability, participation and gender empowerment in the formulation of activities was a key focus area, while gender mainstreaming tools will be applied in the development of technical guidelines for integration of climate change adaptation into planning processes of the district. During implementation, this project will ensure that both men and women are able to participate meaningfully and equitably, have equitable access to project resources, and receive equal social and economic benefits.

i) ***Involvement of stakeholders and beneficiaries for project planning and implementation***

Detailed consultation process for stakeholders and beneficiaries was conducted between 14th May 2019 and 30th August 2019. The consultation was Community Based Participatory Exercise, covered the same villages which were covered during the preliminary consultations when developing the concept note. The **stakeholder and beneficiaries evaluation** involved a wide range of village community groups, women, farmers, livestock keepers, bee keepers, orphans, traders, herders, teachers in the villages, people with disability, youth, elders and school girls and boys and individual people from the five villages of Ugogoni ward and two villages of Mtanana ward with an overall gender balance of 55% men and 45% women. Please see Annex 3 for list of groups and individuals consulted. Other groups involved in the exercise were planners and experts from Kongwa district council, executives and officials of Mtanana and Ugogoni wards. In this consultation process, issues related to socio-economic status, livelihood activities for groups and individual stakeholders and beneficiaries, power relations, land tenure system, willingness of beneficiaries and other stakeholders to voluntary participate to project implementations under Force Account Modality(FAM), opportunities and challenges to the project were discussed, analysed and evaluated.

Figure 22: Project Formulation Team, Technical Experts from Kongwa district council in one of technical sessions/workshop as part of consultative process conducted in Kongwa District Headquarters.


Figure 23: Sessions of workshops and detailed discussions by villagers (Source: Field survey 2018)

Key findings suggestions and concerns from stakeholders.

a) Generally, stakeholders and beneficiaries from village communities, technical staff and managers, from Kongwa district council, government ministries and higher learning institutions highlighted that for successful planning and implementation:
   - The project must use a participatory approach in both design and implementation and apply best practices and techniques accrued by communities, in the district and in Tanzania for implementing rural based adaptation project and programs aimed at increasing resilient of vulnerable communities at grass-root level in villages.
   - Almost 100% of communities and individual experts proposed to apply Force Account Implementation Modality during from the design and implementation stage of this project. The approach is being widely applied by the Government of the United Republic of Tanzania, Development Partners, NGOs in implementation of various social and development projects and infrastructures in rural communities. 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 Kongwa district headquarters and use existing infrastructure at the headquarters and technical staff in combination with FECE staff. The Finance should be channeled through a special account guided by the Government Finial Standard Operating Procedures.
   - The District Development Plan (DDP) is a key local planning process that the project needs to streamline with. This could be achieved by locating the project implementation unit at Kongwa 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 was requested to include provisions for supporting vulnerable households who are most vulnerable than others such as families headed by widows, females, disabled and girls. Including special considerations of students and youth.

b) Stakeholders discussed and analyzed project interventions and pointed that, project components should be addressing climate change risks, particularly on issues related water security, food security, agriculture, livestock, soil and water resources management as well as environmental and ecosystem management as urgent needs and priorities. Therefore, they all agreed that:

- The proposed activities/interventions for the project components in the approved concept note are urgently needed and therefore reaffirmed the proposed project components, expected concrete outputs, indicated activities as well as the expected outcomes under section 1.4
- For the interventions related to agricultural sectors, the stakeholders and direct beneficiaries advised this project to apply the implementation modality which supports both on-farm and off-farm livelihood activities.
- Since Kongwa district has in place a plan to introduce cashew nuts farming as a permanent cash crop that will ensure reliable income and resistance to drought, stakeholders and district experts agreed that, the proposed interventions under component 2 should consider actions to facilitate availability of improved cashew nuts seeds and seedlings.
- For improvement of local cattle breeds in order to increase milk production animal marketability and improve income amongst communities as cross-breed are expected to have fast growth, stakeholders requested such actions be implemented under Kongwa-NARCO support, and the Kongwa – NARCO agreed to support this activity and pasture reserve for local communities as the local support. But, NARCO also requested the project to support water infrastructures for livestock as they also affected by the drought events like their neighboring communities.

Table 7:Some perceived challenges and possible solutions for project interventions as thought by the community representatives

Challenges domain	Challenges and perceived solution
Water scarcity	Water scarcity and poor water infrastructure leading to inadequate water supply ***Solution:*** *Improve water availability through rehabilitation of water facilities, drilling additional boreholes, dam construction and water harvesting at household level.* Unreliable and erratic rainfall ***Solution:*** *Integrated approach to conserve the environment by planting trees, water and soil management through contour bands, terracing, live fencing, ripper tillage, intercropping and tie ridging.* Flooding in *mbuga* area ***Solution:*** *Improve drainage by construction of culverts and bridge to allow water to pass through. Also construction of water reservoirs like dams, plant trees upstream to let water penetrate in the soil. Construction of contour bands and other water harvesting technologies.* Sharing of water sources between human and animals ***Solution:*** *Construction of water troughs for animals to improve sanitation*

Soil related challenges	Depleted soil fertility ***Solution:*** *Improve soil fertility by adding organic manure, intercropping and water harvesting techniques, tie ridges, tilling (deep tillage)* Soil erosion ***Solution:*** *Soil management techniques eg. Contour bands, terracing, ridging and tie ridging, zero tillage. Mulching and planting soil cover crops like cow peas. Planting trees* Insufficient land use plans ***Solution:*** *Adhere to agreed village land use plans. Enhance use of agro inputs to improve productivity.*
Agricultural challenges	Crop failures due to prolonged dry spells and drought periods and poor farming methods ***Solution:*** *irrigation technologies and Improve knowledge on farming systems* Low productivity ***Solution:*** *Soil and water management at farm level be improved through water harvesting techniques, terracing, contour bands and tie ridging, use of organic and inorganic fertilizers and use of improved seeds, plant climate smart crops like sorghum, sunflower, simsim, pigeon peas, cassava, sweet potatoes, use of conservation tillage, rotational agriculture.*
Livestock challenges	Drought and Inadequate pasture due to overstocking ***Solution:*** *Enhance range management such as pasture improvement, adhere to carrying capacity, encourage cattle keepers to adopt zero grazing* Pests and Diseases ***Solution:*** *Improve livestock management systems, adhere to vaccination regimes, improve use of cattle dips and improve feeding.* Poor genetic potential of the local breeds ***Solution:*** *Improve the existing local breeds by cross breeding with improved breeds.* Uncontrolled livestock movement ***Solution:*** *Adhere to village land use plans, destocking to comply with carrying capacity.*

	Inadequate water especially during the dry season ***Solution:*** *Improve water availability for livestock with charco-dams construction* Unreliable markets for livestock and livestock products ***Solution:*** *Organize farmers into producer organizations and link them to lucrative markets*
Environment and forest related challenges	Reduced land cover, bare land and Deforestation ***Solution:*** *Planting trees (Multipurpose trees), provision of knowledge on environmental conservation, strengthening bylaws regarding forest areas* Dependence on one source of fuel (firewood) ***Solution:*** *Use of alternative source of fuel like gas and improved stoves*

Source: Field Survey 2018

Table 8: Summary of results for vulnerability and possible adaptation interventions proposed by various stakeholders including marginalized village groups in Kongwa District

Vulnerable sectors	**Impacts and Vulnerability**	**Possible Adaptation Interventions**
Agriculture	● Food shortages, food insecurity and malnutrition ● High rate of crop failures due to prolonged and increased frequencies of drought events ● Declining productivity and agro-diversity ● Increased crop pests and disasters ● Higher food prices ● Invasion of invasive species	● Promote use of improved crops and crop varieties in different agro-ecological zones ● Promote investigates in modern irrigation techniques and best practices such as drip irrigation ● Promote appropriate agricultural practices to enhance adaptation and increase resilience ● Promote use of appropriate technologies for production, processing, storage, and distribution ● Promote efficient water use technologies
Freshwater Resources	● Increased water scarcity mostly in all rural areas of Kongwa districts especially in Manana and Ugogoni wards ● Increased water shortage and water conflicts among different users ● Diminished water flow due to recurrent and severe droughts ● Perennial rivers changing into seasonal rivers	● Invest in exploration and extraction of underground water resources starting with Mtanana and Ugogni wards ● Enhance operationalization of IWRM, protection and conservation of water catchments ● Promote water harvesting practices ● Invest in and promote appropriate water management technologies ● Improve water quality and

	● Compromised ecosystems as a result of decreasing water ● Conflict on water resources ● Drying of surface water resources ● Drying of water catchment/ sources in Kongwa and other areas in Dodoma	sanitation
Livestock	● Reduced water and pastures in almost all villages in the project sites ● Increased drought causes death of livestock ● Increased vector-borne livestock disease ● Increased conflicts among livestock keepers and crop famers or conservationists ,	● Promote appropriate technologies for livestock production systems to improve quality of the livestock products ● Promote climate change–resilient livestock practices ● Improve pasture and range management in all villages ● Promote sustainable land use planning and management
Human Health	● Increased risk of food insecurity and malnutrition cases in most villages of Kongwa district ● Changes in the distribution of diseases ● Increase case of Non Communicable Disease especially cholera and other water borne related disease	● Enhance capacity of public healthcare systems ● Improve disease surveillance and design of disease-control at health centers and village dispensaries ● Improve knowledge of climate change–related occupational health risks
Forestry	● Ecosystem shift: from forests to grasslands and bare-land ● Loss of forest biodiversity including Non-Timber Forest Products (NFTP) ● Loss of wildlife habitats ● Increased risk of bushfires ● Loss of gene bank	● Afforestation ● Promote biodiversity management practices in all villages involved in the project and outside the project villages in the District ● Mainstream climate change into forest management practices in all villages of Kongwa district ● Promote alternative livelihoods in villages particularly targeting women and youth groups/the most vulnerable community groups ● Promote use of non-wood construction materials and improved energy efficiency technologies in villages
Biodiversity	● Changes to habitats and ecosystems ● Loss of wildlife habitat ● Risk of failure in ecosystem	● Promote ecosystem restoration and rehabilitation activities ● Promote alternative income sources ● Promote tree planting campaigns

	functions	especially timber and fruit plants
Human settlement	● Exposure to extreme events, flood and strong winds ● Threat of displacement, death	● Promote use of appropriate building materials adaptive to climate change ● Promote village land use planning and management of land use plans
Infrastructure	● Flood damage to infrastructure especially rural roads and pedestrians pathways	● Promote deployment and use of appropriate technology in rural roads/infrastructure development
Gender and Cross – cutting issues	● Declining agricultural productivity, linked to ongoing climatic changes and land degradation, continues to expose the majority of the population, especially the very poor and poor women and girls, to chronic, irreversible and severe food and insecurity and water scarcity as well as poverty ● Water scarcity and continued food crisis in villages has instigated conflict within households, including incidents of abandonment or separation of couples. ● Existing Social, economic and political barriers limit women to positively cope or adapt to the current and future climate change impacts ● Inequality related to gender, exclusion of those with disabilities and income inequality as factors that contribute to vulnerability of women, marginalized communities such girl and orphans to poverty and hunger/ including other climate induced disasters	● Promote gender equity and equality among communities in Kongwa to address norms and traditional systems which expose women to struggle mostly with domestic issues and to keep domestic matters of families going. ● Promote and implement alternative income diversification activities such as beekeeping. poultry farming, local chickens productions, Fruit tree planting, woodlots and home gardens and small scale drip irrigation ● Promote awareness to encourage women and girls to participate in all stages of the projects implementations and meetings

Source: Field survey in 2019

Figure 24: Field meeting with communities committee during qualitative assessment of vulnerability and possible Adaptation Interventions

Table 9: Summary of analysis of possible project partners

S/No	Stakeholders	Responsibilities
1	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 contributes to the objectives articulated in the climate change strategy, NDCs, NAP and NAPA documents.
2	Ministry of Finance and Planning	MoF will be responsible to ensure that All project components and in-line with national development plans, visions and strategies. MoF will be part of the Project Steering Committee
3	Ministry of Water and Irrigation (MWI)	MWI is responsible for Water supply, water resources management and irrigation issues. This project will utilize
4	Ministry of Agriculture and Food Security (MoAFS)	MoAFS is responsible for agriculture development issues in Tanzania. All Agricultural related activities will be implemented under MoAFS guidance
5	Ministry of Livestock and Fisheries Development (MoLF)	This project will utilize experiences and technical capacity of MoLF to implement livestock activities. It will use experts and staff including the NSRCO facilities available in Kongwa for livestock related activities
6	Dodoma Regional Administration Secretariat (RAS) office	Dodoma Regional Administration Secretariat (RAS) office widely involved in project design and 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
7	Tanzania Meteorological Agency (TAM)	Responsible for weather and climate related information, and will be key stakeholder during implementation and post implementation stages of the project

8	Local NGOs, Social groups and CBOs	Non-governmental organizations, community based organizations are very few in number, and most of them are not active. However, few of them such as JUST DIGG IT and CARE Tanzania operate in the project area. Informal and community based Organization such farmers, livestock and other social organizations exist in Kongwa. These are key partners for developing and to operate the project. Additionally, are key beneficially of results and outcomes of the project
9	Private sector, parastatal and public company	Private sector in the project site in Kongwa district is at very infancy stage. However, there exist national companies like Kongwa National Ranch Staff, a government specialized sector under the National Ranching Company (NARCO) and the Kibaigwa Agricultural Market. This this project attempt to maximise linkages of villagers/farmers and livestock keepers to markets and financial institutions and buyers of agricultural related products
10	Tanzania Forest Agency (TFA)	Tanzania forest agency is seen as a potential and strategic stakeholders for tree planting, afforestation and ecological rehabilitation and restoration activities
11	Kisiki Hai project	The Kisiki hai project will be very potenatial for awareness raising and environmental and gender sensitive awareness raising activities
12	Rural Water Supply Agency (RUWASA)	This is National Authority responsible for water supply in rural areas. RUWASA is a technical harm of the Government for management and development of water supply infrastructures in rural areas. RUWASA will be responsible to implement some activities related to Water supply and drip irrigation activities
13	Direct beneficiaries	Direct beneficiaries of the proposed project in Kongwa are vulnerable and marginalized community groups in Kongwa. Therefore, these poor villages who are mostly farmers, livestock keepers, women and youth groups are key stakeholders and will be involved widely.

PARTII I. *Provide justification for funding requested, focusing on the full cost of adaptation reasoning.*

Like most of rural areas in Tanzania, the economy and livelihood system of communities in Kongwa district are mainly driven by the climate sensitive sectors. Negative effects due to shifting in weather seasons and climate variability and change have already disrupted the economy and people‘s life in Kongwa. Historical degradation of ecological ecosystems and through the on-going poor livestock and farming practices and climate induced processes adversely affect the existing socio-ecological and livelihood systems in the proposed project sites. The current climate trend and the continued global change in the climate system accelerates these effects and calls for adaptation actions in life supporting sectors such as water, agriculture and livestock. The requested funds from Adaptation Fund is viewed to support direct implementation of concrete climate smart innovations and build resilient economy and livelihoods of the people in Mtanana and Ugogoni Wards Activities proposed by this project will be implemented to attain project objectives including its expected outputs and outcome to enhance adaptive capacity of marginalized communities in Mtanana and Ugogoni wards and to increase their climate resilience to the adverse effects of climate change and variability without any other addition funds apart resources from the AFs‘ resources. The capacity gap relates to financial resources existed to build concrete climate action in the project sites will be solely well addressed using the requested Funds presented in this proposal. However, the resources will be amplified through adoption of using Force Account Modality (FAM).

Component 1: Enhance climate resilient rural water supply system in vulnerable agro-pastoral communities at Mtanana and Ugogoni wards, Kongwa district

Baseline scenario (without AF resources): Without the AF fund, means that, no actions will be taken to implement activities of the component 1 under this project, that is to say present and future climate threats will continue to accelerate the existing water scarcity. Observed climate and weather extreme events such as droughts, and prolonged dry periods will continue to destroy livelihoods, notably water supply. In this manner, the adaptation failure will be witnessed and the detrimental effects of climate change will be irreversible in the near future. Currently, there are sufficient evidences that, women in these areas are suffering the most and are now forced to walk longer distances for searching water. Such evidences on water scarcity driven by climate change have instigated increased social group conflicts such such as farmers and livestock keepers as well as conflicts within households, including incidents of gender based violence. Local communities in the project area have a low capacity to adapt such induced water scarcity due to poverty levels. Moreover, being in least developed country; the Tanzania Government has low adaptive capacity and inadequate financial resources to assist. **With AF funding:** The AF funding will sufficiently facilitate to meeting the expected outputs and adaptation objective of this component, to enhance investments for rural climate resilient water supply system in vulnerable agro-pastoral communities of Mtanana and Ugoghoni in Kongwa District. Financial resources for the AF will facilitate to build rural climate resilient-water supply and adaptive to the current and future climate shocks in these communities and no other funds will be needed to achieve this. The empowerment of community groups, capacity building and the adoption of Force Account Modality and COWSOs will provide sustainable supervision, operational, implementation and management arrangements for infrastructures to be developed to withstand the effects of the current and projected future climate change.

Component 2: Support transformation of exploitive agro-pastoral practices into diversified climate smart and sustainable livelihoods

Baseline scenario (without AF resources): Without the AF project, rural communities in Kongwa District will be forced to continue with their traditional agro-pastoral practices, which are already vulnerable to climate change climate impacts. Crop failures due to drought and unpredictable seasons have caused serious food insecurity and famine. Without AF resources, means taking no measures to improve agricultural productivity and transform livestock systems to improve livelihood to be more climate resilient in Ugogoni and Mtanana. This scenario will worsen the situation in future. If this happened, vulnerable communities especially women will be more pushed into deeper poverty levels. **With AF funding:** The requested the AF resources will be sufficient to achieve the expected outcomes and outputs including the adaptation objectives under this component, without the need of co-financing are not required. AF resources will therefore be used to facilitate improvement of agro-pastoral productivity, transform existing subsistence livelihood system to be more climate resilient and adaptive to future effect of climate change (including increased mean annual temperatures and increased frequency and intensity of droughts) in Ugogoni and Mtanana wards.

Component 3: Improve ecological functions to sustain climate sensitive rural livelihoods at Mtanana and Ugogoni wards and in selected rural communities of Kongwa district

Baseline scenario (without AF resources): Over years now, ecological and environmental systems in Mtanana and Ugogoni wards have been impaired by both human induced and climate change related drivers. The original and natural ecosystems, covered by savannah thickets were degraded over the past 5-7 decades. There is continued trend of environmental degradation such as poor farming methods, deforestations, charcoal making and overgrazing in the project site. Unless concrete adaptation approaches which integrate community and ecosystem based solutions to tackle climate change are

implemented, the trend will continue with disastrous effect to the vulnerable community. **The scenario with AF resources):** AF resources will be used to implement concrete adaptation activities to enhance integrated management of environmental and ecological systems to sustain climate sensitive rural livelihood systems in the project sites. The requested financial resources will therefore be used to establish and implement ecological rehabilitation and restoration activities. Beekeeping activities including tree planting and windrows establishment will be sorely supported under this project. AF funds will also be used to facilitate campaigns on planting fruit trees as income generating activities including engaging farmers in tree planting in their residential areas, along streets and degraded lands.

Component 4: Capacities of institutions, extension services and trainers strengthened to reduce risks associated with climate- induced livelihood failures in Kongwa district

Baseline scenario: (without AF resources): At present Kongwa district do not have adequate capacity to effectively support implementations and scale up climate adaptation. Without the AF project, it is likely that the pace to integrate adaptation issues into district development plans including and carrying out adaptation actions on ground will be slow and in most cases will be not possible. Without FA resources, vulnerable communities in villages of Kongwa district are likely to continue with their unsustainable way of farming and livestock keeping practices which are also likely to limit their adaptive capacity in future. **With AF resources:** Funds from the AF will perfectly be used to promote best practices and lesson learned in the course of project implementation to be effectively shared and communicated with key stakeholders and decision makers in the district and beyond. This will pave the way to upscale and replicate outcomes and results in other places with similar environment. The requested AF resources are sufficient to achieve the expected outputs under this component.

PARTII J. *Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project / programme.*

The project‘s sustainability puts emphasis on active participation of community groups and individuals in decision-making and implementation of the project‘s activities from the beginning. The project is also striving to strengthen the institutional and technical capacity at community at village and district levels. The use of Force Account Modality and train communities group on transformation skills to deliver project interventions will demonstrate the project‘s commitment to investing in local people and a recognition that community members are best placed to lead project implementation at the community level. Formation of COWSOs, FFS, FFFS, women and youth groups and training them on maintenance and operations of rural water supply infrastructures, irrigation and bee-keeping techniques and manufacturing of bee-hives and tree nurseries management skills ensures that investments funded by the project will be maintained beyond the project life. COWSOS and SACCOS will generate operation revenues to sustain all investment in future. Thus, the proposed project will empower people at the grass root to build their local capacity to continue adapting to climate change risks in future. Community ownership will also ensure that all social, economic and environmental benefits gained from the project interventions will be long-lasting. Moreover, the proposed investment is well aligned with national priorities. The proposed investment corresponds with Government Priorities set out in the District Strategic Development Plan for Kongwa district, key national policy documents including the Vision 2025, the Second Five Years Development Plan (2016/2021), Climate Change Strategy 2012, INDCs 2014and the NAPA 2017. Alignment with national priorities ensures Government commitment to project objectives during and beyond implementation. The operation of the project through the District Authority Headquarters will also ensure that District, sector users at the district and village level 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 the district 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

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

Table 10: Overview of the environmental and social impacts and risks identified as being relevant to the project / programme

Checklist of Environmental and Social Principles	***No further assessment required for compliance***	***Risk and potential impact***	***Detail of potential risks***	***Measures to address risk***
Principle 1: Compliance with the Law	*Yes. The project complies with domestic law and policies(see Annex 8)*	*Risk:* ***Low*** *Potential impact:* ***Low.***	*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, most of the components/activities of the proposed project do not fall within the First Category of projects that require full EIA. There is no activity under any component which require full EIA as their size are small and location of the interventions to do not require further assessments. However, where some activities are not fully itemized there might be a risk that such activities will not comply with certain laws.*	*All relevant domestic laws as been assessed. The assessment results revealed that, the proposed project strongly comply with all relevant national laws including international standard).* *All proposed activities under the four components do not conflict with any domestic laws and policies, but they strongly support implementations of those laws and policies as indicated at Part II E above. In addition, all relevant authorities, district and national stakeholders have be consulted to ensure reflection of relevant legal requirements. However, the Environmental and Social Impacts and Risks management Plan has been prepared and is attached as Annex (See Annex 8)*
Principle 2: Access and Equity	*Yes. This project promotes for fair and equitable access to benefits of the project*	*Risk:* ***Low*** *Potential impact:* ***Low***	*The constitution of the United republic of Tanzania specifies equitable distributions of benefits within communities, and prohibits any actions that promote economic imbalances among citizens and communities. However, some activities of the project, under component 1,2and 3 for livelihood improvement are not intended to provide a benefit for all, but target those livelihoods in need as well as the livelihoods which are involved in restoration activities, transforming exploitive agriculture, livestock and beekeeping. Also given that the beneficiaries are rural people and*	*The project activities has fully designed to ensure that, implementation of activities will not reduce or prevent communities at the sites in all villages from accessing basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions and land right. Communities and beneficiaries will be highly sensitized to enhance priorities of the most vulnerable communities while ensuring benefits to reach further communities for scaling ups and replications. In addition, measures have been put in place to able this project to closely monitor all targeted beneficiaries to assure equal access of men, women, youth and the most vulnerable. Indicators in this regard will be included in the Monitoring and Evaluation Plan*

			marginalized poor families who are not often integrated in the villages politics and decision-making processes, there could be also a risk of insufficient access of the project resources by these people.	
Principle 3: Marginalized and Vulnerable Groups	*Yes. No initiatives are identified with execution that could generate a negative impact on marginalized and/or Vulnerable groups.*	*Risk:* ***Moderate*** *Potential impact:* ***Moderate***	*In this project, there is no single activity or initiatives identified with execution that could generate a negative impact on marginalized and/or vulnerable groups. But without extensive consultation with marginalized/vulnerable groups at the project sites and in training exercises, it is probable that project activities will exclude these marginalized/vulnerable groups, thus preventing them from accessing benefits – both in terms of resources and training*	*Marginalized and poor vulnerable village groups especially women have been widely consulted and involved in the design of this project and will further be consulted and involved during the implementation of all on-the-ground activities. 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 rural villages. This project ensures that all components enhance the adaptive capacity of marginalized and vulnerable groups including transforming their social life to better levels especially for women and girls.*
Principle 4: Human Rights	*Yes*	*Risk:* ***Low*** *Potential impact: Moderate/* ***High***	*None anticipated. No activities are identified whose execution is not in line with the established international human rights. Project objectives promote basic human rights for equitable access to service and clean and safe drinking water, access to food, information, and quality and health environment.*	*The proposed project respect and adhere to all relevant conventions on human rights, national and local laws in relation to human rights.*
Principle 5: Gender Equity and Women's Empowerment	*Yes, Gender analysis has been conducted(see Annex 5)*	*Risk:* ***Moderate*** *Potential impact:* ***Moderate/ High***	*Without extensive, transparent and fair involvement of women and other gender sensitive groups, it is likely that women will be inadequately represented during implementation of this project. This inadequate inclusion of women would be compounded as the negative effects of climate shocks are expected to be experienced disproportionately by women compared to men.*	*From the begging the project has ensured inclusion of gender equality and women empowerment issues with activities sensitive to gender equality particularly equal rights, responsibilities, opportunities and access of women and youth to resources allocated to improve their resilience to the current and future climate change effects. All consultative and participatory processes strived to include representation of women groups of the community and analyze relevant gender-disaggregated data. The ministry and department responsible for gender issues including gender experts and NGOs actively involved in gender issues in Tanzania were invited to*

				participate in appraising the final document of this project.
Principle 6: Core Labor Rights	*Yes. The project respects the labor standards as identified by ILO and the Employment and Labor Relation Act, 2004*	*Risk:* ***Low*** *Potential impact:* ***Moderate/ High***	*Activities under component 1,2 and 3 will involve labor works for implementations of concrete adaptation actions through the popular implementation modality known as Force Account where community members and beneficiaries provide the labor force. However, in doing so local communities might be exposed to the risk of minor accidents while executing some constructions and tree planting and ecological restoration activities.*	*Core labor rights will be respected and considered in the project implementation. The employment and Labor Relation Act, 2004 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. In particular, national and regional stakeholders were involved in the design of project activities to ensure that labor legislations are adhered. All of the labor involved will be daily wages where the wages will be determined by the tasks and according to best common practices in the districts and villages*
Principle 7: Indigenous Peoples	*Yes, no further assessment is required.*	*Risk:* ***Low*** *Potential impact:* ***Low***	*None anticipated*	*All project interventions ensure equitable access to project benefits and resources by local peoples and to most extent communities at grass-root and relevant marginalized community groups are included in community consultation and during participatory planning of activities.*
Principle 8: Involuntary Resettlement	*Yes*	*Risk:* ***Low*** *Potential impact:* ***Low***	*None anticipated*	*The project design does not include voluntary or any involuntary resettlement.*
Principle 9: Protection of Natural Habitats	*Yes*	*Risk:* ***Low*** *Potential impact:* ***Moderate***	*Interventions will include planting of tree species, bee-keeping, improved ecosystem and environmental quality and services and functions provide water access and improved food security through drip irrigation interventions. Despite this focus, there is a low risk that the interventions of concrete adaptation actions could result in destruction of small areas of natural habitat.*	*By implementing conservation measures linked to economic benefits to the people to tackle climate change in Kongwa district, the project will promote improved management of natural ecosystems, particularly in the context of future climate change. These activities will include enhanced ecosystem functioning in the projects and beyond.*

Principle 10: Conservation of Biological Diversity	*Site specific baseline study will be undertaken during implementation to ensure that the project's activities do not result into significant loss of biological diversity or introduction of known invasive species.*	*Risk:* ***Low*** *Potential impact:* ***High***	*The assessment study on environmental and social impacts and risks didn't identify significant impacts of biological diversity. However, without careful planning and mapping of project site, on-the-ground adaptation interventions might adversely impact on local biodiversity. For example, planting exotic, invasive species might outcompete indigenous species and impact negatively on both indigenous species richness and on the ecosystem services.*	*By implanting water conservation practices, smart water supply activities, climate sensitive agricultural techniques and best practices, and improved ecosystem service s and functions this project promotes the improved management and conservation of biological diversity and local scale at village levels. It promotes establishment of village bylaws and regulations for protections of biological diversity and management of village environmental quality.* *Site specific baseline study will be undertaken during implementation to ensure that the project's activities do not result into significant loss of biological diversity or introduction of known invasive species.*
Principle 11: Climate Change	*Yes*	*Risk:* ***Low***	*None anticipated. The project will contribute to climate change adaptation and mitigation, thus will complement the national and global efforts to combat detrimental effects of climate change.*	*Through the Four (4) components, this project is designed to improve climate resilience of agro-pastoral rural communities in Kongwa district, facilitate transfer of climate adaptation technologies to local communities in rural villages, and promote innovations development for climate solutions in rural villages and communities. In this way, this project is design to enhance adaptive capacity of local communities and marginalized community groups. None of project activities will enhance emissions of greenhouse gases.*
Principle 12: Pollution Prevention and Resource Efficiency	*Yes*	*Risk:* ***Low*** *Potential impact:* ***High***	*None anticipated*	*The proposed project is visualized to cause no any harm or pollution.*
Principle 13: Public Health	*Yes*	*Risk:* ***Low*** *Potential impact:* ***High***	*None anticipated*	*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 raising 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.*
Principle 14: Physical and Cultural Heritage	*Yes*	*Risk:* ***Low*** *Potential impact:* ***Moderate***	*None anticipated*	*No physical and cultural heritage sites which exists in the project sites*

Principle 15: Lands and Soil Conservation	*Yes*	*Risk:* ***Low*** *Potential impact:* ***Moderate***	*None anticipated.*	*This project is design to enhance and promote conservation of soil and land resources. The continued degradation of the land resources will be reversed through smart interventions for components 2 and 3. The proposed activities under those components will result into increased soil stability, rehabilitate the degraded contour bands/windrows and reduced runoff of nutrients from top soil, promote improved soil fertility and productivity, improve the hard pan soils and waste land to productive lands.*

Mitigation measures for the environmental and social impacts and risks are further detailed in Section III C and Annex 7

PART III: IMPLEMENTATION ARRANGEMENTS

A. Project Management Arrangements

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 Group/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;
iii) Oversight of project implementations and reporting on budget performance;
iv) Quality assurance and accountability for outputs and deliverables during project development, implementation and on completion phases;
v) Receipt, management and disbursement of the AF's funds in accordance with the financial standards of the AF;
vi) 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
vii) General administration and support costs including legal services, procurement and supply management, IT and human resources management

The Executing Entities: Foundation for Energy, Climate Change and Environment (FECE) jointly with Kongwa 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, an Assistant Project Coordinator, a Project Driver and a Project Accountant who will also serve as Project Administrative Support Staff. The Project Coordinator, the Assistant Project Coordinator, the Driver and the Accountant are referred here as project personnel and will be sourced from the existing staff within Kongwa District Council, except the Project Coordinator who will be sourced from the existing staff within FECE. 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 Kongwa District Council. The Secretariat of the Committee will be the PMU through the District Executive Director and the Executive Director of FECE. The members of Project Steering Committee will be District Executive Director of Kongwa District Council, Chairperson of the Kongwa District Council, one representative from each of the following sector ministries: the ministry responsible for rural water supply, the ministry responsible for agriculture, the ministry responsible for livestock, the ministry responsible for Climate Change, the ministry responsible for forestry and natural resources. Other members will an officer from National Environment Management Council (NEMC), two members from FECE, One member from the Tanzania meteorological Agency, One member of Tanzania Forest Services, one member from NARCO Kongwa.

Project Management Unit: The project Management Unit will be established and hosted at the Headquarters of the Kongwa District Council, which will be responsible for the day-to-day management of the project activities and facilitate stakeholders' engagement The PMU will be comprised with fulltime Project Manager (PM), full time M & E Officer), fulltime Financial and Accountant (FA) and full time driver and Personal Secretary (PS). The Project Manager's prime 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 Manager, presented to the District Executive Director (DED) and to the FECE management Board 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 Manager is also responsible for managing and monitoring the project risks initially identified and submit new risks to the PSC for consideration and decision on possible actions if required and update the status of these risks by maintaining the project risks log according to the FAs Guidelines. The key functions of the PM will include 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 Kongwa District/FECE 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 nongovernment 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, if any, and recommendations on necessary improvements;
- Inform the Kongwa District Authorities/FECE and PSC, without delay, of any issue or risk which might jeopardise the success of the project;
- Liaise and coordinate with NEMC on a regular basis;

See Annex7 for the summarized Terms of References (ToRs) of the ***PM***

Because most of activities are filed work and will involve extensive extension 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 monitor and supervise project activities.

PARTIII B. Describe the measures for financial and project risk management.
B. Financial and project risk management

Describe the measures for financial and project / programme 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 foresee those risks before they happen. 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 stakeholders‘ involvement and natural and environmental hazards are rated low to medium.

Table 11: Risks and risk management measures

S/No	Identified Risks	Level of Risk (Low - L; Medium - M; and	Mitigation Measures

		High-H)	
1	Competing interests between different stakeholders regarding accessing and use of project benefits and related resources	L	Establish multi-stakeholders‘ forum
2	Local communities with limited participation and willingness to promote project initiatives	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	High expectations for quick investments on the ground and resources beyond the available project resources	M	Continue with awareness raising campaign to foster more understanding about the project objectives and activities under the components and implementation arrangements
4	Project financial management	L	The project will have clear separation of roles and strengthen accountability and auditing
5	Delay in project implementation due to government bureaucracy, long and inefficient procurement processes	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 FECE and Negotiate with Government at Kongwa district to get special treatment that can fast-truck implementation
6	Limited Stakeholders Involvement	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, monitoring and evaluation. Involvement of key stakeholders at community level and inclusion of marginalized communities and groups such as women, local leaders, and community beneficiaries, local district government in Kongwa and public service organizations will facilitate to mitigating any risks related to stakeholders‘ involvement.
7	Low adoption rate of proposed innovations and adaptation technologies by communities	M	Promotion and demonstration of new technologies and practices
8	Financial Risk	L	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. Approved regulations, procedures and guidelines on costs for services & goods of the United Republic of Tanzania including the Adaptation Fund Standards will be strictly followed
9	Conflict Management	L	Although it is not expected that any conflict will rise during implementation of this project, the NIE management and 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

PART III C. Environmental and social risk management measures

Describe the measures for environmental and social risk management, in line with the Environmental and Social 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 has been developed in collaboration with relevant stakeholders and authorities including NEMC (see Annex 8). Further detailed ESMP for each intervention will be formulated during the inception workshop.

Table 12: Environmental and Social impacts and risks management

Environmental and Social Principles	Identified potential impacts and Risks	Level (H, M, L)	Mitigation Measures
Compliance with the Law	Some activities under component 1 and 2 which are currently not fully	L	Environmental and Social Management Plan (ESMP) has been prepared and will be adhered to

	itemized/designed there might be a risk that such activities will not comply with certain laws		monitor implementations of on-the ground concrete activities such as water supply and micro-irrigation
Access and Equity	Given that the beneficiaries are rural people and marginalized poor families who are not often integrated in the villages politics and decision-making processes, there could be a risk of insufficient access of the project resources by these people.	L	Clear and transparent criteria have been put in place including selection of participants the trainings and workshops. Measures have been put in place to able 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
Marginalized and Vulnerable Groups	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	M	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 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 clean and safe drinking water, access to food, information, and quality and health environment	N/A	The proposed project respect and adhere to all relevant conventions 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 implementation of this project, thus making the project not benefiting men and women equally	H	This project has put measures to include a 50% ratio for gender consideration during implementation of all project activities under the four 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 possibilities of communities/beneficiaries who will be involved to implemented activities using Force Account Modality under components 1, 2 and 3 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 and required relevant protection gears will be adequately provided.
Indigenous Peoples	According to Tanzania laws, there are no indigenous people identified in the proposed project sites.	N/A	EMSP prepared will be monitored to ensure equitable access to project benefits and resources by local peoples and to most extent communities at grass-root and relevant marginalized community groups are included in community consultation and during participatory planning of 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 re-assessment will be conducted during implementation phase
Conservation of Biological Diversity	Execution of concrete adaptation actions under components 1,2 and 3 may result in negative impacts on biodiversity	L	ESMP has been prepared to guide and monitor executions of such interventions. Activity based mitigation measures has also been development under the ESMP to be followed during implementation phase
Climate Change	No identified risk	N/A	None of project activities will enhance significant emissions of greenhouse gases.
Pollution Prevention and Resource	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 raising 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 reversed through smart 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 the ESMP 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 minimise 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 Manager, PMU and the FECE/Kongwa District Council 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 Kongwa 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 Manager can direct the complainants to write a letter explaining through relevant organs established from the village levels. The concerns cam 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 Project Manager 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.

PARTIII D. Monitoring and evaluation

Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan.

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 project's inception phase which will be distributed and presented to all stakeholders during the Inception Workshop. The emphasis of the Supervision Plan will be on outcome monitoring, learning and sustainability and financial management. Project risks and assumptions will be regularly monitored by NEMC. Risk assessment and rating will be an integral part of the Project Implementation Review (PIR). The quality of the project's 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 evidence 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, output and outcome of the activities. Generally, the PPR will include, but is not limited to, reporting on the following:

- progress on the project‘s objective and outcomes – each with indicators, baseline data 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 risk 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 the Results Framework. Monitoring and evaluation system will be linked to the results framework, annual work plans and budget. In addition, the project will commission an annual audit (to be conducted by a certified auditor) of project accounts to ensure compliance with the AF and Government rules and procedures. Table 12 summarizes the budget of the M&E plan.

Table 13: Project Monitoring and Evaluation Work Plan and Budge

Activity	Sex-disaggregated indicators	Responsibility	Budget in US $	Timeframe													Notes
				2020	2021				2022				2023				
				Quarters	Quarters				Quarters				Quarters				
				Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Inception and annual workshops	At least 50% of workshop participants are female, to maintain 50:50 gender ration	Project Manager M& E Officer /Project Management Unit(PMU)	10,000														Will be done soon after receiving the funds
Initial studies to document in-depth baseline, condition of the project sites and vulnerabilities	Procurement process of the consultant to consider gender at least 40% female available for evaluation process	National consultant, Project Manager and M&E Officer	10,000														Will be done at the begging of the project implementations
Monitoring Project implementation of activities and outputs under the Four Components	Atleast 50% of female benefits from the project in each village. The PMU to Consider 40% female	Project Manager and Monitoring and Evaluation Officer	18,000														Will be done quarterly and on need basis
Visits to field sites for joint review of status and project progress and reporting	At-least 50:50 male-female ration is maintained in execution of activities and benefits from each project activities under each component as per gender analysis study	Project team	20,000														Will be done on need basis
Independent Final	Final evaluation	National	15,000														Will be done at-

Evaluation	report to check if least 50% of project beneficiaries in village communities were female and girls	Consultant																least two months before project closure
Audits and Final Project Audit	Audits and Final Project Audit report must indicate if least 50% of beneficiaries in village communities were female and girls	Chief Auditor General	8,000															Will be done at least two months before the end of the project
Quality assurance and field based quality checks by the IE	IE to ensure at least maintain 50:50 gender ration by the executing agency as indicated in the Gender assessment report	IE quality assurance Team and the Task Manager	30,000															It is a continuous process in every quarter
Total M & E costs			101,000															

PARTIII D: Results Framework including milestones, targets and indicators

The Results Framework of the project defines success indicators for project implementation and the respective means of verification. A Monitoring and Evaluation (M&E) system for the project will be established, based on the indicators and means of verification. It is important to note that the Results Framework in Section E, including its indicators, targets and means of verification, will be reconfirmed during the launching event expected in October 2020.

Any changes to be done to the Results Framework will require approval by the Project Steering Committee. The inception workshop is crucial to building ownership for project results and agreeing on modalities of project execution, documenting mutual agreement for the proposed executive arrangements amongst stakeholders and beneficiaries.

Table 14: The results framework with indicators to output level, baseline, targets, sources of verification and assumptions

Project Component	*Project Outcome*	*Project Output*	*Baseline Indicators*	*Means of verification*	*Baselin e Levels*	*Project Outcome Indicator*	*Tar gets*
1.Enhance climate resilient rural water supply system in vulnerable agro-pastoral communities at Mtanana and Ugogoni wards	1.Enhanced climate resilient rural water supply system in vulnerable agro-pastoral communities of Mtanana and Ugogoni wards, Kongwa district	1.1:Climate resilient rural water supply system established in agro-pastoral communities at Matanana and Ugogoni Wards in Kongwa district	Number of borehole and number of solar pumps installed	1.Number of boreholes drilled 2. Number of purchased and installed solar energy- driven water pumps	0% of required boreholes 0%– water pump driven by solar energy	% coverage of climate resilient rural water supply	100 % of vulnerable agro -pastoral communities of Mtanana and Ugogoni ward s Kongwa district climate resilient
			Number of water tanks constructed, Kilometers/meters covered by water networks	1.Number of water storage structures and distribution networks constructed	8% water networks		
			Number of water kiosks constructed	Number of community water points/ community water Kiosks	0 community water points/ community water Kiosks exist		

			Number of constructed cattle troughs	Number of constructed cattle troughs	0% cattle troughs constructed in Mtanana and Ugogoni wards	sy st e m in a gr o- p as to ra l c o m m u ni ti es of K o n g w a di st ri ct	ent rural wate r supp ly syste m
		1.2 *Establishment of Community Owned Water Supply Organization(COWSOs) facilitated and their functional committee members trained on operational and maintenance in Kongwa District*	Training reports and availability of COWSOs	1.Number COWSOs of established 2.Training reports	0% exist and has effective management structure at Mtanana and Ugogoni wards		
			Training reports and availability of COWSOs	Number of by laws on effective water uses and management	0 bylaws exist		

2. Support transformation of exploitive agro-pastoral practices to	2.Transformed exploitive agro-pastoral practices to diversified climate smart and	2.1 Best agricultural –climate smart practices enhanced to improve food security in the selected villages of Mtanana and	Number of micro-drip irrigation constructed, Areas covered by drip irrigation	Number climate sensitive drip irrigation schemes	0% of dri p irrigation schemes	% of a gr o- p as	Esta blish three drip irrig ation sche

diversified climate smart and sustainable livelihoods	sustainable livelihoods in selected wards of Kongwa district	Ugogoni wards, Kongwa district	infrastructures			to ral pr ac ti ce s tr a ns fo r m e d to di v er si fi e d cl i m at e s m ar t a n d su st	mes and impr ove food secu rity by 90% at Mta nana and Ugo goni ward s
			Number of contour bands/windrows constructed Number of farmers using water management techniques in farms	Number of contour bands/windrows constructed Number of farmers using water management techniques in farms	Existence of damaged contour band/ windrows		
			Number of farmers using improved seeds and use intercropping with drought resistant varieties	Number of farmers using improved seeds and use intercropping with drought resistant varieties	Less than 10% farmers use improved drought tolerant and early maturing seeds		
			Training reports and number of farmers trained	Number of farmers trained and using FFS	90% of farmers use traditional methods of agricultural systems		

			Number of gardens established by women, number of women attended FFFS and training	Number of gardens established by women Number of women attended FFFS	More than 98% of women engage in traditional agriculture	ai n a bl e li v el ih o o ds	
		2.2 Natural pasture, local breeds and livestock management systems improved to enhance adaptive capacity of livestock keepers to climate induced droughts in Kongwa district.	Number of pastures farms, Area of rangeland managed in kilometers or meters	Number of pastures farms, Number of rangeland managed in km,	0 pasture farms, existing of xx number of grazing land		
			Number of local breeds improved through cross breeding techniques	Number of local breeds improved through cross breeding techniques	Availability of improved breeds at NARCO		
		2.3 Improved market value chain of agro-pastoral products on farm and off farm products to strength their competition power in the market and diversify livelihood systems in the project sites	Number of local famers and livestock keepers access to improved market	Number of local farmers trained on market and financial issues, Number of local famers and livestock keepers access to improved market	Availability of famers and livestock keeps organized in informal groups		
			Training reports and equipment for improving quality and packaging of	Number of machines and equipment for improving quality and packaging of agricultural	0 machines and equipment		

				agricultural products	products			

3.Improve ecological functions to sustain climate sensitive rural livelihoods at Mtanana and Ugogoni wards and in selected rural communities of Kongwa district	3:Improved ecological services and functions to sustain climate sensitive rural livelihoods in Kongwa district	3.1.Integrated ecological and management systems implemented in Kongwa district to sustain climate sensitive rural livelihoods in vulnerable communities	Number of kilometers or meters of ecosystems rehabilitated or restored, Number of trees planted, woodlots established	Number of restored and rehabilitated ecosystems, windrows, established woodlots, Number of ecological restoration and rehabilitation plans developed	90% windrows and contour bands restored, xx hectors of woodlots established, 10 villages have ecosystem restoration plans	Number and type of ecosystems maintained and impro	Restore and Rehabilitate at least 90% of the degraded ecosystems in Mtanana and Ugogoni wards to sustain climate sensitive rural likelihoo
			Number of farmers, Number of modern beehives and Training reports	Number of modern beehives purchased and used by farmers, women and old people	0% of modern bee hives in the selected project sites		
			Number of tree planted, Number of kilometers or acres covered by planted trees	Number of tree planted	Availability of some tree nurseries in local communities		
			Number of improved charcoal and firewood stoves	Number of improved charcoal and firewood stoves	0% of improved charcoal and firewood stoves available in the project sites		

			Training reports, number of training materials developed	Training reports, number of training materials developed	0 relevant training modules available at the district,	v e d to e n h a n ce th ei r fu n ct io ns a n d se rv ic es u n d er th e cl i m at e a n	ds
			Number of development plans reviewed to integrate climate change issues Number KDCRP Toolkit developed	Number of development plans reviewed to integrate climate change issues, Number and type of climate related risk reduction strategies developed at district level	0 reviewed district development plans, 0 ward and village plans reviewed to integrate climate change issues		
			Number of news outlets in the local press	Number of news outlets in the local press and media	Available media and communication experts		

			project interventions through video and other documentaries, public media, meetings and public websites	and media Number of awareness meetings conducted and reports	that have covered the topic Number of awareness meetings conducted		d w ea th er se as o ns	
			4.1.5 Facilitate provisional of project monitoring and evaluation facilities, tools and equipment	Monitoring reports and other publications	Number of tools and equipment purchased			

PART IIIF: Project alignment with AF results framework

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

Table 15: Alignment with with AF results framework

Project Objective(s)	***Project Objective Indicator(s)***	***Fund Outcome***	***Fund Outcome Indicator***	***AF Core Indicators.***	***Grant Amount (USD)***
1.Enhance climate resilient rural water supply system in vulnerable agro-pastoral communities at Mtanana and Ugogoni Wards	*1% coverage of climate resilient rural water supply system in agro-pastoral communities of Kongwa district*	*Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas* *Outcome 4: Increased adaptive capacity within relevant development and natural resource sectors*	*2.1. No. and type of targeted institutions with increased capacity to minimize exposure to climate variability risks*	*Core Indicator: Number of beneficiaries (direct and indirect)*	*330,000.00*
			3.2. Modification in behavior of targeted population	*Core Indicator 4.2: Assets produced, developed, improved or strengthened*	
			4.1.Development sectors' services responsive to evolving needs from changing and variable climate		
			6.1 Percentage of households and communities having more secure (increased) access to livelihood assets		
			6.2. Percentage of targeted population with sustained climate-resilient		

			livelihoods		
2. Support transformation of exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods	*Number of people from agro-pastoral communities transformed from exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods in selected wards of Kongwa district*	*Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas* *Outcome5: Increased ecosystem resilience in response to climate change and variability* *Outcome 4:Increased adaptive capacity within relevant development and natural resource sectors*	*2.1. No. and type of targeted institutions with increased capacity to minimize exposure to climate variability risks*	*Core Indicator: 6.1.2: Increased income, or avoided decrease in income* *Core Indicator 5.1: Natural assets protected or rehabilitated* *Core Indicator: Number of beneficiaries (direct and indirect)*	*430,000.00*
			3.2. Modification in behavior of targeted population		
			4.2. Physical infrastructure improved to withstand climate change and variability-induced stress		
			5.1 Ecosystem services and natural Assets maintained or improved under climate change and variability-induced stress		
			6.1 Percentage of households and communities having more secure (increased) access to livelihood assets		
			6.2. Percentage of		

			targeted population with sustained climate-resilient livelihoods		
3.Improve ecological functions to sustain climate sensitive rural livelihoods at Mtanana and Ugogoni wards and in selected rural communities of Kongwa district	*Improved ecological functions to sustain climate sensitive rural livelihoods in Kongwa district under the changing climate and variability of seasonal weather events*	*Outcome 4:Increased adaptive capacity within relevant development and natural resource sectors* *Outcome 5: Increased ecosystem resilience in response to climate change and variability*	*3.2. Modification in behavior of targeted population* *4.1.Development sectors' services responsive to evolving needs from changing and variable climate* *5.1 Ecosystem services and natural Assets maintained or improved under climate change and variability-induced stress* *6.1 Percentage of households and communities having more secure (increased) access to livelihood assets*	*Core Indicator: 6.1.2: Increased income, or avoided decrease in income* *Core Indicator 5.1: Natural assets protected or rehabilitated* *Core Indicator: Number of beneficiaries (direct and indirect)*	*198,285.00*
4. Strengthen capacities of institutions, extension services and trainers in to reduce risks associated with climate-induced	*Strengthened institutional and technical capacity to reduce risks associated with climate-induced livelihood*	*Outcome 2: Strengthened Institutional capacity to reduce risks associated with climate-induced* *Outcome 6:*	*Output 2.1: Strengthened capacity of national and regional centers and networks to respond rapidly to extreme*	*Core Indicator: Number of beneficiaries (direct and indirect)* *Core Indicator 1.2:*	*60,000.00*

livelihood failures in Kongwa district	*failures in Kongwa district*	*Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas* *Outcome 4:Increased adaptive capacity within relevant development and natural resource sectors*	*weather events* *3.2. Modification in behavior of targeted population* *Output 2.1: Strengthened capacity of national and regional centers and networks to respond rapidly to extreme weather events*	*No. of Early Warning Systems* *Core Indicator: 6.1.2: Increased income, or avoided decrease in income*	
Project Outcome(s)	***Project Outcome Indicator(s)***	***Fund Output***	***Fund Output Indicator***	***AF Core Indicators.***	***Grant Amount (USD)***
1.Enhanced climate resilient rural water supply system in vulnerable agro-pastoral communities of Mtanana and Ugogoni wards, Kongwa district	*Number of boreholes drilled; Number of purchased and installed solar energy-driven water pumps; Number of water storage structures; Number of kilometers/ meter of distribution networks constructed; Number of community water points/ community water Kiosks; Number of constructed cattle trough; and Number of COWSOs*	*Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities* *Output 4:Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability* *Output 6:Targeted individual and community livelihood strategies*	*4.1.1. No. and type of health or social infrastructure developed or modified to respond to new conditions resulting from climate variability and change (by type)* *4.1.2Number of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by asset*	*Core Indicator: Number of beneficiaries (direct and indirect)* *Core Indicator 4.2: Assets produced, developed, improved or strengthened*	*330,000.00*

	established	*strengthened in relation to climate change impacts, including variability*	*types* *No. and type of adaptation assets (physical as well as knowledge) created in support of individual- or community-livelihood strategies* *Type of income sourcesfor households generated under climate change scenario*		
2.Transformed exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods in selected wards of Kongwa district	*Number of climate sensitive drip irrigation schemes* *Number of contour bands/windrows constructed* *Number of farmers using improved seeds and use intercropping with drought resistant varieties* *Number of farmers trained and using FFS*	*Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities* *Output 4:Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability*	*4.1.1. No. and type of health or social infrastructure developed or modified to respond to new conditions resulting from climate variability and change (by type)* *4.1.2Number of physical assets strengthened or constructed to withstand conditions*	*Core Indicator: 6.1.2: Increased income, or avoided decrease in income* *Core Indicator 5.1: Natural assets protected or rehabilitated* *Core Indicator: Number of*	*430,000.00*

	Number of gardens established by women *Number of women attended FFFS*	*Output 5.Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts including variability*	*resulting from climate variability and change (by asset types* *5.1.1 Number of natural resources assets created ,maintained or improved to withstand conditions resulting from climate variability and change(by type and scale)* *No. and type of adaptation assets (physical as well as knowledge) created in support of individual- or community-livelihood strategies* *Type of income sources for households generated under climate change scenario*	*beneficiaries (direct and indirect)*	
		Output 6:Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability			

3.Improved ecological services and functions to sustain climate sensitive rural livelihoods in Kongwa district	*Number of restored and rehabilitated ecosystems, windrows and established woodlots* *Number of ecological restoration and rehabilitation plans developed* *Number of modern beehives purchased and used by farmers, women and old people* *Number of tree planted* *Number of improved charcoal and firewood stoves*	*Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities* *Output 5.Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts including variability* *Output 6:Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability*	*4.1.1. No. and type of health or social infrastructure developed or modified to respond to new conditions resulting from climate variability and change (by type)* *5.1.1 Number of natural resources assets created ,maintained or improved to withstand conditions resulting from climate variability and change(by type and scale)* *6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of individual- or community-livelihood strategies* *6.1.2. Type of income sources for households*	*Core Indicator: 6.1.2: Increased income, or avoided decrease in income* *Core Indicator 5.1: Natural assets protected or rehabilitated* *Core Indicator: Number of beneficiaries (direct and indirect)*	*198,285.00*

			generated under climate change scenario		
4. Strengthened institutional and technical capacity to reduce risks associated with climate-induced livelihood failures in Kongwa district	*Number of communities and district staff trained* *Number of development plans reviewed to integrate climate change issues*	*Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities* *Output 6:Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability*	*2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events* *Number and type of risk reduction actions or strategies introduced at local level* *No. of news outlets in the local press and media that have covered the topic* *7.2. No. or targeted development strategies with incorporated climate change priorities enforced*	*Core Indicator: Number of beneficiaries (direct and indirect)* *Core Indicator 1.2: No. of Early Warning Systems* *Core Indicator: 6.1.2: Increased income, or avoided decrease in income*	*60,000.00*

Targets for AF's Core indicators of the project

Table 16: Project indicators and beneficiaries

Core indicators	**Information on the core indicators**
Number of Beneficiaries	**4500 direct beneficiaries and 80,000 indirect beneficiaries** ***Detailed calculation of the direct beneficiaries*** - 500 households **(4500 persons)** - Enhanced capacity of local institutions to mainstream climate change in community development planning, sustainable natural resources management strategies and to record and communicate the lessons learned of at least **200** persons (100 by year 2 ,half of them women and half of them men) - Informed of local climate change issues and adequate adaptation actions to be implemented for at least **950** persons (510 adult women, 340 adult men, 100 students (50 girls and 50 boys) ***Detailed calculation of the indirect beneficiaries*** - All project activities will have an impact on the entire population
Assets produced, developed, improved or strengthened": drilling of bores fitted with solar water pumps, construction of water troughs and charcoal-dams for livestock, drip irrigation and water supply infrastructures	**Assets improved or strengthened (in short-term)** - 3 drip irrigation schemes - 2 boreholes - 500 households - 2 water troughs - 2 charcoal-dams **Assets improved or strengthened(long-term)** – Ugogoni and Mtanana wards
"Increased income, or avoided decrease in income": beekeeping horticulture and milk	- The average annual income from horticulture (tomatoes, onions and spinach) is estimated at US $8500 from 3rd year of the project - Pasture improvement and animal breeding will increase income from sale of milk, leading to the average annual income of at least $ 1500 by the end of the project - The average annual income from sale of honey is estimated at US $ 7,600 by end of the project
"Natural Assets Protected or Rehabilitated": reduction of deforestation, improvement of biodiversity,	- 1000 acres of contour bands/windrows restored - 3000 acres of natural forest/woodland restored - 1000 acres of woodlots established

PART IIIG. Budget

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 17: Detailed budget for the proposed project

Expected Outputs	Output budget (TZS)	Activities	Inputs	Budget notes	Y1 (US$)	Y2 (US$)	Y3 (US$)	Total amount (US$)
Component 1. Enhance climate resilient rural water supply system in vulnerable agro-pastoral communities at Mtanana and Ugogoni wards								
Outcome 1. Enhanced climate resilient rural water supply system in vulnerable agro-pastoral communities of Mtanana and Ugogoni wards, Kongwa district								**330,000.00**
1.1. Climate resilient rural water supply system established in agro-pastoral communities at Matanana and Ugogoni Wards in Kongwa district	282,067.54	1.1.1. Drill boreholes in drought prone and water scarce villages and Install solar driven water pumps at Mtanana and Ugogoni wards	Costs for boreholes and Solar pumps	1	60,539.83	78,291.60	65,200.05	204,031.48
		1.1.2. Construct water storage tanks and distribution network systems at Mtanana and Ugogoni wards	Cost for water tanks and distribution network	2	7,037.26	9,000.00	5,000.00	21,037.26
		1.1.3. Construct cattle troughs for livestock water system in in agro-	Construction materials for cattle troughs	3	15,199.29	25,799.52	16,000.00	56,998.81

		pastoral communities in selected villages at Matanana and Ugogoni wards, in Kongwa district						
1.2. Community Owned Water Supply Organization(COWSOs) established and facilitated and committee members trained on operational and maintenance	47,932.46	1.2.1. Conduct awareness raising meetings with community stakeholders to facilitate formulation of stable, effective and efficiency COWSOs at Mtanana and Ugogoni wards in accordance to the Water supply and sanitation Act, 2009.	Village meetings	4	1,231.46	2,813.48	2,000.00	6,044.94
		1.2.2. Establish gender sensitive water governance arrangements for COWSOs at Mtanana and Ugogoni Wards	Village meetings	5	5,107.67	7,553.84	5,851.28	18,512.79

		1.2.3. Conduct Technical Trainings of Trainers on maintenance and operations; management of finance, accounting and group dynamics issues to selected community members of COWSOs for both Mtanana and Ugogoni wards	Trainings for COWSOs	6	6,024.84	10,349.89	7,000.00	23,374.73
Component 2. Support transformation of exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods								
Outcome 2. Number of agro-pastoral communities transformed from exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods in selected wards of Kongwa district								430,000
2.1. Best agricultural – climate smart practices enhanced to improve food security	163,984	2.1.1. Construct and establish atleast three drip irrigation structures/schemes at Mtanana and Ugogoni wards in Kongwa district	Costs for establishment of micro-drip irrigation system	7	7,129.00	7,022.05	7,127.89	21,278.94
in the selected villages of		2.1.2. Rehabilitate the existed pre	Contour bands/windrows restorati	8	16,665.91	20,566.14	10,099.77	47,331.82

Mtanana and Ugogoni wards, Kongwa district		independence contour bands/windrows, and promote other soil and water management techniques (terracing, tie ridging) in-situ techniques for sustained agriculture/crop productivity at Mtanana and Ugogoni wards	on technologies					
		2.1.3. Train selected members of farmer and women groups on Operation and Maintenance (O&M) of drip irrigation facilities at Mtanana and Ugogoni wards	Training costs on operations and maintenance of drip irrigation infrastructures	9	2,074.94	3,951.90	1,780.76	7,807.60
		2.1.4. Facilitate increased use of climate smart crops and promoting intercropping with drought	Cost for provisions of seeds for climate smart crops such as cashew	10	22,269.14	35,634.57	17,544.86	75,448.57

		resistant varieties like cashew nuts, sorghum, sunflower, simsim, pigeon peas, cassava, cereals, sweet potatoes and early maturing crops to increase climate resilience farming systems at Mtanana and Ugogoni wards.	nuts seeds and nurseries, extension services					
		2.1.5. Establish women based gardens and poultry houses and trainings on FFFS (Female Farmer Field School) – provision of seeds and tools to diversity gender based livelihood systems	Extension services and provision of seeds and tools to diversity gender based livelihood systems	11	3,270.36	5,271.66	3,575.24	12,117.26
2.2. Natural pasture, local	68,864.46	2.2.1. Establishing drought resistant	Cost for pasture improvement	12	3,414.82	4,741.98	2,534.57	10,691.37

breeds and livestock management systems improved to enhance adaptive capacity of livestock keepers to climate induced droughts in Kongwa district.		pasture species and enhance range management to transform traditional grazing system.						
		2.2.2. Improve livestock management to control pests and diseases through cattle dips, feeding systems and cross breeding local breeds with improved breeds available at the National Ranching Company (NARCO)	Livestock breed improvement	13	19,086.55	20,451.93	18,634.62	58,173.09
2.3. Improve market value chain of agro-pastoral products on farm and off farm products to	197,151.10	2.3.1 Facilitate and train farmers and livestock keepers on value addition and packaging techniques of their agricultural products and link them to	Community workshops	14	30,452.88	39,185.32	35,515.36	105,153.56

strength their competition power in the market and diversify livelihood systems in the project sites		competitive markets and finance institutions						
		2.3.2 Facilitate provision of value addition and packaging tools, equipment and machines	Materials, goods and services	15	25,799.63	35,598.65	30,599.26	91,997.55
Component 3. Improve ecological functions to sustain climate sensitive rural livelihoods at Mtanana and Ugogoni wards and in selected rural communities of Kongwa district								
Outcome 3. Improved ecological functions to sustain climate sensitive rural livelihood in Kongwa district under the changing climate and variability of seasonal weather events								198,285.00
3.1. Integrated ecological and management systems implemented in Kongwa district to sustain climate sensitive rural livelihoods in vulnerable commun	198,285	3.1.1. Establish and implement ecological restoration and rehabilitation plans (such as shrub/grasses, mangoes, cashew nuts establishment on contour bands/windrows, woodlots and woodland restoration) in selected Wards and Villages of Kongwa District	Costs for ecological rehabilitation and restoration activities	16	21,824.26	43,905.40	35,320.42	101,050.08

ities		3.1.2. Promote bee keeping activities as income diversification and demonstration of adaptation benefits generated from ecological restoration areas under activity 3.1.1 to increase adaptive capacity of vulnerable marginalized groups (such as women, girls, old people)	Establishment of bee-keeping demonstration workshop center	17	10,006.60	15,162.25	9,163.30	34,332.15
		3.1.3 Promote tree planting (trees with both environmental and socio economic values in mid- and long-term such as fruit plants and wood plants for timber) activities in residential areas, along streets and roadsides and in the degraded areas	Planting trees with both environmental and socio economic values	18	12,967.59	20,967.59	19,967.60	53,902.78
		3.1.4. Promote scaling ups of projects' Best Techniques (BT) and Best Practices (BP) on ecological	Best Techniques (BT) and Best Practices (BP) for ecological restorati	19	5,000.00	3,000.00	1,000.00	9,000.00

		restoration and rehabilitation in other areas of the district including in Dodoma region	on and rehabilitation					
Component 4. Building capacities of extension services and institutions at District, Ward and Village levels to support local communities and knowledge management								
Outcome 4. Capacities of institutions, extension services and trainers in Kongwa district strengthened to reduce risks associated with climate- induced livelihood failures in Kongwa district								60,000.00
4.1 Capacities of extension services and institutions in Kongwa district are strengthened to support communities to undertake climate change adaptation activities	60,000.00	4.1.1 Develop a detailed training plan to guide the capacity building program for the Project. A Consultant will also be hired to develop a detailed training plan highlighting the specific content with relevant examples to the prevailing conditions in Kongwa district, each ward and villages involved in the project implementation.	Consultant Fees	20	2,000.00	2,500.00	1,500.00	6,000.00

		4.1.2 Develop training modules to build capacity of stakeholders on a continuous basis in all project sites	Materials and goods	21	2,500.00	3,000.00	2,500.00	8,000.00
		4.1.3 Review and mainstream climate change adaptation measures into sustainable development plans at district, wards to village levels and KDCRP Toolkit will be developed to support district planners and villagers review, implement, monitor and to update the reviewed plans in future	Adaptation and policy expert	22	0.00	10,000.00	0.00	10,000.00
		4.1.4 Documenting and disseminating lessons and best practices from project interventions	DSAs or fees for experts	23	2,500.00	5,000.00	2,500.00	10,000.00

		4.1.5 Communicate project results and share lessons learnt through video and other documentaries, public media, meetings and public websites	Communication materials	24	2,000.00	4,000.00	4,000.00	10,000.00
		4.1.6 Facilitate provisional of project monitoring and evaluation facilities, tools and equipment	Cost to facilitate M & E	25	4,000.00	7,000.00	5,000.00	16,000.00
			TOTAL		**288,102.00**	**422,768.00**	**308,415.00**	**1,018,284.00**

Table 18: Budget notes

#	Description	
1	Costs for boreholes and Solar pumps	- Solar Panels (15hp), - Solar pump [Submersible Pump with Q= 9.63M3/hr, 10hp) and Surface pump with Q=97m3/hr, H=300 , 10hp), - A total of 18,954 m of Pipes (110mm GS PN 12 PE 100; 50mm HDPE PN 10 PE 100; 63mm HDPE PN 10 PE 100; 110mm HDPE PN 16 PE 100; 75mm HDPE PN 12 PE 100), - A total of 184 m of Cables (4corex 10sqmm) - Three (3)Control panel, - Drilling 3 boreholes - Labour - Accessories and fittings
2	Cost for water tanks and distribution networks	- Purchase and installation of three (3) elevated storage tanks each with 10,000 liters capacity, made of stainless steel. Each estimated at US$ 4000 - A total of 4000m of HDPE pipes OD 50 (DN 1 ½ǁ) - Cement, gravel, sand and water -Steel bar (12mm), -Accessories and fittings - Technician/Labor
3	Construction of cattle trough	Construction of 2 borehole & 2 water trough for Mtanana & Ugogoni Wards will involve the following; - Trench excavation and backfilling (main 0.6m wide and 1.2m deep, 1410m long; main 0.6m wide and 1.2m deep, 200m long) - HDPE pipe 63mm, PN 10, GS sleeve pipe 90 mm, GS 63mm - Fittings and accessories
4	Village meetings	Awareness raising involves training workshop on community-driven planning framework for climate adaptation measures, promoting the establishment of Community Owned User Associations, procurement, contract management, supervision and approval of construction works as well as supporting Community Owned User Associations in sustainable operation and maintenance of their schemes. In Tanzania, COWSO can exist in different forms such as registered trusts, a water consumer association, a cooperative society, a non-governmental organization, or any other body or organization established under written law of Tanzania
5	Village meetings	The cost of achieving gender inclusion in COWSO leadership include; - 6 roadshow to understand community culture and norms at the grassroots, - Formulate 12 climate change groups "CCG" and climate adaptation group "CAG" at each primary school and villages in the 12 villages of Mtanana and Ugogoni - The costs of gender inclusion is associated with tailoring knowledge products into age, gender and local context and languages. Other costs include travel and DSA.
6	Trainings for COWSOs	The Consultant will develop training material on COWSO establishment, operation and management; and ii) deliver this training in six (6) workshops to 12 COWSOs at Mtanana and Ugogoni wards. Costs include travel and DSA.

7	Costs for establishment of micro-drip irrigation system	Installation of drip irrigation system require purchase of construction and industrial equipment such as cement, drip tape, grumate rubber, starter connector, first connector, blind pipe length, gate valve, gate valve, end plug connector, PVC / HDPE pipe, t-connector, solution tape, filter 150 microns, adapter connector, simtank 2,000 litres, raiser tank, labor charge, solar pump (10HP), hiring borehole drilling experts
8	Contour bands/windrows restoration technologies	- This restoration initiative requires construction/digging of windrows, - Vegetating the windrows by trees and grasses to limit soil erosion - A total of 50 hectres will be involved in this project initiative - Raise awareness and implementation of good agricultural practices (GAP) as a means to protect the windrows - Awareness on beekeeping in the windrows area - Formulate and implement by-laws specifically for protection of windrows/contour bands at Mtanana Ward
9	Training costs on operations and maintenance of drip irrigation infrastructures	Three Training events (Workshops) per year in each ward; Nine (9) training workshop to farmers demonstration group in each ward
10	Cost for provisions of seeds for climate smart crops such as cashew nuts seeds and nurseries, extension services	Establishment of cashew nuts as alternative cash crops will involve establishment and management of cashew nuts nurseries, capacity building on cashew nuts trees farm management. A total of 74,000 farmers in the project area will be involved in the project period.
11	Extension services and provision of seeds and tools to diversity gender based livelihood systems	2- hectares earmarked for this activity in each village, 1-acre will be developed as demonstration FFFS. - Women and girls groups formulation, 4 groups from each village, hence a total of 88 groups across the 9-villages of Mtanana and Ugogoni. - Costs implication on this activates involve knowledge exchange travel, DSA and 8-workshop (quarterly) on capacity building on good agricultural practices (GAP). Establish and capacitate good agricultural practices on 12 FFFS. A total of 12 FFFS in 9 villages will be involved in the project.
12	Cost for pasture improvement	Establish and capacitate good livestock keeping practices in 12 villages will be involved in the project.
13	Livestock breed improvement	-2 Cattle deeps will be constructed in Mtanana and Ugogoni wards - Conduct sensitization seminars on cattle vaccination - Enable purchase of frozen semen straws and cooling liquid nitrogen gas, working gears. - Procuring 6 incalf heifers /primiparous pregnant cows
14	Community workshops	- Community consultation to identify and select high values crops for value addition, packaging and sales to purposely maximize climate resilient opportunities.
15	Materials, goods and services	Costs for realizing bee-keeping productivity is linked to renovation of existing manufacturing workshop at an estimate of US$ 13000. In the workshop the following tools are required, - 1-secular saw, 1-table saw, 1-gip saw, 1-cuting saw - 1-table plane, 1-plane no.4, 1-plane no.5, 1-plane no.6 - grander machine -2-G clamp, 1--Shash clamp -2-Hummer, -1-Drill machine

16	Costs for ecological rehabilitation and restoration activities	- 50 hectares are set to pilot commercial forestation forecasted for supplying wood products on beekeeping productivity and other community development as the Kongwa and Dodoma at large, get more urbanized. - Cost implication on this activity involves farm preparation, nurseries establishment, purchase of tree seeds and or seedlings, polythened tubes (>100, 000m), Plastic sheets (150, 000m), agronet sheets (200,000m), 10-shovel, 5-prooning knives, 10-watering can, 10-buckets, 12-pair of groves, and 5-trolley
17	Establishment of bee-keeping demonstration workshop center	More than 100 hectares on hilly areas are targeted. - This activity involve 8 quarterly community meetings and workshops, 12-bimonthly field visits, preparation of brochures, workshop reports and tailored implementation manual/guideline. Hence costs on travel and DSA. See also Budget Note No.17 on nurseries preparation and seedlings management, However, large area will be left to regenerate itself than planting exotic species.
18	Cost associated with planting trees of both environmental and socio economic values	Cost to establish nurseries and woodlots
19	Best Techniques (BT) and Best Practices (BP) for ecological restoration and rehabilitation	Travel: 50 participants x $10 = $500 DSA: 50 participants x $5 x 4 days = $1,000 Venue Hire: $500 Consultant Fee: US$ 250 x 4 days = $1000 Total cost: $3,000 x 2 per year = $6,000
20	Consultant Fees	Cost for consultation services
21	Materials and goods	Materials and goods, such as computer hardware and software, are central to strengthen the capacity of stakeholders on knowledge and lesson learned such that to integrate climate change into all project components and areas
22	Adaptation and policy expert	Gathering information necessary to facilitate effective and efficient project integration include costs on inception meeting, field survey and final report. - Costs include, Consultancy fee, travel and DSA
23	DSAs or fees for experts	- Costs in this activities include; - Field travel to documenting changes occurred as a result of project intervention, knowledge product generation, workshop with community members in various project components and sites - Travel: 50 participants x $10 = $500 - DSA: 50 participants x $10 x 2 days = $1,000 Venue Hire: $250 -Stationaries: $250 - Knowledge products i.e. manuals, CD/USB, reports: $2000 Consultant Fee: US$ (Lumpsum) = $1000 Total cost: $5,000 x 2 (year 1 & 2) = $10,000

24	Communication materials	-Cost of communication materials – such as brochures, pamphlets and policy briefs – to sustain the flow of information between the following: i) projects coordinating team and various groups implementing the project in the 12 villages of Mtanana and Ugogoni; ii) local and regional climate information platforms; iii) experts and technical staff responsible for agro–pastoral community project components and climate change adaptation; and iv) local government policies, project sites (villages) by-laws and decision makers
25	Cost to facilitate M & E	-Cost of communication materials – such as brochures, pamphlets and policy briefs – to sustain the flow of information between the following: i) projects coordinating team and various groups implementing the project in the 12 villages of Mtanana and Ugogoni; ii) local and regional climate information platforms; iii) experts and technical staff responsible for agro–pastoral community project components and climate change adaptation; and iv) local government policies, project sites (villages) by-laws and decision makers. - Costs in this activities include; - Field travel, workshop with community members in various project components and sites and knowledge product generation on lesson learned;, - Travel: 250 participants x $10 = $2,500 - DSA: 250 participants x $5 x 2 days = $5,000 - Venue Hire: $250 -Stationaries: $750 - Knowledge products i.e. manuals, CD/USB, reports: $3,500 Consultant Fee: US$ (Lumpsum) = $5,000

Table 19: Executing fee breakdown

Execution activity	Description and notes	US$
Top ups/ salaries allowances for project personnel (based in Kongwa district Council Headquarters)	Project Manager: Salary allowance/top ups $500 per month x 12 months = $6,000 x 3 years = $18,000	18,000
	Project Monitoring and evaluation expert: Salary allowance/top ups $166.7 per month x 12 months = $6,000 x 3 years = $6,000 t	6,000
	Project Accountant: Salary allowance/top ups $166.7 per month x 12 months = $6,000 x 3 years = $6,000Assistant	6,000
Office operation costs	Computers, Print, Copy and Scan	6,000
	Communication costs	1,000
	Office consumables	4,000
	Fuels for project management and field supervisions	6,400
Project Steering Committee meetings	Project Steering Committee meetings the initial meeting serves as Inception Workshop): Cost includes DSAs and conference packages	16,600
Equipment	For both office and field equipment with one (1) vehicle for Project Monitoring and facilitation of field works	31,160.77
TOTAL		95,160.77

Table 20: Implementing Entity Fee

S/No	Description and notes	
1	Overall Coordination and management (staff allowance for project coordination and management staff ,finance, procurement and administrations)	26,554.23
2	Financial management, including accounting, treasury, grant and trust fund management and costs for external audits and other financial and management support	20,000.00
3	Costs associated with the provision of equipment to the Implementing Entity	20,000.00
4	Costs associated with quality assurance and field based quality checks including costs related to travel, DSA	20,000.00
	TOTAL	**86,554.23**

PART III H: Disbursement

Table 21: Schedule include a disbursement schedule with time-bound milestones.

	After Signing the Implementation Agreement	**After Year 1(US $)**	**After Y2 (US$)**	**Total (US $)**
Scheduled date (tentative)	**October 2020**	**October 2021**	**October 2022**	
Project Funds	**290,102.00**	**422,768.00**	**305,416.00**	**1,018,286.00**
executing Entity Fees	**40,000.000**	**35,160.00**	**20,000.00**	95,160.00
Implementing Entity Fee	30,000.00	30,000.00	26,554.00	86,554.00
Total	360,102.00	487928.00	**354,969.00**	1,200,000.00

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. **Record of endorsement on behalf of the government**[24] *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

See Annex 1 for all endorsement letters

Table 22: List of endorsement letters for the proposed project

1	***Eng. Joseph K. Malongo****, Permanent Secretary, Vice President's Office*	Date*: December, 28th, 2018*
2	***Ambassador Joseph E. Sokoine, Deputy****, Permanent Secretary, Vice President's Office*	Date*: January,14th , 2020*

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 2012, 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: *January 17, 2020*	Tel. and email: **+255 753 240 517**, nieaf@nemc.or.tz / kasigazi.koku@gmail.com

Project Contact Person: **Dr. Dominico B. Kilemo**

[24] 6. 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.

Tel. and Email: *+255 757 370 856, Email: dbkilemo@gmail.com*

Annex 1: Endorsement letters

UNITED REPUBLIC OF TANZANIA

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

In reply please quote:

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

Our Ref: BA. 90/201/01

14th January, 2020

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

Re: Endorsement for Enhancing Climate Change Adaptation for Agro-Pastoral Communities in Kongwa District

In my capacity as designated authority for the Adaptation Fund in the 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.

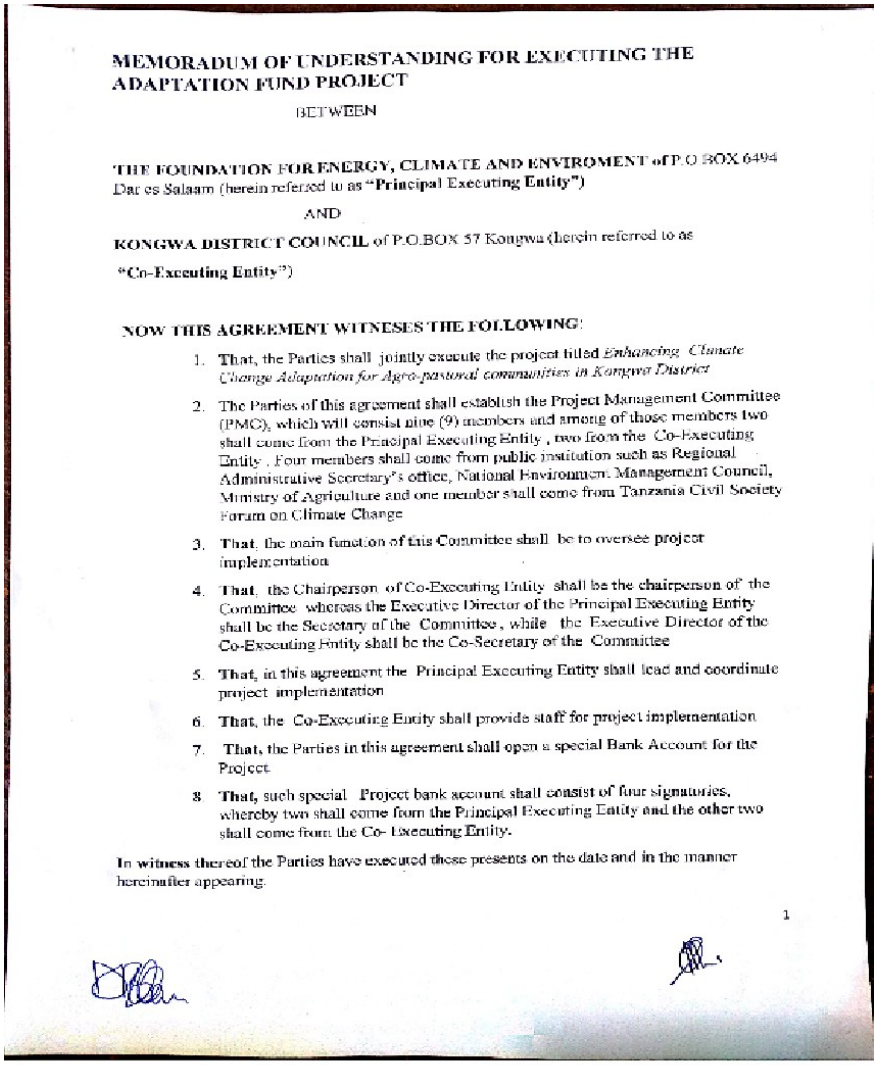
Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by National Environment Management Council and executed by Foundation for Energy Climate and Environment in collaboration with Kongwa District Council.

Sincerely,

Ambassador Joseph E. Sokoine
For Permanent Secretary

All correspondences should be Addressed to ***Permanent Secretary,***

Annex 2: Memorandum of understanding



MEMORADUM OF UNDERSTANDING FOR EXECUTING THE ADAPTATION FUND PROJECT

BETWEEN

THE FOUNDATION FOR ENERGY, CLIMATE AND ENVIROMENT of P.O BOX 6494 Dar es Salaam (herein referred to as **"Principal Executing Entity"**)

AND

KONGWA DISTRICT COUNCIL of P.O.BOX 57 Kongwa (herein referred to as **"Co-Executing Entity"**)

NOW THIS AGREEMENT WITNESES THE FOLLOWING:

1. **That**, the Parties shall jointly execute the project titled *Enhancing Climate Change Adaptation for Agro-pastoral communities in Kongwa District*
2. The Parties of this agreement shall establish the Project Management Committee (PMC), which will consist nine (9) members and among of those members two shall come from the Principal 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, Ministry of Agriculture and one member shall come from Tanzania Civil Society Forum on Climate Change
3. **That**, the main function of this 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 thereof the Parties have executed these presents on the date and in the manner hereinafter appearing.

1

Annex 3: List of participants were involved in the consultation processes

A: List of participants in the village meetings and workshops

1. Ibwaga Village

NO	PARTICIPANT NAME	DESIGNATION	MOBILE PHONE
1.	Jonas J. Kwanga	Village Chairman – Ibwaga	0756-457818
2.	Ezra H. Gao	VEO	0655164815
3.	Benson S. Nyamafu	UVCCM Village Chairman	0759378882
4.	Meshack Mazengo	CCM Village Secretary	0763889777
5.	Chrisopher M. Mganga	Mbuyuni Hamlet Chairman	0717703738
6.	Stanley Mkokoteni	CCM Village Chairman	0677817066
7.	Wilson Ngonela	Balozi wa Mtaa	0745943979
8.	Ernest Maumbi	Ibwaga Hamlet Chairman	0712363199
9.	Patrick Msa	Farmer	0716892497
10.	Henry Magawa	Soweto Hamlet Chairman	
11.	Zacharia E. Chiyendo	Farmer	0757429290
12.	David John Daudi	CMC Group Chairman	0763214711
13.	Elizabeth Rupia	CMC Group Secretary	0764259421
14.	Paulina M. Mbulla	Village Government delegate	0752010464
15.	Ezekiely Maganga	Katibu Mwenezi CCM	0711253325
16.	Julius Kusenha	Balozi	0675764836
17.	Acex Lemabi	Delegate	0763522798
18.	Godfrey Maumbi	Delegate	0675763029
19.	Rupia J. Rupia	Harmlet Chairman	
20.	Jane S. Chidumka	Health Care Provider	0787368788
21.	Elikana Kalaita	Health Care Provider	0752885746
22.	Fredrick Kusenha	Delegate	0653710422
23.	Jonathan M. Lesilwa	Farmer	
24.	Baraka H. Kusenha	Village Government delegate	0717077957
25.	Salama Msagala	Village Government delegate	0766469169
26.	Lusiana Lenjima	Health Care Provider	0783277555
27.	Amana L. Chali	Farmer	0755905558
28.	Jeni A. Chitemo	Farmer	0654128515
29.	Remmy S. Malogo	Ibwaga Primary School Teacher	0676111690
30.	Gloria J. Lugwalu	Farmer and female group representative	
31.	Jeniya Nyanghuta	Farmer and female group representative	
32.	Amos Mwile Njebellah	Chibegu Harmlet Chairman	0712113229
33.	Elika Luka Kayuya	Delegate	0653474049
34.	Veronica H. Msagala	Delegate	0753460777
35.	Enock P. Chiloya	Harmlet Chairman	0712624854
36.	Anjelina H. Samson	CMC Member	0752502198
37.	Dr. Kilemo	Environmental expert – FECE	0757370856
38	Prof. Clavery Tungaraza	Lecturer - SUA	0713283353

39.	Dr. Bwire	Environmental and climate change specialist (VICE PRESIDENT OFFICE)	0713871921 OR 0752534632
40.	Gwalusajo Kapande	Agric Officer – Kongwa DC	0712742086
41.	Fabian Maingu	Accountant – Kongwa DC	0682711717
42.	Mkama Manyama	Environmentalist	0784670648
43.	Haruni L. Nghangala	Procurement Officer – Kongwa DC	0653826888
44.	Godfrey Mujairi	DEMO – Kongwa DC	0756520768
45.	Barakati Ally	Water Engineer – TARURA	0672516119
46.	James E. Nkini	Forestry & Bee Expert – Kongwa DC	0714305099 & 0757412089
47.	Dismas J. Kimaro	Economists – From STAMICO	
48.	Kefa Manase	Livestock Officer – Kongwa DC	0743744554
49.	Imani S. Matonya	Business Officer – Kongwa DC	0622495595
50.	Gasper B. Kabendera	GIS – Kongwa DC	0678794047

2. Mtanana ―A‖ & ―B‖ Villages

NO	PARTICIPANT NAME	DESIGNATION	MOBILE PHONE
1.	Jumanne Malale	Mtanana ―A‖ Village Chairman	
2.	Yakobo J. Kutaka	Mtanana ―B‖ Village Chairman	
3.	Mwenda S. Msanjila	VEO – Mtanana ―A‖	
4.	Mkama Manyama	ENVIRONMENTALIST	0784670648
5.	Dr. Kilemo	FECE	0757370856
6.	Barakati Ally	Water Engineer – TARURA	0672516119
7.	Prof. Tungaraza	Professor – Sokoine University of Agriculture	0713283353
8.	Dr. Bwire	Environmental and climate change specialist (VICE PRESIDENT OFFICE)	0752534632
9.	Gwalusajo Kapande	Agric Officer – Kongwa DC	0712742086
10.	Fabian Maingu	Accountant – Kongwa DC	0682711717
11.	Haruni L. Nghangala	Procurement Officer – Kongwa DC	0653826888
12.	Godfrey Mujairi	DEMO – Kongwa DC	0756520768
13.	James E. Nkini	Forestry & Bee Expert – Kongwa DC	0714305099
14.	Dismas J. Kimaro	ECONOMISTS – From STAMICO	
15.	Kefa Manase	Livestock Officer – Kongwa DC	0743744554
16.	Imani S. Matonya	Business Officer – Kongwa DC	0622495595
17.	Gasper B. Kabendera	GIS – Kongwa DC	0678794047
18	Zainabu Bungwa	Natural Resources Officer –Ministry of Natural Resources and Tourism-	0714522939
19	Joseph Kihaule	Climate Change Specialist – VICE PRESIDENT OFFICE	0713275662
20	Prosper Makundi	Principal Agricultural Officer – Miistry of Agriculture	0715200145
21	Alex George	Water Resources Officer – Ministry of Water and irrigation	0787690366

22	Happiness Kalugaba	Environmental Officer - Dodoma Regional Secretariat	0764041639

3. Chimotolo Village

NO	PARTICIPANT NAME	DESIGNATION	MOBILE PHONE
1.	Dr. Bwire	Environmental Expert (VICE PRESIDENT OFFICE)	0713871921 OR 0752534632
2.	Prof. Tungaraza	Lecturer - SUA	0713283353
3.	Mkama Manyama	ENVIRONMENTALIST	0784670648
4.	Dr. Kilemo	Environmental expert -FECE	0757370856
5.	Barakati Ally	Water Engineer – TARURA	0672516119
6.	Gwalusajo Kapande	Agric Officer – Kongwa DC	0712742086
7.	Fabian Maingu	Accountant – Kongwa DC	0682711717
8.	Haruni L. Nghangala	Procurement Officer – Kongwa DC	0653826888
9.	Godfrey Mujairi	DEMO – Kongwa DC	0756520768
10.	James E. Nkini	Forestry & Bee Expert – Kongwa DC	0714305099
11.	Dismas J. Kimaro	ECONOMISTS – From STAMICO	
12.	Sadala M. Chimgusa	Chimotolo Village Chairman	0712612365
13.	Deogratius J. Chimhombi	VEO	0652782316
14.	Ernest A. Maganga	Village Government Delegate	0659737602
15.	Andrea Ruhusa	Village Government Delegate	0717635881
16.	Sophia Madebe	Village Government Delegate	
17.	Jesca Mdabwa	Village Government Delegate	
18.	Nelson Mbalani	Village Government Delegate	0755177826
19.	Jairos Chisaluni	Village Government Delegate	0767270364
20.	Maumbi Mahenyegu	Village Government Delegate	0712096376
21.	Jackson Ngoliga	Village Government Delegate	0756449845
22.	Wilson Sendeu	Village Government Delegate	0764456687
23.	John Mulute	Village Government Delegate	0755533715
24.	Dauson Mkuta	Village Government Delegate	0744826416
25.	Elia Ruhusa	Village Government Delegate	0658860690
26.	Shedruck Leng‘ata	Village Government Delegate	0769518736
27.	Mganga Mlahagwa	Village Government Delegate	0717222959
28.	Maiko Mahinyila	Village Government Delegate	0716641852
29.	Gasper B. Kabendera	GIS – Kongwa DC	0678794047
30.	Imani S. Matonya	Business Officer – Kongwa DC	0622495595
31.	Kefa Manase	Livestock Officer – Kongwa DC	0743744554

4. Mautya –A‖ & —B‖ Villages

NO	PARTICIPANT NAME	DESIGNATION	MOBILE PHONE
1.	Robart Dedede Mwimbwa	Mautya –B‖ Village Chairman	
2.	Ernest Chikusi Ndabasho	VEO Mautya –B‖	
3.	Gideon S. Lengaiy	Famous Elder Mautya –A‖	
4.	Lukugu Milangasi	Famous Elder Mautya –A‖	
5.	Madeha Chidyangale	Famous Elder Mautya –A‖	
6.	Kutoka Mbezwa	Famous Elder Mautya –A‖	
7.	George M. Mkasanga	Famous Elder Mautya –A‖	
8.	Motyakala Malechela	Famous Elder Mautya –B‖	
9.	Mapengo Saba	Famous Elder Mautya –B‖	
10.	Balinoti Soiti	Famous Elder Mautya –B‖	
11.	Mtizi Mhunze	Famous Elder Mautya –A‖	
12.	Enersiti C. Madole	Village Government Delegate Mautya –A‖	
13.	Malema N. Elias	Hamlet Chairman	
14.	Emmanuel L. Mtandulu	Magomeni Hamlet Chairman	
15.	Obadia Dedede Lungwa	Village Government Delegate Mautya –A‖	
16.	Alex Y. Ngongo	Village Government Delegate Mautya –B‖	
17.	Maliam Mbasha	Village Government Delegate Mautya –B‖	
18.	Bitilisi Ndalu	Village Government Delegate Mautya –B‖	
19.	Piason G. Ndalu	Village Government Delegate Mautya –B‖	
20.	Samson L. Milangasi	Village Government Delegate Mautya –B‖	
21.	Issaya N. Koineti	Village Government Delegate Mautya –B‖	
22.	Buse M. Mjenda	VEO Mautya –A‖	
23.	Jackson Chedego	Village Chairman Mautya –A‖	
24.	Jonas M. Leguna	Village Government Delegate Mautya –B‖	
25.	Charles Pujim	Village Government Delegate Mautya –B‖	
26.	Yohana Sumla	Village Government Delegate Mautya –B‖	
27.	Mayola Kamnya	Village Government Delegate Mautya –B‖	
28.	Veliani C. Mpanjile	Village Government Delegate Mautya –B‖	
29.	Mlongwa M. Njelesa	Village Government Delegate Mautya –A‖	
30.	Barakati Ally	Water Engineer – TARURA	0672516119
31.	Imani S. Matonya	Business Officer – Kongwa DC	0622495595
32.	Kefa Manase	Livestock Officer – Kongwa DC	0743744554
33.	Gasper B. Kabendera	GIS – Kongwa DC	0678794047
34.	Mkama Manyama	ENVIRONMENTALIST	0784670648
35.	Fabian Maingu	Accountant – Kongwa DC	0682711717
36.	Haruni L. Nghangala	Procurement Officer – Kongwa DC	0653826888

37.	Godfrey Mujairi	DEMO – Kongwa DC	0756520768
38.	James E. Nkini	Forestry & Bee Expert – Kongwa DC	0714305099 & 0757412089
39.	Dismas J. Kimaro	ECONOMISTS – From STAMICO	
40	Prof. Tungaraza	Lecturer - SUA	0713283353
41.	Dr. Kilemo	Environmental expert -FECE	0757370856
42.	Gwalusajo Kapande	Agric Officer – Kongwa DC	0712742086

5. Soiti Village

NO	PARTICIPANT NAME	DESIGNATION	MOBILE PHONE
1.	Godfrey Mujairi	DEMO – Kongwa DC	0756520768
2.	Gwalusajo Kapande	Agric Officer – Kongwa DC	0712742086
3.	Haruni L. Nghangala	Procurement Officer – Kongwa DC	0653826888
4.	Prof. Tungaraza	Lecturer - SUA	0713283353
5.	Dr. Kilemo	Environmental expert – FECE	0757370856
6.	Fabian Maingu	Accountant – Kongwa DC	0682711717
7.	Dr. Bwire	Environmental Expert (VICE PRESIDENT OFFICE)	0713871921 OR 0752534632
8.	Barakati Ally	Water Engineer – TARURA	0672516119
9.	Gasper B. Kabendera	GIS – Kongwa DC	0678794047
10.	Mkama Manyama	ENVIRONMENTALIST	0784670648
11.	Kefa Manase	Livestock Officer – Kongwa DC	0743744554
12.	James E. Nkini	Forestry & Bee Expert – Kongwa DC	0714305099 & 0757412089
13.	Imani S. Matonya	Business Officer – Kongwa DC	0622495595
14.	Dismas J. Kimaro	ECONOMISTS – From STAMICO	
15.	Dickson P. Mbaigwa	SOITI Village Chairman	
16.	Tabu M. Mbedegalo	VEO	
17.	Keneth Sadan	Soiti Village Government Delegate	
18.	Mariam Chilongola	Soiti Village Government Delegate	
19.	Betilis Makasi	Soiti Village Government Delegate	
20.	Boniface M. Magaya	Hamlet Chairman	
21.	Bonfas Y. Ngoliga	Soiti Village Government Delegate	
22.	John M. Mhomba	Soiti Village Government Delegate	
23.	Nasoni L. Selenje	Soiti Village Government Delegate	
24.	Jarome Mubi Sangamhwani	Soiti Village Government Delegate	
25.	Tano Chipanha Nghunzo	Soiti Village Government Delegate	
26.	Bernard C. Paulo	Soiti Village Government Delegate	
27.	Yoha Yusuph Kabwele	Soiti Village Government Delegate	
28.	Aginesy Chiyungumi	Soiti Village Government Delegate	
29.	Mashaka Pusila	Soiti Village Government Delegate	

30.	Nelly Chimaisi	Soiti Village Government Delegate	
31.	Jackson Konaisei	Soiti Village Government Delegate	
32.	Juma Mdachi	Soiti Village Government Delegate	
33.	Ajuae Chimais	Soiti Village Government Delegate	
34.	Mhalu M. Sanga	Soiti Village Government Delegate	
35.	Agnita M. Kutamika	Soiti Village Government Delegate	
36.	Shukuru Mapya	Soiti Village Government Delegate	
37.	Majuto Makas	Soiti Village Government Delegate	

6 Machenje Village

NO	PARTICIPANT NAME	DESIGNATION	MOBILE PHONE
1.	Michael M. Mateje	MACHENJE Village Chairman	
2.	Charles Mazengo	VEO	
3.	Harody M. Charau	Machenje Village Government Delegate	
4.	Leonard J. Lupulu	Tandika –A‖ Hamlet Village Chairman	
5.	Hamisi J. Lechipya	Tandika –B‖ Hamlet Village Chairman	
6.	Habely E. Mhulula	Machenje Village Government Delegate	
7.	Anna J. Lupulu	Machenje Village Government Delegate	
8.	Anthony Mhulula	Hamlet Chairman	
9.	Rameki A. Chilangazi	Chandama –A‖ Village Government chairman	
10.	Asha Juma	Machenje Village Government Delegate	
11.	Anastazia Lukas	Machenje Village Government Delegate	
12.	Richard Telemka	Machenje Village Government Delegate	
13.	Denis Malolela	Farmer	
14.	Yusuph A. Mwendi	Halmet Chairman	
15.	Michael N. Mwalimu	Machenje Village Government Delegate	
16.	Gasper B. Kabendera	GIS – Kongwa DC	0678794047
17.	James E. Nkini	Forestry & Bee Expert – Kongwa DC	0714305099 & 0757412089
18.	Barakati Ally	Water Engineer – TARURA	0672516119
19.	Dismas J. Kimaro	ECONOMISTS – From STAMICO	
20.	Mkama Manyama	ENVIRONMENTALIST	0784670648
21.	Dr. Kilemo	Environmental expert -FECE	0757370856
22.	Prof. Clavery Tungaraza	Lecturer - SUA	0713283353
23.	Dr. Bwire	Environmental Expert (VICE PRESIDENT OFFICE)	0713871921 OR 0752534632
24.	Gwalusajo Kapande	Agric Officer – Kongwa DC	0712742086
25.	Fabian Maingu	Accountant – Kongwa DC	0682711717
26.	Haruni L. Nghangala	Procurement Officer – Kongwa DC	0653826888
27.	Godfrey Mujairi	DEMO – Kongwa DC	0756520768
28.	Kefa Manase	Livestock Officer – Kongwa DC	0743744554
29.	Imani S. Matonya	Business Officer – Kongwa DC	0622495595

7 Mtanana ―B‖ Village

NO	PARTICIPANT NAME	DESIGNATION	MOBILE PHONE
1.	Gasper B. Kabendera	GIS – Kongwa DC	0678794047
2.	James E. Nkini	Forestry & Bee Expert – Kongwa DC	0714305099 & 0757412089
3.	Dismas J. Kimaro	ECONOMISTS – From STAMICO	
4.	Dr. Kilemo	Environmental expert – FECE	0757370856
5.	Prof. Tungaraza	Lecturer - SUA	0713283353
6.	Dr. Bwire	Environmental Expert (VICE PRESIDENT OFFICE)	0713871921 OR 0752534632
7.	Gwalusajo Kapande	Agric Officer – Kongwa DC	0712742086
8.	Fabian Maingu	Accountant – Kongwa DC	0682711717
9.	Haruni L. Nghangala	Procurement Officer – Kongwa DC	0653826888
10.	Mkama Manyama	ENVIRONMENTALIST	0784670648
11.	Godfrey Mujairi	DEMO – Kongwa DC	0756520768
12.	Barakati Ally	Water Engineer – TARURA	0672516119
13.	Kefa Manase	Livestock Officer – Kongwa DC	0743744554
14.	Imani S. Matonya	Business Officer – Kongwa DC	0622495595
15.	Mika M. Leguna	Village chairman	
16.	John M. Chiloleti	VEO	
17.	Dann S. Lusiji	Mtanana ―B‖ Village Government Delegate	
18.	Amon E. Chizuwa	Mtanana ―B‖ Village Government Delegate	
19.	Dickson M. Ihembe	T-RELI Hamlet chairman	
20.	Samson L. Daudi	T-RELI Government member	
21.	Gamalie C. Malyosi	T-RELI Government member	
22.	Edward Thomas	T-RELI Government member	
23.	Amos M. Mhigano	Hamlet chairman	
24.	Alex P. Mahinyila	Bwagamoyo Hamlet chairman	
25.	Pendo Mahinyila	Special Seat member	
26.	Juliana Mlahagwa	Special Seat member	
27.	Zakaria J. Mayeu	Hamlet chairman	

8 Chigwingwili Village

NO	PARTICIPANT NAME	DESIGNATION	MOBILE PHONE
1.	Kefa Manase	Livestock Officer – Kongwa DC	0743744554
2.	Haruni L. Nghangala	Procurement Officer – Kongwa DC	0653826888
3.	Prof. Tungaraza	Lecturer - SUA	0713283353
4.	Imani S. Matonya	Business Officer – Kongwa DC	0622495595
5.	Fabian Maingu	Accountant – Kongwa DC	0682711717
6.	Godfrey Mujairi	DEMO – Kongwa DC	0756520768
7.	Barakati Ally	Water Engineer – TARURA	0672516119
8.	Dr. Kilemo	Environmental expert –FECE	0757370856
9.	James E. Nkini	Forestry & Bee Expert – Kongwa DC	0714305099 & 0757412089
10.	Mkama Manyama	ENVIRONMENTALIST	0784670648
11.	Gwalusajo Kapande	Agric Officer – Kongwa DC	0712742086
12.	Gasper B. Kabendera	GIS – Kongwa DC	0678794047
13.	Dismas J. Kimaro	ECONOMISTS – From STAMICO	
14.	Dr. Bwire	Environmental Expert (VICE PRESIDENT OFFICE)	0713871921 OR 0752534632
15.	Stanley P. Beleko	Chingwingwili Village Chairman	
16.	Mary D. Kibena	VEO	
17.	Daniel S. Shonde	Clinical Officer	
18.	Jobu L. Chimombo	Chingwingwili village government member	
19.	Amos P. Mwaliko	Chingwingwili village government member	
20.	Kepha T. Lihedule	Chingwingwili hamlet chairman	
21.	Peter M. Sumi	Chiwasu Group secretary	
22.	Malima Mgaisa	Chingwingwili village government member	
23	Mashaka M. Lemnje	Chiwasu Group Chairman	

B. List of stakeholders participated in meetings and workshops of at Kongwa district council headquarters

NO	PARTICIPANT NAME	DESIGNATION	MOBILE PHONE
1.	Hon. Zubery White Mwanzalila	MAYOR/Council Chairman- Kongwa District Chairman	0784674202
2.	Dr. Omary A. Nkullo	District Executive Dirictor (DED) – Kongwa	0713399349
3.	Jackson G. Shija	DAICO – Kongwa DC	0754225245
4.	Gasper B. Kabendera	GIS – Kongwa DC	0678794047
5.	James E. Nkini	Forestry & Bee Expert – Kongwa DC	0714305099 & 0757412089
6.	Dismas J. Kimaro	ECONOMISTS – From STAMICO	0755194305
7.	Mkama Manyama	ENVIRONMENTALIST	0784670648
8.	Prof. Clavery Tungaraza	Lecturer – SUA	0713283353
9.	Emmanuel Msengi	Ranch Technician (NARCO Kongwa)	0718046869
10.	Barakati Ally	Water Engineer – TARURA	0672516119
11.	Raymond Lutega	Ranch Manager (NARCO Kongwa)	0677302298
12.	Emmanuel Msengi	Ranch Technician (NARCO Kongwa)	0718046869
13.	Dr. Kilemo	Enviironmental expert -FECE	0757370856
	Godfrey Mujairi	DEMO – Kongwa DC	0756520768
	Imani S. Matonya	Business Officer – Kongwa DC	0622495595
14.	Dr. Bwire	Environmental Expert (VICE PRESIDENT OFFICE)	0713871921 OR 0752534632
15.	Gwalusajo Kapande	Agric Officer – Kongwa DC	0712742086
16.	Fabian Maingu	Accountant – Kongwa DC	0682711717
17.	Haruni L. Nghangala	Procurement Officer – Kongwa DC	0653826888
18.	Kefa Manase	Livestock Officer – Kongwa DC	0743744554
19	Zainabu Bungwa	Natural Resources Officer –Ministry of Natural Resources and Tourism-	0714522939
20	Joseph Kihaule	Climate Change Specialist – VICE PRESIDENT OFFICE	0713275662
21	Prosper Makundi	Principal Agricultural Officer – Miistry of Agriculture	0715200145
22	Alex George	Water Resources Officer – Ministry of Water and irrigation	0787690366
23	Happiness Kalugaba	Environmental Officer - Dodoma Regional Secretariat	0764041639
24	Theophil Likangaga	Principal Health Officer - Ministry of Health, Community Development, Gender, Elderly and Children	
25	Jimmreeves Naftal Kawiche	Ministry of Finance and Planning	
26	Jumma Motoka	President Office Regional Government and Local Authorities	

27	Dr. Patrick M. Ndaki	University of Dar es Salaam	
28	Dr. Hussein Mohamed	Muhimbili University of Health and Allied Sciences	
29	Hellen Msemo	Tanzania Meteorological Agency	
30	Lucia Chacha	Principal Livestock Officer - Ministry of Agriculture Livestock and Fisheries	0752 157651
31	Magreth G. Sembuyagi	Disaster Management Officer -Prime Ministers‘ Office -Disaster Management Division (PMO-DMD)	0715-000369
32	Adelaida Tillya	Principal Environmental Officer-Vice President‘s Office	0767-265100
33	Blandina Cheche	Principal Environmental Management Officer - National Environment Management Council	0754 563773

C: List of stakeholders participated in meetings and workshops of at NARCO – Kongwa Offices

NO	PARTICIPANT NAME	DESIGNATION	MOBILE PHONE
1.	Raymond Lutega	Ranch Manager (NARCO Kongwa)	0677302298
2.	Emmanuel Msengi	Ranch Technician (NARCO Kongwa)	0718046869
3.	Mkama Manyama	ENVIRONMENTALIST	0784670648
4.	Prof. Clavery Tungaraza	Lecturer – SUA	0713283353
5.	Gasper B. Kabendera	GIS – Kongwa DC	0678794047
6.	James E. Nkini	Forestry & Bee Expert – Kongwa DC	0714305099 & 0757412089
7.	Dismas J. Kimaro	ECONOMISTS – from STAMICO	
8.	Dr. Kilemo	Environmental expert -FECE	0757370856
9.	Dr. Bwire	Environmental Expert (VICE PRESIDENT OFFICE)	0713871921 OR 0752534632
10.	Gwalusajo Kapande	Agriculture Officer – Kongwa DC	0712742086
11.	Fabian Maingu	Accountant – Kongwa DC	0682711717
12.	Haruni L. Nghangala	Procurement Officer – Kongwa DC	0653826888
13.	Imani S. Matonya	Business Officer – Kongwa DC	0622495595
14.	Kefa Manase	Livestock Officer – Kongwa DC	0743744554
15.	Godfrey Mujairi	DEMO – Kongwa DC	0756520768
16.	Barakati Ally	Water Engineer – TARURA	0672516119

D: List of participants to the national technical team for review the project concepts to ensure consistence with national development policies, plans and strategies and in line with adaptation fund policies

S/No	Name	Institution	Contacts
1.	Prof. Ntahondwi Nyandwi	IMS-UDSM	O789496202
2.	Dr. Narriman Jiddawi	State University of Zanzibar (SUZA)	0777423183
3.	Dr. Maseke Richard Mgabo	Institute of Rural Development and Planning (IRDP)	0754431482
4.	Mr. Juma Limbe	Vice President‘s Office (VPO)	0756960224
5.	Dr. Masinde K. Bwire	State Mining Cooperation (STAMICO)	0752534632
6.	Mr. Naftal Jimreeves	Ministry of Finance and Planning (MoFP)	0685652780
7.	Mr. Obadia Kibona	Ministry of Water and Irrigation (MoWI)	0756886234
8.	Ms. Shakwaanande Natai	Ministry of Agriculture and Food Security (MAFSC)	0754637892
9.	Mr. Theophil Likangaga	Ministry of Health, Community Development, Gender and Children (MoHCDGEC)	0782520231
10.	Dr. Vedast Makota	National Environment Management Council (NEMC)	0767265672
11.	Mr. Joseph Kombe	National Environment Management	

		Council (NEMC)	
13.	Mr. Fredrick Mulinda	National Environment Management Council (NEMC)	
14.	Ms. Upendo Mtunguja	National Environment Management Council (NEMC)	
15.	Ms. Ritha Said	National Environment Management Council (NEMC)	
16.	Ms. Roselyne Mayowa	National Environment Management Council (NEMC)	
17.	Mr. Jamal Baruti	National Environment Management Council (NEMC)	
18.	Mr. Julius Edward	National Environment Management Council (NEMC)	
19	Mr. Timothy Leiter	GIZ	0762865423
20	Mr. Samwel Sudi	GIZ	0787306862

Annex 4: Brief summary of results of design workshops by villagers at Matanana and Ugogoni wards in Kongwa district

a) During the villages' design workshops held between August 2018 and October 2019 the villagers had discussions about the changes witnessed over time in the proposed project sites. The changes discussed were related to Rainfall and other weather elements, vegetation, agricture and soil and livestock systems. (A). The discussions were led by elders and Moderated by District experts

Table A: Change over time regarding rainfall, vegetation, agriculture and soil, livestock in Ugogoni and Mtanana wards

	Rainfall and weather	**Vegetation**	**Agriculture and soil**	**Livestock**
Colonial time	There was a long rainfall period; heavy rainfall from December to May and light rainfall from May to August. Adequate boreholes and a network of water pipes. Modern weather stations were operational.	Mtanana and Ugogoni wards initially had thick forest cover. Trees were cut and collected along the contour lines to form windrows. Bob brought exotic tree species. There were also local tree species such as acacia. There was little soil	Was practiced with modern machinery Contour windrows. Main crop was groundnut, but also castor oil. Productivity was 20 bags per acre (Groundnuts)	Colonial settler named Bob brought cattle breeds from Kenya. Farmers (tenants) were given 5 cows each, if they give birth to male calves then the calves were given back to Bob and female calves were for the farmers. Bob built cattle dips, troughs and charco dams.

		erosion.		
Independence – 1961			Groundnut production continued for a short while and then it was abandoned all together.	Livestock production continued, but livestock services were discontinued.
Recent past to date	Drought and Flooding is more frequent.	The land is almost bare.	The machines are not there anymore. The contour bands are degrading or already disappeared. Soil erosion and soil fertility problems.	Livestock breeds left by Bob don't exist anymore.

b) Results of consultations with the communities of both Mtanana and Ugogoni wards. In the discussions challenges and possible solutions were classified through five (5) domains. The discussions were moderated by experts from Kongwa district.

Table B: perceived challenges and possible solutions as thought by the community representatives engaged during the design phase of the project

Challenges domain	Challenges and perceived solution
Water	Water scarcity and poor water infrastructure leading to inadequate water supply ***Solution:*** *Improve water availability through rehabilitation of water facilities, drilling additional boreholes, dam construction and water harvesting at household level.* Unreliable and erratic rainfall ***Solution:*** *Integrated approach to conserve the environment by planting trees, water and soil management through contour bands, terracing, live fencing, ripper tillage, intercropping and tie ridging.* Flooding in *mbuga* area ***Solution:*** *Improve drainage by construction of culverts and bridge*

	to allow water to pass through. Also construction of water reservoirs like dams, plant trees upstream to let water penetrate in the soil. Construction of contour bands and other water harvesting technologies. Sharing of water sources between human and animals ***Solution:*** *Construction of water troughs for animals to improve sanitation*
Soil related challenges	Depleted soil fertility ***Solution:*** *Improve soil fertility by adding organic manure, intercropping and water harvesting techniques, tie ridges, tilling (deep tillage)* Soil erosion ***Solution:*** *Soil management techniques eg. Contour bands, terracing, ridging and tie ridging, zero tillage. Mulching and planting soil cover crops like cow peas. Planting trees* Insufficient land use plans ***Solution:*** *Adhere to agreed village land use plans. Enhance use of agro inputs to improve productivity.*
Agricultural challenges	Crop failures due to prolonged dry spells and drought periods and poor farming methods ***Solution:*** *irrigation technologies and Improve knowledge on farming systems* Low productivity ***Solution:*** *Soil and water management at farm level be improved through water harvesting techniques, terracing, contour bands and tie ridging, use of organic and inorganic fertilizers and use of improved seeds, plant climate smart crops like sorghum, sunflower, simsim, pigeon peas, cassava, sweet potatoes, use of conservation tillage, rotational agriculture, cashew nuts.*
Livestock challenges	Drought and Inadequate pasture due to overstocking ***Solution:*** *Enhance range management such as pasture improvement, adhere to carrying capacity, encourage cattle keepers*

	to adopt zero grazing Pests and Diseases ***Solution:*** *Improve livestock management systems, adhere to vaccination regimes, improve use of cattle dips and improve feeding.* Poor genetic potential of the local breeds ***Solution:*** *Improve the existing local breeds by cross breeding with improved breeds.* Uncontrolled livestock movement ***Solution:*** *Adhere to village land use plans, destocking to comply with carrying capacity.* Inadequate water especially during the dry season ***Solution:*** *Improve water availability for livestock with charco dams construction* Unreliable markets for livestock and livestock products ***Solution:*** *Organize farmers into producer organizations and link them to lucrative markets*
Environment and forest related challenges	Reduced land cover, bare land and Deforestation ***Solution:*** *Planting trees (Multipurpose trees), provision of knowledge on environmental conservation, strengthening bylaws regarding forest areas* Dependence on one source of fuel (firewoods) ***Solution:*** *Use of alternative source of fuel like gas and improved stoves*

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Annex 5: Additional Analysis of other funding sources to avoid duplications

Initiative	DP/Agency	Objectives	Implementer	Project
Smallholders' Utilisation of Smart Technologies in Agricultural Industries and natural resources management	Norway	Up scaling agriculture sectors for smallholder farmers	Ministry of Agriculture (MoA)	Manyara regions
SRMP	IFAD, Irish Aid (IA), International Land Coalition (ILC), ILRI and Tanzania Government.	Promoting traditional livestock keepers and farmers to acquire, own, and maintain sustainable land management.	Ministry of Livestock and Fisheries; National Land Use Planning Commission (NLUPC); International Livestock Research Institute (ILRI); Community Organisations dealing with Livestock; and LGAs	Districts Kiteto, K Mvomer rural
SWIOFish	WORLD BANK	To Improve Management Effectiveness of Selected Priority Fisheries at Regional, National and Community Level	The Ministry of Livestock and Fisheries, FETA, TAFIRI, MPRU and LGAs	17 LGA Ocean
Projection of Climate Change effects on Lake Tanganyika	DANIDA	To assess the impact of climate change on Lake Tanganyika	TAFIRI	Lake Ta
Ocean Acidification Observation in Tanzanian Coastal Waters	WIOMSA	Research based on Ocean Acidification Monitoring Programme	TAFIRI	Indian O
Inclusive Green Growth of the Smallholder Agriculture Sector in SAGCOT	Norway	a) To increase access to inputs and improved agronomic practices b) To improve post-harvest handling, c) To improve access to markets, d) To improve the policy environment and advocacy for climate smart agriculture	Ministry of Agriculture (MoA)	SAGCO
GCCA Programme: Integrated Approaches for Climate Change Adaptation in the East Usambara Mountains	EU	To support 8 communities living near high biodiversity forests in the East Usambara Mountains to increase and diversify incomes, strengthen resilience and reduce vulnerability to climate change-related impacts.	ONGAWA and TFCG	Tanga R

GCCA Programme: Scalable Resilience: Outspreading Islands of Adaptation	EU	To increase the adaptive capacity of 18 at-risk Tanzanian communities while pioneering replicable solutions to climate change vulnerability.	Community Forest Pemba	Pemba I
GCCA Programme: Igunga Eco-Village	EU	To increase the resilience of 9 local farmer communities in Igunga by increasing resilience to the adverse effects of climate change	Heifer International	Tabora
GCCA Programme: Eco-village Adaptation to Climate Change in Central Tanzania (ECO-ACT)	EU	To roll-out the best practices from Chololo Eco-Village and introduce new innovations based on vulnerability assessment; Strengthen the capacity of local government institutions in two districts on climate change adaptation strategies; Establish an effective knowledge management system for learning and sharing.	Eco ACT (IRDP)	Dodoma
GCCA Programme: ECO-BOMA: A climate-resilient model for Maasai Steppe pastoralists	EU	a) Access to ecosystem services protected and improved. b) Economic asset of pastoralist communities developed. c) Local government capacity to cope with climate change increased. d) Knowledge about climate-related vulnerabilities and impacts and climate change adaptation solutions increased	ECO-BOMA	Arusha
Urban Resilience	DFID	Improving the urban resilience		
Scale up for water security and Agriculture resilience	DFID	Improving water security and agriculture resilience	Ministry of Water	National and LG
Assisting Institutions and Markets for Resilience	DFID	Strengthening how institutions and markets deliver climate resilience and low carbon growth		National
Developing Core Capacity to Address Adaptation to Climate Change in Tanzania in productive coastal zones (GEF Project)	Least Developed Countries Fund (LDCF)	Enhancing Adaptation to Climate Change in Tanzania in productive coastal zones	VPO-DoE	Pangani, Bagamo

Concrete Adaptation Measures to Reduce Vulnerability of Livelihoods and Economy of Coastal Communities of Tanzania	Adaptation Fund (AF)	Reducing Vulnerability of Livelihoods and Economy of Coastal Communities	VPO-DoE	Coastal
Integrated Planning to Implement CBD and Resilience to Climate Change	Germany	Improved application of legal tools for land-use planning and participation in decision-making towards implementation of the CBD convention	GIZ	Katavi-R landscap near Su
Climate-sensitive Water Resources Management	Germany	A soft and research based climate change adaptation aimed for a) Improved (climate-sensitive) Water Resources Data and Information b) Inter-sectoral cooperation c) Climate change adaptation in Water Resources Management d) Organisational and Leadership Development	GIZ	National and Lak up scalin basins th level app
Ecosystem-Based Adaptation for Rural Resilience in Tanzania	GEF LDCF	To increase resilience to climate change in rural communities of Tanzania by strengthening ecosystem resilience and diversifying livelihoods	VPO	Kishapu Mvomer andKask (Unguja
Reversing Land Degradation Trends and Increasing Food Security in Degraded Ecosystems of Semi-arid areas of Tanzania	International Fund for Agricultural Development – IFAD	A climate change project promoting adaptation through reversing Land Degradation Trends and Increasing Food Security in Degraded Ecosystems of Semi-arid areas of Tanzania	Ministry of Agriculture	Nzega, (Mkalan Pemba (
Capacity enhancement of policy makers and policy support institutions for climate information generation, management and integration into development plans and programmes	African Development Bank (AfDB)		VPO	Same an districts
Small Grants Programme - Community Based Adaptation	UNDP	Adaptation	Bahi and Mnayoni	

Concrete Adaptation Measures to Reduce Vulnerability of Livelihoods and Economy of Coastal Communities of Tanzania (Adaptation Fund project)	Adaptation Fund (UNEP)	Reducing Vulnerability of Livelihoods and Economy of Coastal Communities	Coastal zone district	
Electrification of North Western Tanzania - Rural electrification component from Rusumo Hydropower source	EU-Africa Infrastructure Trust Fund	Access for rural households and businesses to sustainable, affordable and renewable energy services	North-West Tanzania	
Enhancing comprehensive climate change resilience in Zanzibar	UNDP	Capacity building	DoE Zanzibar	
Enhancing national capacity for mainstreaming climate resilience in Zanzibar	AfDB	Enhancing capacity to adapt to the impacts of climate change in Zanzibar	DoE Zanzibar	
DCFP	UK Aid	Climate Resilience for Cooperatives	ZACCA, Zanzibar	
Simiyu Climate Resilience Project	GCF	To increase the climate resilience of rural and urban households, particularly small scale farmers and women living in the Simiyu Region and to improve policies and regulation for cross-sectoral action towards climate adaptation	Ministry of Water	Simiyu r Water, A Health s
Mainstreaming Environment& Climate Change Adaptation in the Implementation of National Policies	UNDP and One UN Fund	Policy based project to ensure that environment and climate change are mainstreamed in the most economically important and vulnerable sectors of the economy in Tanzania leading to reduced poverty levels while maintaining environmental integrity	VPO	Tanzani Zanziba
Strengthening Climate Information and Early Warning Systems (SCIEWS)	GEF through UNDP	To strengthen the weather, climate and hydrological monitoring capabilities, early warning systems and available information for responding to extreme weather and planning adaptation to climate change in Tanzania.	PMO –Disaster Management Office	Lindi, a Mbeya, Songea, Iringa re and Zan
Strengthening Climate Change Governance in	UNDP and One Fund	To support the Zanzibar Vice presidents Office(ZVPO) in strengthening		Zanziba

Zanzibar		climate change governance for Zanzibar through capacity building and mainstreaming of adaptation actions in development plans		
Supporting the implementation of integrated ecosystem management approach for landscape restoration and biodiversity conservation in Tanzania	GEF through United Nations Environment Programme	To review and harmonize policies and legal and institutional framework for sustainable landscape restoration initiatives	VPO/NEMC	Great R Rukwa a River ba
Securing watershed services through sustainable land use management in the Ruvu and Zigi catchments (Eastern Arc Region)	GEF/UNDP	Build institutional capacity and strengthening coordination among water basin authorities and relevant stakeholders in implementing practical sustainable land use management	Ministry of Water and Irrigation	Eastern (Pangan Ruvu Ba Morogor
Decentralised Climate Finance Project (DCFP)	IIED	Pilot climate financing in selected district of Manyara region	TAMISEMI	Longido Ngorong Monduli
Building Capacity for Resilient Food Security Project in Tanzania	UNEP	Support URT in strengthening knowledge and Systems to target resilient food security in line with existing government agriculture policies.		Morogor Dodoma Tabora (Iringa (K Lindi (R Zanziba Kusini, Unguja, Wete)

Annex 6: Terms of reference for project manager for ―enhancing climate change adaptation for agro-pastoral communities in Kongwa District**"**

1. **Introduction**

Kongwa district Council in partnership with the Foundation for Energy, Climate Change and Environment (FECE) has received funds from the Adaptation Fund through the National Environment Management Council (NEMC) to implement the project titled ―Enhancing Climate Change Adaptation for Agro-Pastoral Communities in Kongwa District‖. Kongwa District Council seeks to use part of the funds to payments under the contract for a Project Manager.

Kongwa District Council and FECE through NEMC are implementing **"Enhancing Climate Change Adaptation for Agro-Pastoral Communities in Kongwa District" (ECCA - APC in Kongwa)** project funded by the Adaptation Fund (AF). This project will run for three (3) years. The project seeks to reduce the vulnerability of rural agro-pastoral communities in Kongwa to climate change, focusing on four key issues—water scarcity, agriculture, ecosystem restoration and alternative livelihoods. Climate change in Kongwa– has resulted 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 shrunk in number and variety, such that what was termed as good seasons are truncated or disappeared. Nowadays, people's experience in most villages in district is that seasons are progressively being replaced by a more simplified pattern of events whose characteristics are predominantly hot (hotter) and dry or hot (hotter) and wet. Rains are more erratic, coming at unexpected times in and out of 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. Within recognizable seasons, unusual and ―unseasonable‖ events are occurring more frequently, including heavy rains in dry seasons, dry spells in rainy seasons, 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 production, led to the displacement of communities, loss of life and assets, and caused an overall reduction of community resilience. Seasonality influences farmers' decisions about when to cultivate and sow and harvest. It ultimately contributes to the success or failure of their crops and livestock.

The project will increase climate resilience of rural communities and will therefore reduce the impacts of climate change in agro-pastoral communities of Kongwa District particularly in Mtanana and Ugogoni wards. This will be achieved through implementation of integrated concrete adaptation measures covering the following sectors: water, agriculture, livestock and ecosystem management. In this way the project will adopt a comprehensive integrated approach in order to tacle the multiple effects of climate change as well as to enhance the population's adaptive capacity through the following four components:

v) Enhance climate resilient rural water supply system in vulnerable agro-pastoral communities at Mtanana and Ugogoni Wards;
vi) Support transformation of exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods; and
vii) Improved ecological functions to sustain climate sensitive livelihoods in Kongwa District.
viii) Strengthen local institutions capacity for effective adaptation strategies and reduce risks associated with climate-induced socio-economic failures in Kongwa district.

2.0 Objectives of the Assignment

The objective of the Project Manager will be to ensure a well-coordinated and effectively implemented project within the Tanzanian context but taking into account AF's financial management rules. The PM will be responsible for the overall management of the project, including the mobilization of all project inputs and the supervision of project staff, consultants and sub-contractors. The PM will report to the District Executive Director (DED) for day to day project activities and for all of the project's substantive and administrative issues. From the strategic point of view of the project, the PM will report on a periodic basis to the Project Steering Committee. The PM will perform a liaison role with relevant district technical departments, NEMC, implementing partners (activity/sub-project contractors), and other stakeholders. Additional details are in the approved Project Document

3.0 Duties and Responsibilities

The Project Manager (PM) will lead the project team and provide overall operational management for the successful execution and implementation of the project. The PM has the daily responsibility for management, coordination and supervision of the implementation of the project and delivery of the results in accordance with the full project proposal and agreed work plans. The PM will be responsible for financial management and disbursements. The PM 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 outputs and within the specified constraints of time and cost as outlined in the project document.
- Report to Kongwa District/FECE 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 nongovernment 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, if any, and recommendations on necessary improvements.
- Inform the Kongwa District Authorities/FECE and PSC, without delay, of any issue or risk which might jeopardise the success of the project.
- Liaise and coordinate with NEMC on a regular basis.

4.0 Qualifications and Experience

- Master's degree in environment, natural resources 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 resources management.
- Experience in the public participation development process associated with environmental and sustainable development an asset.
- Demonstrated working experience with Adaptation Fund (AF) 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. Creative and independent report writing skills and ability to structure persuasive arguments in a diplomatic way is highly desirable;
iii. Excellent interpersonal skills;
iv. Strong IT skills and should be computer literate in MS Office and project management software;
v. Strong team leadership skills;
vi. Good moderating skills (in workshops, facilitation and policy making skills), presentation (in high level meeting), communication (with flair and enthusiasm), in project and time management, advisory skills and experience in empirical work
vii. Ability to build consensus, collaboration, and maintain effective working relationships with internal and external stakeholders, at all levels including in an international and cross-cultural context.

Annex 7: Environmental and Social Management Plan (ESMP)

FOUNDATION FOR ENERGY, CLIMATE AND ENVIRONMENT (FECE) AND KONGWA DISTRICT COUNCIL

Enhancing Climate Change Adaptation for Agro-Pastoral Communities in Kongwa District

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FOR ENHANCING CLIMATE CHANGE ADAPTATION FOR AGRO-PASTORAL COMMUNITIES IN KONGWA DISTRICT

December 2019

1. INTRODUCTION

1. 1 Project Background

The proposed project seeks to pilot practical and cost effective and community rooted solution to improve livelihood of poor people, restore and habilitate ecological systems, support agriculture and livestock production in Kongwa district. The objective is to enhance climate resilience of more than 320,000 people living in the area and improve livelihood actions towards climate adaptation and transformed environmental actions. Specifically, the proposed project will be addressing the following objectives;

i) To enhance climate resilient rural water supply system in vulnerable agro-pastoral communities at Mtanana and Ugogoni wards;

ii) To support transformation of exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods;

iii) To improve ecological functions to sustain climate sensitive livelihoods in Kongwa District; and

iv) To strengthen capacities of institutions, extension services and trainers to reduce risks associated with climate- induced livelihood failures in Kongwa district

The project has the following four (4) components:

i) Enhance climate resilient rural water supply system in vulnerable agro-pastoral communities at Mtanana and Ugogoni Wards;
ii) Support transformation of exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods; and
iii) Improved ecological functions to sustain climate sensitive livelihoods in Kongwa District.
iv) Capacities of institutions, extension services and trainers strengthened to reduce risks associated with climate- induced livelihood failures in Kongwa district

The following are expected outcome of the project:

a) Enhanced climate resilient rural water supply system in vulnerable agro-pastoral communities of Mtanana and Ugogoni wards, Kongwa district;

b) Transformed exploitive agro-pastoral practices to diversified climate smart and sustainable livelihoods in selected wards of Kongwa district;

c) Improved ecological services and functions to sustain climate sensitive rural livelihoods in Kongwa district; and

d) Capacities of institutions, extension services and trainers strengthened to reduce risks associated with climate- induced livelihood failures in Kongwa district

Project Coordination and Implementation Arrangements

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 Group/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;
iii) Oversight of project implementations and reporting on budget performance;
iv) Quality assurance and accountability for outputs and deliverables during project development, implementation and on completion phases;
v) Receipt, management and disbursement of the AF's funds in accordance with the financial standards of the AF;
vi) 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
vii) General administration and support costs including legal services, procurement and supply management, IT and human resources management

The Executing Entities: Foundation for Energy, Climate Change and Environment (FECE) jointly with Kongwa 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 Kongwa District Council. The Secretariat of the Committee will be the PMU through the District Executive Director and the Executive Director of FECE. The members of Project Steering Committee will be District Executive Director of Kongwa District Council, Chairperson of the Kongwa District Council, one representative from each of the following sector ministries: the ministry responsible for rural water supply, the ministry responsible for agriculture, the ministry responsible for livestock, the ministry responsible for Climate Change, the ministry responsible for forestry and natural resources. Other members will an officer from National Environment Management Council (NEMC), two members from FECE, One member from the Tanzania meteorological Agency, One member of Tanzania Forest Services, one member from NARCO Kongwa.

Project Beneficiaries

The targeted project beneficiaries include mainly the local communities. Such communities include farmers, fisher folks, schools, urban residents, forest adjacent dwellers, and any other rural communities who are vulnerable to climate change effects in Bunda district council. The vulnerable groups including women, 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/institution.

2. COMPONENTS OF THE ESMP FOR THE ENHANCING CLIMATE CHANGE ADAPTATION FOR AGRO-PASTORAL COMMUNITIES IN KONGWA DISTRICT

The ESMP for the the proposedroject includes the following components:

(a) project 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
(h) Cost estimates.

A template of the Environment and Social Management Plan to guide implementers is provided as ***Table 6***

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. There are number of policies, instruments and laws that will guide implementation of this ESMP. Generally, is the National Environmental Policy (NEP) of 1997, the national Environmental management Act 2004 and the Environmental Impacts Assessment (EIA) and Environmental Audit (EA) Regulations, 2005 will guide implementation of the ESMP and the project in line with the AF‘s Environmental and social policy. Table below provides key policies, legislation and strategies which 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 1,2 and 3; and 4 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 1 and 2
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. Is 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 Strategy 2012	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 adaptation issues
	Guided by the Paris Agreement Work Programme adopted at COP_{24} 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
National Environmental Management Act Cap 191 of 2004 (EMA, 2004)	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 climate resilient in Tanzania
National Biodiversity Strategy and Action Plan (NBSAP) 2015-2020	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. 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) *Address the*

	underlying causes of biodiversity loss by mainstreaming biodiversity across government and society; b) Reduce the direct pressures on biodiversity and promote sustainable use c); To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity; d) Enhance the benefits to all from biodiversity and ecosystem services; and e) Enhance implementation through participatory planning, knowledge management and capacity building. This project will promote ecosystems and biodiversity conservations through actions under component 2 and 3
Water Resource Management Act, 2009	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 1, 2 and 3
The Supply and Sanitation Act, 2009	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.
Employment and Labor Relation Act, 2004	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 and 3 will involve employment of communities hence this Act will be adhered and obeyed by the Project Management Unit
Occupational Health and Safety Act, 2003	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 Obey all relevant provisions of this Act
The National Land Act Cap 113, 2002	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.
The HIV and AIDs (Prevention and Control) Act of 2008	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
Workers Compensation Act No.20, 2008	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.
EIA and Audit Regulations, 2005	Made Under Sections 82(1) and 230(2) (h) and (q) of EMA Cap.191 0f 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 Hazardous Waste 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 quality standards 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
Nationally Determined Contributions (NDCs) 2020-2025 and the	NDCs 2020-2025 and the INDCs 2015 of United of Republic of Tanzania, responds to decision of the Conference of the Parties to the UNFCCC, and builds on the National Climate Change Strategy (2012),

Intended Nationally Determined Contributions (INDCs) 2015	the Zanzibar Climate Change Strategy (2014) and other national climate change development processes. The strategies aim to, among others, enhance adaptive capacity to climate change and promote adaptation action, thereby supporting long term climate resilience of social systems and ecosystems; and enhance participation in climate change mitigation activities to contribute to international efforts while ensuring sustainable development. The NDCs provide a set of intervention on adaptation and mitigation, which is expected to build country resilience to the impacts of climate change and contribute to the global effort of reducing GHG emission. The proposed contributes the top most five sectors among the prioritized seven sectors identified in the NDCs 2020-2025 and the INDCs -2015 of the United Republic of Tanzania for adaptation Actions. It also contribute to the mitigation contributions of the NDCs and the INDCs through the ecosystem and forest management actions identified under component 2 and 3.

4. 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 12 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 Adaptation guidelines and Principles are elaborated in detail in ***Table 3.***

Table 3: Principles to Guide Screening and Management of Environmental and Social Impacts of planned activities for the proposed activities

Principle 1: Compliance with the Law	Projects/programmes supported by the Fund shall be in compliance with all applicable domestic and international law. In this regards, the Implementing Entity (IE) will ensure that the project/programme comply with applicable domestic and international law as described at section 2 above. In support of the Proposal, the IE will provide, when relevant, a description of the legal and regulatory framework for any project activity that may require prior permission (such as planning permission, environmental permits, construction permits, permits for water extraction, emissions, and use or production or storage of harmful substances). For each such a requirement, the IE will describe the current status, any steps already taken, and the plan to achieve compliance with relevant domestic and international laws.
Principle 2: Access and Equity	Projects/programmes supported by the Fund shall provide fair and equitable access to benefits in a manner that is inclusive and does not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights. Projects/programmes should not exacerbate existing inequities, particularly with respect to marginalized or vulnerable groups. The process of allocating access to project/programme benefits should be fair and impartial. A fair process treats people equally without favouritism or discrimination, and an impartial process treats all rivals or disputants equally. Furthermore, the project/programme will be designed and implemented in a way that will not impede access of any group to the essential services and rights mentioned in the Principle. Possible

	elements that may be considered The IE can demonstrate compliance of the project/programme by describing the process of allocating and distributing project/programme benefits, and by showing how this process ensures fair and impartial access to benefits. It may also state clearly that there will be neither discrimination nor favouritism in accessing project/programme benefits. The IE may demonstrate that the project/programme does not impede access of any group to the essential services and rights indicted in the principle. ESP Guidance document 7 In addition, the project/programme can use a risk analysis to identify and assess the risk of impeding access to essential rights and services, and of exacerbating existing inequalities. The IE may conduct stakeholder mapping in order to identify the potential beneficiaries, rivals, disputants, marginalized, or vulnerable people.
Principle 3: Marginalized and Vulnerable Groups.	Projects/programmes supported by the Fund shall avoid imposing any disproportionate adverse impacts on marginalized and vulnerable groups including children, women and girls, the elderly, indigenous people, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS. In screening any proposed project/programme, the implementing entities shall assess and consider particular impacts on marginalized and vulnerable groups. Impacts on marginalized and vulnerable groups must be considered so that such groups do not experience adverse impacts from the project/programme that are disproportionate to those experienced by others. Marginalized groups are groups of people who are excluded from the normal economic and social fabric of societies, thus lacking access to basic essential services and facilities. Furthermore, they lack the means to improve themselves (motivation, social capital, skills and knowledge) and have low resilience. Vulnerable groups are groups of people unable or with diminished capacity to anticipate, cope with, resist, and recover from the impacts of (external) pressures, facing a higher risk of poverty and social exclusion than the general population. Vulnerability can stem from belonging or being perceived to belong to a certain group or institution, and is a relative and dynamic concept. Using accepted methods based on disaggregated data, where possible, the IE should identify and quantify the groups mentioned in the principle (children, women and girls, the elderly, indigenous people, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS) as well as any groups identified additionally such as seasonal migrants or illegal aliens. If any are present, the IE should: ● Describe the characteristics of the marginalized or vulnerable groups. • Identify adverse impacts that each marginalized and vulnerable group are likely to experience from the project/programme, taking into consideration the specific needs, limitations, constraints and requirements of each group. For

	example, a small detour or the construction of a minor obstacle for most able-bodied people could be an insurmountable obstacle to wheelchair users or persons with certain disabilities. These are examples of disproportionate adverse impacts. ● Describe how the impacts are not disproportionate compared to no marginalized and non-vulnerable groups, or how they can be mitigated or prevented so as not to be disproportionate. These mitigation measures could be design or operational features of infrastructure, or access guarantees to ESP Guidance document 8 project benefits for those without complete administrative files such as refugees and internally displaced persons or tribal groups. ● Describe monitoring that may be needed during project/programme implementation for the possible occurrence of disproportionate adverse impacts on marginalized and vulnerable groups, as situations may change over time (e.g. the arrival of refugees or internally displaced persons).
Principle 4: Human Rights	Projects/programmes supported by the Fund shall respect and where applicable promote international human rights. The Universal Declaration of Human Rights (UDHR) of 10 December 1948 provides a common standard of achievements for all peoples and all nations by setting out fundamental human rights to be universally protected. A number of human rights bodies were created based on the UN Charter, including the Human Rights Council, and under the international human rights treaties to monitor their implementation. The Office of the High Commissioner for Human Rights (OHCHR) supports the different human rights monitoring mechanisms in the United Nations system.8 Promotion of human rights in the project/programme will be achieved by creating awareness with all involved in the project/programme operations, including design, execution, monitoring, and evaluation, about the Universal Declaration of Human Rights as an overarching principle in the implementation of the project/programme. The text of the UDHR is freely available in 438 languages.9 Possible elements that may be considered Information that the IE may consider when assessing the project/programme potential risks with regard to this principle: • When the host country or countries of the project/programme are cited in any Human Rights Council Special Procedures, be they thematic10 or country11 mandates, the IE may provide an overview of the relevant human rights issues that are identified in the Special Procedures and describe how the project/programme will address any such relevant human rights issues. • Human rights issues should be an explicit part of consultations with stakeholders during the identification and/or

	formulation of the project/programme. The findings on human rights issues of the consultations should then be included in the project/programme document, and details of the consultations added as an annex. 8 The Human Rights Council uses so-called Special Procedures, which are mechanisms to address either specific country situations or thematic issues in all parts of the world. Special Procedures' mandates usually call on mandate-holders to examine, monitor, advise and publicly report on human rights situations in specific countries or territories, known as country mandates, or on major phenomena of human rights violations worldwide, known as thematic mandates. There are 30 thematic mandates and 8 country mandates. All report to the Human Rights Council on their findings and recommendations. 9 http://www.ohchr.org/EN/UDHR/Pages/SearchByLang.aspx 10 http://www.ohchr.org/EN/HRBodies/SP/Pages/Themes.aspx 11 http://www.ohchr.org/EN/HRBodies/SP/Pages/Countries.aspx ESP Guidance document 9 • Even if the country or countries where the project/programme will be implemented is not a Party to any of the nine core international human rights treaties, 12 compliance with UDHR, at a minimum, will be monitored.
Principle 5: Gender Equality and Women's Empowerment.	Projects/programmes supported by the Fund shall be designed and implemented in such a way that both women and men 1) have equal opportunities to participate as per the Fund gender policy; 2) receive comparable social and economic benefits; and 3) do not suffer disproportionate adverse effects during the development process. In many societies, different roles are allocated to men and women based on cultural, traditional, religious, or other grounds. Gender equality refers to the equal rights, responsibilities, opportunities and access of women and men and boys and girls as well as the equal consideration of the respective interests, needs, and priorities. To ensure gender equality, measures often need to be taken to compensate for or reduce disadvantages that prevent women and men from otherwise operating on an equitable basis. Gender equality and women‘s empowerment must be applied in the project/programme design and its implementation regardless of the legal and regulatory framework in which the project/programme is set. Principle 5 is guided by Article 2 of the United Nations Framework Convention on Climate Change (UNFCCC), which refers to ‒anthropogenic interaction‖ — therefore interaction of women and men — within the climate system. The UNFCCC has adopted a number of decisions on gender since 2001. The Paris Agreement acknowledged that Parties in their climate actions should be guided by respect for human rights, gender equality and the empowerment of women in its Preamble while stressing the importance of following ‒a country-driven, gender-responsive, participatory and fully transparent approach‖ for adaptation action in Article 7(5). Principle 5 is intended to be consistent with other international conventions, in particular with the Universal Declaration of

	Human Rights (UDHR), the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), the International Labour Organization (ILO) core conventions, the Millennium Development Goals (MDGs) and follow-up Sustainable Development Goals (SDGs), and the 2030 Agenda for Sustainable Development. 13 The design and implementation of the project/programme should ensure that it: 1) Does not include elements that are known to exclude or hamper a gender group based on legal, regulatory, or customary grounds 2) Does not maintain or exacerbate gender inequality or the consequences of gender inequality. For example, unequal access to education based on gender may result in lower literacy rates among the disadvantaged group. This lack of literacy may, as a secondary effect of gender inequality, limit access to benefits or increase adverse effects of the project for that particular group. Possible elements that may be considered Information that may be considered by the IE when assessing the potential risks with regard to this principle: 12 http://www.ohchr.org/EN/ProfessionalInterest/Pages/CoreInstruments.aspx 13 https://sustainabledevelopment.un.org/post2015/transformingourworld ESP Guidance document 10 • An analysis of the legal and regulatory context with respect to gender equality and women's empowerment in which the project/programme will take place will identify any obstacles to compliance. In addition, analysis of the cultural, traditional, religious, or any other grounds that might result in differential allocation of benefits between men and women, or of the disproportionate adverse impacts from the project/programme may be appropriate. • Actively pursue equal participation in project/programme activities and stakeholder consultation. Ensure that all positions in the project/programme are effectively equally accessible to men and women, and that women are encouraged to apply and take up positions. • The project/programme design and implementation arrangements will ensure equal access to benefits and that there are no disproportionate adverse effects. This may be achieved by any appropriate means, including, e.g.: ▪ Conducting a gender analysis of the sector the project/programme will support; ▪ Describing the current situation of the allocation of roles and responsibilities in the project/programme sector or area; ▪ Showing how the project/programme will pro-actively take measures to promote gender equality e.g. by organising separate working groups or conducting separate stakeholder consultations at times and locations conducive to soliciting opinions of all.
Principle 6: Core Labour Rights.	Projects/programmes supported by the Fund shall meet the core labour standards as identified by the International Labour Organization. The ILO core labour standards are stated in the 1998 ILO Declaration of Fundamental Principles and Rights at Work. 14 The Declaration covers four fundamental principles and rights, which are further developed in eight fundamental rights

	conventions: 15 ▪ Freedom of association and the effective recognition of the right to collective bargaining (conventions ILO 87 and ILO 98); ▪ Elimination of all forms of forced or compulsory labour (conventions ILO 29 and ILO 105); ▪ Elimination of worst forms of child labour (conventions ILO 138 and ILO 182); 16 ▪ Elimination of discrimination in respect of employment and occupation (conventions ILO 100 and ILO 111). Regardless of whether the countries where Fund‘s projects/programmes are implemented have ratified the conventions, in the context of the Fund‘s 14 More information on the core labour rights can be found at http://www.ilo.org/declaration/lang--en/index.htm 15 The full text of the eight conventions (ILO Conventions 29, 87, 98, 100, 105, 111, 138 and 182) is available from the ILO information system on international labour standards http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:1:0 16 ILO 182 includes not employing children in forced, economically exploitive or hazardous work; or in a way that interferes with educations or is harmful to health or physical, mental, spiritual, moral, or social development. ESP Guidance document 11 project/programme operations the IE will respect, promote, and realize in good faith the principles mentioned above and ensure that they are respected and realized in good faith by the EE and other contractors. Where applicable, the project/programme will incorporate the ILO core labour standards in the design and implementation of the project/programme and create awareness with all involved on how these standards apply. The IE will summarize in the Proposal how they are ensuring that the EE is implementing the ILO core labour standards. Possible elements that may be considered Information the IE may consider when assessing the project/programme potential risks with regard to this principle: • If the project/programme host country has ratified the eight ILO core conventions, the risks involved may be smaller. National compliance makes it more likely that a project/programme can and will achieve compliance. • The latest ILO assessments of application of the standards in the project/programme country is available in the reports of the two ILO bodies, The Committee of Experts on the Application of Conventions and Recommendations and The International Labour Conference‘s Tripartite Committee on the Application of Conventions and Recommendations. Other assessments by reputable sources (e.g. the World Bank or regional development banks) may also be used. • Past/present/planned ILO assistance to meet the standards through social dialogue and technical assistance. • Information on any ILO Special procedures relevant to the Member nation or to the project/programme, including details on the triggering representation or complaints. • Demonstration on how the ILO core labour standards will be incorporated in the design and the implementation of the project/programme, as appropriate. • In the case of problematic assessments by ILO of compliance or in the case of Special procedures at the national level,

	the IE will provide information on how these issues will be addressed, if they are relevant to the project/programme. Reference may be made to a monitoring process during project/programme implementation for future possible problematic ILO assessments or new Special procedures.
Principle 7: Indigenous Peoples	**.** The Fund shall not support projects/programmes that are inconsistent with the rights and responsibilities set forth in the UN Declaration on the Rights of Indigenous Peoples and other applicable international instruments relating to indigenous peoples. The 2007 UN Declaration on the Rights of Indigenous Peoples (UNDRIP) has its legal foundation in ILO Convention 169 concerning Indigenous and Tribal Peoples in Independent Countries. As part of the system of thematic Special Procedures, the Human Rights Council has appointed a Special Rapporteur on the rights of indigenous ESP Guidance document 12 peoples. The Special Rapporteur promotes good practices, reports on the overall human rights situations of indigenous peoples in selected countries, addresses specific cases of alleged violations of the rights of indigenous peoples, and conducts or contributes to thematic studies. ‒Other applicable international instruments relating to indigenous peoples‖ means any treaties, conventions, protocols, or other international instruments related to indigenous peoples to which the project/programme country is a party and that are currently in force. These include but are not limited to the following United Nations (UN) conventions: 17 ▪ Convention against Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment; ▪ Convention on the Elimination of All Forms of Discrimination against Women; ▪ Convention on the Rights of the Child; ▪ International Covenant on Civil and Political Rights; ▪ International Covenant on Economic, Social, and Cultural Rights; ▪ International Convention on the Elimination of All Forms of Racial Discrimination. If indigenous peoples are present in the project/programme implementation area the IE will: 1) Describe how the project/programme will be consistent with UNDRIP, and particularly with regard to Free, Prior, Informed Consent (FPIC) 18 during project/programme design, implementation and expected outcomes related to the impacts affecting the communities of indigenous peoples. 2) Describe the involvement of indigenous peoples in the design and the implementation of the project/programme, and provide detailed outcomes of the consultation process of the indigenous peoples. 3) Provide documented evidence of the mutually accepted process between the project/programme and the affected communities and evidence of agreement between the parties as the outcome of the negotiations. FPIC does not necessarily require unanimity and may be achieved even when individuals or groups within the community explicitly disagree. 4) Provide a summary of any reports, specific cases, or complaints that have been made with respect to

	the rights of indigenous peoples by the Special Rapporteur and that are relevant to the project/programme. This summary should include information on subsequent actions, and how the project/programme will specifically ensure consistency with the UNDRIP on the issues that were raised. Possible elements that may be considered 17 Links to these conventions are available at www2.ohchr.org/english/law. The ratification status of each convention by country is available at http://treaties.un.org/Pages/Treaties.aspx?id=4&subid=A&lang=en 18 Free, Prior, Informed Consent (FPIC) is the principle that a community has the right to give or withhold its consent to proposed projects that may affect the lands they customarily own, occupy or otherwise use. ESP Guidance document 13 Information that the IE may consider when assessing the project/programme potential risks: • Status of ratification of ILO Convention 169 by the country or countries in which the project/programme will be implemented. • Project/programme consistency with the UNDRIP may further be enhanced by creating awareness about the rights of indigenous peoples and how it is a general principle in the implementation of the project/programme.
Principle 8: Involuntary Resettlement.	Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids or minimizes the need for involuntary resettlement. When limited involuntary resettlement is unavoidable, due process should be observed so that displaced persons shall be informed of their rights, consulted on their options, and offered technically, economically, and socially feasible resettlement alternatives or fair and adequate compensation. Involuntary resettlement refers to both physical displacement (relocation or loss of shelter) and to economic displacement (loss of assets or access to assets that leads to loss of income sources or other means of livelihood). Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in physical or economic displacement because of either: 1) lawful expropriation or temporary or permanent restrictions on land use, and 2) negotiated settlements in which the buyer can resort to expropriation or impose legal restrictions on land use if negotiations with the seller fail. This principle does not apply to resettlement resulting from voluntary land transactions in which the seller is not obligated to sell and the buyer cannot resort to expropriation or other compulsory processes sanctioned by the legal system of the host country if negotiations fail. The IE should determine if physical or economic displacement is required by the project/programme and if it is voluntary or involuntary. If it is involuntary, the IE will: 1) Provide justification for the need for involuntary resettlement by demonstrating any realistic alternatives that were explored, and how the proposed involuntary resettlement has been minimized and is the least harmful solution. 2) Describe in detail the extent of

	involuntary resettlement, including the number of people and households involved, their socio-economic situation and vulnerability, how their livelihoods will be replaced, and the resettlement alternatives and/or the full replacement cost compensation required whether the displacement is temporary or permanent. 3) Describe in detail the involuntary resettlement process that the project/programme will apply, and the built-in safeguards to ensure that displaced persons shall be informed of their rights in a timely manner, made aware of the grievance mechanism, consulted on their options, and offered technically, economically, and socially feasible resettlement alternatives or fair and adequate compensation. This also should include an overview of the applicable national laws and regulations. 4) Justify the conclusion that the involuntary resettlement is feasible. ESP Guidance document 14 5) Describe the adequacy of the project/programme organisational structure to successfully implement the involuntary resettlement as well as the capacity and experience of the project/programme management with involuntary resettlement. 6) Build awareness of involuntary resettlement and the applicable Principles and procedures of the project/programme.
Principle 9: Protection of Natural Habitats.	The Fund shall not support projects/programmes that would involve unjustified conversion or degradation of critical natural habitats, including those that are (a) legally protected; (b) officially proposed for protection; (c) recognized by authoritative sources for their high conservation value, including as critical habitat; or (d) recognized as protected by traditional or indigenous local communities. The Convention on Biological Diversity defines a _habitat‘ as the place or type of site where an organism or population naturally occurs. ‒Critical natural habitat‖ refers to habitats that are not man-made and that fulfil a critical role for an organism or a population that in the absence or disappearance of that habitat might be severely affected or become extinct. Specific knowledge about a habitat (either common knowledge, traditional insights, or the result of formal scientific research) is always the basis for identifying critical natural habitats. Often, but by no means always, this has resulted in assigning a protected status to such a critical habitat. The principle refers to legal protection at all levels of governance. The absence of legal protection alone cannot be used to conclude that a habitat is not to be considered a critical natural habitat. Reference is made to knowledge about the importance and intrinsic value of a habitat. The precautionary principle prevails where such knowledge is inadequate or inconclusive. The IE will identify: 1) the presence in or near the project/programme area of natural habitats, and 2) the potential of the project/programme to impact directly, indirectly, or cumulatively upon natural habitats. If such habitats exist and there is a potential of the project/programme to impact the habitat, the IE will: 1) Describe the location of the critical habitat in relation to the project and why

	it cannot be avoided, as well as its characteristics and critical value. 2) For each affected critical natural habitat, provide an analysis on the nature and the extent of the impact including direct, indirect, cumulative, or secondary impacts; the severity or significance of the impact; and a demonstration that the impact is consistent with management plans and affected area custodians. Possible elements that may be considered Information that may assist the IE in decision-making include: • The laws and regulations within the country that protect natural habitats, including the different forms of protection, and the institutional arrangements for their implementation and enforcement that apply to the habitat. ESP Guidance document 15 • The critical natural habitats nationwide, their location, characteristics and critical value. These areas may be identified based upon their actual or proposed legal protection status, on common knowledge or traditional or indigenous knowledge, or on scientific information on their value. The legal protection refers to all levels of government, as well as international conventions and agreements like the Convention on Wetlands (Ramsar, Iran, 1971). Scientific knowledge may be in the form of peer-reviewed, published scientific research, or inventory lists prepared by authoritative sources like the UNESCO Man and the Biosphere Programme, the International Union for Conservation of Nature (IUCN) and the United Nations Environment Programme (UNEP). Large non-governmental conservation organizations like the World Wide Fund for Nature, Bird Life International, and Conservation International may also be sources of useful information.
Principle 10: Conservation of Biological Diversity.	Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids any significant or unjustified reduction or loss of biological diversity or the introduction of known invasive species. The Convention on Biological Diversity (CBD) defines biological diversity as ‒the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.‖ This definition implies that biological diversity concerns not only living organisms of all taxa but also ecosystem processes, habitats, hydrological cycles, processes of erosion and sedimentation, landscapes, etc. The Cartagena Protocol on Biosafety to the Convention on Biological Diversity is an international treaty governing the movements of living modified organisms (LMOs) resulting from modern biotechnology from one country to another. The IE will identify: 1) the presence in or near the project/programme area of important biological diversity; 2) potential of a significant or unjustified reduction or loss of biological diversity, and 3) potential to introduce known invasive species. If important biological diversity exists and will be significantly or unjustifiably impacted or if the project/programme will

	introduce known invasive species, the IE will: Biological diversity • Describe the elements of known biological diversity importance in the project/programme area, using any relevant sources of information, such as protection status, status on the IUCN Red List of Threatened Species19 and other inventories, recognition as a UNESCO Man and the Biosphere Programme reserve20, Ramsar site, 21 etc. • Describe why the biological diversity cannot be avoided and what measures will be taken to minimize impacts. 19 International Union for Conservation of Nature, www.iucnredlist.org 20 United Nations Educational, Scientific and Cultural Organization,www.unesco.org/new/en/naturalsciences/environment/ecological-sciences/man-and-biosphere-programme 21 Convention on Wetlands of International Importance, called the Ramsar Convention, www.ramsar.org ESP Guidance document 16 Invasive Species • Describe the invasive species that either may or will be introduced and why such introduction cannot be avoided. • Provide evidence that this introduction is permitted in accordance with the existing regulatory framework22 and the results of a risk assessment analysing the potential for invasive behaviour. • Describe the measures to be taken to minimize the possibility of spreading the invasive species
Principle 11: Climate Change.	Projects/programmes supported by the Fund shall not result in any significant or unjustified increase in greenhouse gas emissions or other drivers of climate change. The main drivers of climate change that are considered here are the emission of carbon dioxide gas from the use of fossil fuel and from changes in land use, methane and nitrous oxide emissions from agriculture, emission of hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride, other halocarbons, aerosols, and ozone. Compliance with the principle may be demonstrated by a risk-based assessment of resulting increases in the emissions of greenhouse gasses or in other drivers of climate change. Projects/programmes23 in the following sectors require a greenhouse gas emissions calculation using internationally recognized methodologies: 24 energy, transport, heavy industry, building materials, large-scale agriculture, large-scale forest products, and waste management. The calculations will be used as a basis for a substantiated evaluation of the significance and justification of any increase. Other projects/programmes may demonstrate compliance by carrying out a qualitative risk assessment for each of the mentioned drivers of climate change, plus any impact by the project/programme on carbon capture and sequestration capacity.
	Principle 12: Pollution Prevention and Resource Efficiency. Projects/programmes supported by the Fund shall be designed and implemented in a way that meets applicable international standards for maximizing energy efficiency and minimizing material resource use, the production of wastes, and the release of pollutants. There are two distinct

	aspects to this principle. Projects/programmes shall on the one hand minimize in a reasonable and cost-effective way the resources that will be used during implementation. This applies to all sources and forms of energy, to water, and to other resources and materials inputs. On the other hand, the project/programme will minimize the production of waste and the release of pollutants (including GHGs). Possible elements that may be considered 22 Including the Cartagena protocol for countries that have ratified it. 23 If a programme contains one project that is in one of the sectors mentioned, the requirement will apply to the whole programme. 24 In line with the Guidelines for National Greenhouse Gas Inventories (2006) of the Intergovernmental Panel on Climate Change (IPCC) www.ipcc-nggip.iges.or.jp/public/2006gl/ . Tools are available from a number of sources, including www.ghgprotocol.org, www.epa.gov/climatechange/emissions/ghgrulemaking.html, and www.defra.gov.uk/publications/2011/03/26/ghg-guidance-pb13309. ESP Guidance document 17 IEs may illustrate the minimization of resource use by showing how this concept has been applied in the project/programme design and how this will be effective during implementation. Such illustration may include references to certain design options/alternatives and implementation arrangements. Where international standards for maximizing energy efficiency and minimizing material resource use apply, these will be listed and a description provided on how the design and implementation arrangements of the project/programme are consistent. Preventing waste and pollution may be achieved by preparing a waste and pollution prevention and management plan for the whole project/programme. The nature and quantity of the waste, as well as those of possible pollutants the project/programme may produce, will determine the level of detail and the performance requirements of the waste and pollution prevention and management plan. The plan should include the cost of implementation arrangements and as well as implementation and performance monitoring. The guiding principles of the waste and pollution prevention and management plan should be prevention, a precautionary approach, evidence-based monitoring, and participation and consultation. Implementation of the plan will be duly documented and all those involved in project/programme implementation will be familiarized with the plan and its implications.
Principle 13: Public Health.	Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids potentially significant negative impacts on public health. Possible public health impacts of a project/programme can be determined by assessing its impact on a range of so-called determinants of health. 25 Public health is determined not just by access to medical care and facilities and lifestyle choices, but also by a much broader set of social and economic conditions in which people live. Possible elements that may be

	considered The project/programme may demonstrate that it will not cause potentially significant negative impacts on public health by screening for possible impacts and including the results of the screening in the Proposal. Health impact screening is a process of rapidly and systematically identifying the project/programme‘s potential impacts on public health. It will typically also elucidate the risk of such effects and determine if a further thorough public health impact assessment and the development of a management plan is needed to prevent potentially significant impacts and to demonstrate compliance with the principle. This screening can thus be the first step in a full health impact assessment, depending on the outcome of the screening. A range of health impact assessment and screening tools exist. For the purpose of demonstrating compliance, a checklist for health impact assessment screening may be used. Such a checklist considers the potential impact of the project/programme on a comprehensive range of health determinants for the population as a whole and for groups within the population. A health impact-screening checklist should include at least the following sections: 1) a section on the background and context of the project/programme; 2) a section with an adequate list of health determinants, with space for a nuanced assessment, for each determinant, the likelihood of impact occurring; and 3) a section identifying the group(s) most likely to be affected by each health determinant 25 Further information on determinants of health is available e.g. from the World Health Organization website http://www.who.int/hia/evidence/doh/en/ ESP Guidance document 18 If the outcome of the screening is that no potentially significant negative impacts on public health are likely, then the screening may be used to demonstrate compliance. If on the other hand the screening concludes that further health impact assessment is needed, then the outcome of that process may be used to demonstrate compliance. Both screening and possibly health impact assessments must comply with the relevant WHO recommended practices.
Principle 14: Physical and Cultural Heritage.	Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids the alteration, damage, or removal of any physical cultural resources, cultural sites, and sites with unique natural values recognized as such at the community, national or international level. Projects/programmes should also not permanently interfere with existing access and use of such physical and cultural resources. The reference for international recognition of physical and cultural heritage is the 1972 UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage. Convention Articles 1 and 2 provide definitions of what is considered cultural27 and natural28 heritage. The List of World Heritage in Danger29 (Article 11 (4) of the Convention) also provides a reference. The IE will identify the presence of cultural heritage in or near the project/programme.

	If cultural heritage exists, the IE will: • Describe the cultural heritage, the location and the results of a risk assessment analysing the potential for impacting the cultural heritage; and • Describe the measures to be taken to ensure that cultural heritage is not impacted, and if it is being accessed by communities, how this access will continue. Possible elements that may be considered Information that may assist the IE when assessing the project/programme potential risks include: • Status of ratification and entry into force of the Convention Concerning the Protection of the World Cultural and Natural Heritage by the country or countries in which the project/programme will be implemented. 26 http://www.who.int/hia/en/ 27 monuments: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science; groups of buildings: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science; sites: works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view. 28 natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view; geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation; natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty. 29 http://whc.unesco.org/en/danger ESP Guidance document 19 • National legal and regulatory framework for recognition and protection of physical and cultural heritage in the country or countries where the project/programme is implemented. • Inventory of the physical and cultural heritage present in the wider project/programme area that enjoys recognition at community, national, or international levels.
Principle 15: Lands and Soil Conservation.	Projects/programmes supported by the Fund shall be designed and implemented in a way that promotes soil conservation and avoids degradation or conversion of productive lands or land that provides valuable ecosystem services. Principle 15 concerns the stewardship of land to either be maintained in its natural state, where possible, or if it is converted to promote and protect its functioning. Soil conservation refers to a set of measures to prevent, mitigate or control soil erosion and degradation. 30 There are two aspects to the principle: promotion of soil conservation and avoidance of degradation or

	conversion of valuable lands. This applies to soils and lands directly affected by the project/programme as well as those influenced indirectly, or as a secondary or cumulative effect. Soil conservation should be incorporated in project/programme design and implementation. Soil conservation The IE will identify: 1) the presence of fragile soils (e.g. soils on the margin of a desert area, coastal soils, soils located on steep slopes, rocky areas with very thin soil) within the project area or 2) project/programme activities that could result in the loss of otherwise non-fragile soil. If such soils exist and potential soil loss activities will take place, the IE will: • Identify and describe: o Soils that may be impacted by the project/programme; o Activities that may lead to loss of soils; o Reasons why soil loss is unavoidable and o Measures that will be taken to minimize soil loss. • Describe how soil conservation has been promoted to the EE. Valuable lands The IE will identify: 1) productive lands and/or lands that provide valuable ecosystem services within the project/programme area. If such lands exist, the IE will: • Identify and describe: o The lands; o Project/programme activities that may lead to land degradation; o Reasons why using these lands is un-avoidable and the alternatives that were assessed, and o Measures that will be taken to minimize productive land degradation or ecosystem service impacts. 30 The Food and Agriculture Organization of the United Nations defines soil degradation as a change in the soil health status resulting in a diminished capacity of the ecosystem to provide goods and services for its beneficiaries. ESP Guidance document 20 4. Demonstrating compliance with the ESP in the project/programme proposal document This section describes how the IE can present the relevant environmental and social risk information in the funding proposal to the Board, at both concept and fully developed proposal stages. In the Proposal Section II.K, from the concept stage, the IE will document and summarize the findings of the screening/assessment process and categorization, including completing the checklist provided in that section of the proposal. Detailed information on the screening process and findings should be made available as an annex. Categorization The outcome of the screening and assessment process is used to determine the environmental and social categorization of the risk for the project/programme. This should be done at the concept stage. The criteria for categorization are described in paragraph 8 of the ESP. 31 The IE may present the findings of the screening/assessment process to substantiate and support its determination of the category for a project/programme. It is not possible to provide universal reference points to quantify severity of environmental and social impacts. Therefore, the IE will provide rationales to support their determination of severity and acceptability so that the determination can be reviewed as necessary. Category C projects/programmes are those for which no adverse environmental or social impacts are anticipated at the time of screening, and that do not require further impact assessment. Nevertheless,

	during the implementation of category C projects/programmes, low-level monitoring for unexpected environmental or social impacts will be included in the project/programme design and will be reported on annually. Conducting environmental and social assessments As a general rule, the IE, when required, should conduct impact assessment before submitting the fully-developed project/programme document. Environmental and Social Management Plan Risks and/or impacts that are identified and determined as unavoidable in the assessment process should be captured in an environmental and social management plan. This may be a single plan or a collection of plans. This plan should be submitted at the fully-developed proposal stage. The environmental and social management plan should describe the risk mitigation measures that will be taken to ensure consistency with the ESP Principles and applicable host country laws and regulations. Much of the content of an environmental and social management plan will consist of the specific management plans and related activities that have been identified during the impact assessment in accordance with the separate Principles. The Instructions provide additional detail on management and monitoring plans. In some Category B projects/programmes, where the proposed activities requiring an environmental or social assessment represent a minor part of the project, and when the assessment and/or management plan cannot be completed in time or where 31 See footnote 2 supra. ESP Guidance document 2

5. 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 ENHANCING CLIMATE CHANGE ADAPTATION FOR AGRO-PASTORAL COMMUNITIES IN KONGWA DISTRICT:

The overall objective of this ESMF 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 activates 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. Establishing FFFS, provision of water supply and access, and integrating Kongwa Ranch livestock breed with nearby community flocks will contribute to climate resilient and sustainable management of natural resources, through lesson learned, improved breed, and reduced reliance on natural resources.

ii. Strengthening the good agricultural practices (GAP) to communities will significantly contribute to increasing capacity to adapt to climate change scenario, through agricultural productivity, food security and agroforestry practices.

iii. Training and awareness raising on environmental and climate change issues will contribute to better management of environment

iv. Rehabilitating fragile areas such as degraded lands, windrows, hills and riverbanks, will contribute to ecosystems and ecological restoration hence increase the resilience to

climate change events

v. Establishment of FFFS 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

vi. Integration of livelihoods system i.e. small animal keeping, more improved varieties agricultural crops, cattle keeping, production of fodder as well as supply and access of water profoundly reduces the supply and demand pressure on natural resources

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 promote malaria cases in the study 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

Enhancement and mitigation measures

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 Impact	Enhancement/Mitigation Measures	Responsibility for Implementation	Site of Implementation	Implementation Schedule	Responsibility for Monitoring	Monitoring Indicators
Enhancement of Program Positive Impacts							
1	Increased alternative livelihood opportunities	Introducing livelihood systems that will contribute to reduction of pressure on natural resources	FECE, Kongwa district council and the project management unit	Project sites associated with the benefiting communities	Throughout the project cycles	Project management Unit, FECE, Kongwa district	Improved incomes Livelihoods created
2	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	Kongwa District Council, FECE and NEMC,	In all villages involved in the project	Throughout the project cycle	Project management Unit, District environmental, water and agricultural officers	Kilometers or acres of the areas restored and rehabilitated
3	Enhance water sources and improved agricultural practices systems	Improved livelihood systems and food security	Kongwa District Council, FECE and NEMC	Project sites	Throughout the program cycle	Project management Unit, District environmental, water and agricultural officers	Number of structures established
4	Reduction of deforestation	Introduction of closure and planting trees to reduce deforestation	Kongwa District Council, FECE and NEMC	Project sites	Throughout the program	Project management Unit	Rehabilitated and restored areas

					cycle		

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

PROJECT COMPONENTS/ ACTIVITIES	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
Component 1. Enhance climate resilient rural water supply system in vulnerable agro-pastoral communities at Mtanana a								
Outcome 1. Enhanced climate resilient rural water supply system in vulnerable agro-pastoral communities of Mtanana an								
Output 1.1. Climate resilient rural water supply system established in agro-pastoral communities at Matanana and Ugogo								
1.1.1. Drill boreholes in drought prone and water scarce villages and Install solar driven water pumps at Mtanana and Ugogoni wards	X	X		X	X	X	X	X
1.1.2. Construct water storage tanks and distribution network systems at Mtanana and Ugogoni wards	X	X	X	X	X	X	X	X
1.1.3. Construct cattle troughs for livestock water system in in agro-pastoral communities in selected villages at Matanana and Ugogoni wards, in Kongwa district	X	X	X	X	X	X	X	X
Output 1.2. Community Owned Water Supply Organization(COWSOs) established and facilitated and committ maintenance								
1.2.1. Conduct awareness raising meetings with community stakeholders to facilitate formulation of stable, effective and efficiency COWSOs at Mtanana and Ugogoni wards in accordance to the Water supply and sanitation Act, 2009.	X	X	X	X	N/A	X	X	X
1.2.2. Establish gender sensitive water governance arrangements for COWSOs at Mtanana and Ugogoni Wards	X	X	X	X	N/A	X	X	X
1.2.3. Conduct Technical Trainings of Trainers on maintenance and operations; management of finance, accounting and group dynamics issues to selected	X	X	X	X		X	X	X

community members of COWSOs for both Matanana and Ugogoni wards								
Component 2. Support transformation of exploitive agro-pastoral practices to diversified climate smart and sust								
Outcome 2. Number of agro-pastoral communities transformed from exploitive agro-pastoral practices to livelihoods in selected wards of Kongwa district								
Output 2.1 Best agricultural –climate smart practices enhanced to improve food security in the selected villages of Mtana								
2.1.1. Construct and establish atleast three drip irrigation structures/schemes at Mtanana and Ugogoni wards in Kongwa district	X	X	X	X	X	X	X	
2.1.2. Rehabilitate the existed pre independence contour bands/windrows, and promote other soil and water management techniques (terracing, tie ridging) in-situ techniques for sustained agriculture/crop productivity at Mtanana and Ugogoni wards	X	X	X	X	X	X	X	
2.1.3. Train selected members of farmer and women groups on Operation and Maintenance (O&M) of drip irrigation facilities at Mtanana and Ugogoni wards	X	X	X	X	X	X	X	
2.1.4. Facilitate increased use of climate smart crops and promoting intercropping with drought resistant varieties like cashew nuts, sorghum, sunflower, simsim, pigeon peas, cassava, cereals, sweet potatoes and early maturing crops to increase climate resilience farming systems at Mtanana and Ugogoni wards.	X	X	X	X		X	X	
2.1.5. Establish women based gardens and poultry houses and trainings on FFFS (Female Farmer Field School) – provision of seeds and tools to diversity gender based livelihood systems	X	X	X	X	X	X	X	
Output 2.2. Natural pasture, local breeds and livestock management systems improved to enhance adaptive capacity of live Kongwa district								
2.2.1. Establishing drought resistant pasture species and enhance range management to transform traditional grazing system.	X	X	X	X	X	X	X	X
2.2.2. Improve livestock management to control pests and diseases through cattle dips, feeding systems and cross breeding local breeds with improved breeds available at the National Ranching Company (NARCO)	X	X	X	X	X	X	X	X
Output 2.3. Improve market value chain of agro-pastoral products on farm and off farm products to strength their competi livelihood systems in the project sites								

2.3.1 Facilitate and train farmers and livestock keepers on value addition and packaging techniques of their agricultural products and link them to competitive markets and finance institutions	X	X	X	X	X	X	X	X
2.3.2 Facilitate provision of value addition and packaging tools, equipment and machines	X	X	X	X	X	X	X	X
Component 3. Improve ecological functions to sustain climate sensitive rural livelihoods at Mtanana and Ugogoni wards district								
Outcome 3. Improved ecological functions to sustain climate sensitive rural livelihood in Kongwa district under thechang weather events								
Output 3.1. Integrated ecological and management systems implemented in Kongwa district to sustain climate sensitive r								
3.1.1. Establish and implement ecological restoration and rehabilitation plans (such as shrub/grasses, mangoes, cashew nuts establishment on contour bands/windrows, woodlots and woodland restoration) in selected Wards and Villages of Kongwa District	X	X	X	X	X	X	X	X
3.1.2. Promote bee keeping activities as income diversification and demonstration of adaptation benefits generated from ecological restoration areas under activity 3.1.1 to increase adaptive capacity of vulnerable marginalized groups (such as women, girls, old people)	X	X	X	X	X	X	X	X
3.1.3 Promote tree planting (trees with both environmental and socio economic values in mid-and long-term such as fruit plants and wood plants for timber) activities in residential areas, along streets and roadsides and in the degraded areas	X	X	X	X	X	X	X	X
3.1.4. Promote scaling ups of projects' Best Techniques (BT) and Best Practices (BP) on ecological restoration and rehabilitation in other areas of the district including in Dodoma region	X	X	X	X	X	X	X	X
Component 4. Building capacities of extension services and institutions at District, Ward and Village levels to support loca								
Outcome 4. Capacities of institutions, extension services and trainers in Kongwa district strengthened to reduce risks failures in Kongwa district								
Output 4.1 Capacities of extension services and institutions in Kongwa district are strengthened to support commun activities								
4.1.1 Develop a detailed training plan to guide the capacity building program for the Project. A Consultant will also be hired to develop a detailed training plan highlighting the specific	X	X	X	X	X	X	X	X

content with relevant examples to the prevailing conditions in Kongwa district, each ward and villages involved in the project implementation.								
4.1.2 Develop training modules to build capacity of stakeholders on a continuous basis in all project sites	X	X	X	X	X	X	X	X
4.1.3 Review and mainstream climate change adaptation measures into sustainable development plans at district, wards to village levels	X	X	X	X	X	X	X	X
4.1.4 Documenting and disseminating lessons and best practices from project interventions	X	X	X	X	X	X	X	X
4.1.5 Communicate project results and share lessons learnt through video and other documentaries, public media, meetings and public websites	X	X	X	X	X	X	X	X
4.1.6 Facilitate provisional of project monitoring and evaluation facilities, tools and equipment	X	X	X	X	X	X	X	X

6: Conclusion

Although the AF‘s Environmental and Social Policy, a project can be categorized as either A, B or C, 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.
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