ADAPTATION FUND

CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project:	Strengthening Agro-Ecosystem Adaptation for Sustainable Livelihoods within Landscapes (SEASL)
Country:	Eswatini
Thematic Focal Area:	Ecosystem Based Adaptation
Type of Implementing Entity:	Multilateral Implementing Entity
Implementing Entity:	International Fund for Agricultural Development
Executing Entities:	Food and Agriculture Organization
Amount of Financing Requested:	US **10,000,000** (in U.S Dollars Equivalent)

Project Formulation Grant Request (<u>available to NIEs only</u>): Yes ☐ No ☒

Amount of Requested financing for PFG:

Letter of Endorsement (LOE) signed: Yes ☒ No ☐

NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: https://www.adaptation-fund.org/apply-funding/designated-authorities

Stage of Submission:

☐ This concept has been submitted before

☒ This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

Please note that concept note documents should not exceed 50 pages, including annexes.

PROJECT BACKGROUND AND CONTEXT:

Location and Climate

1. Eswatini, officially the Kingdom of Eswatini, is a landlocked country situated in the south-eastern part of the African Continent, sharing borders with South Africa to the south, west and north and Mozambique to the east. The country is approximately 17, 364 km^2 in size located between the latitudes of 25º 43' and 27º 19'S and longitudes of 30º 47' and 32º 08' E[1].The mountainous country has varying landscapes, with a subtropical climate composed of wet summers and cool winters. There are four physiographic regions (Figure 1) in the country that extend longitudinally from north to south in coarsely parallel belts and from the east to west are the Lubombo escarpment, Lowveld, Middleveld and the Highveld[2]. Weather conditions are generally cool and rainy in the Highveld, the Middleveld is warmer with rain, the Lowveld is hot and dry, and the Lubombo Plateau is warm and dry.

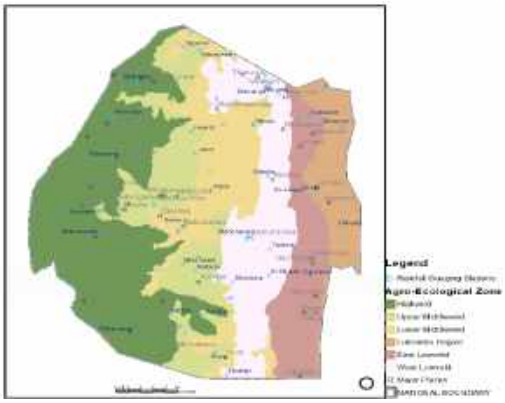


Figure 1: Eswatini Agroecological zones (TNC, 2016)

2. The altitude varies with each physiographic where the highest point is 1 862 m above sea level (in Bulembu), and the lowest point is at 21 m (where the Great Usutu River enters Mozambique[3]). The general climatic pattern of the country is wet hot summers (October to March) where about 75% of the annual rainfall is experienced during that period. Again, cold dry winters are experienced in April to September[4].

3. Administratively, the country is divided into four regions namely, Hhohho, Manzini, Shiselweni and Lubombo[5]. The Land tenure system in the country is classified into three categories as dictated by the country's history. The categories are Swazi Nation Land (SNL) which covers about 75% of the area, the Title Deed Land and Crown Land jointly cover the remaining 25%[6].

Biophysical Environment

4. Eswatini is at the center of the major climatic zones transition, which is caused by different air masses exhibiting different patterns of origin. The country's location is the equatorial convergence zone causing summer rains, again the subtropical eastern continental moist maritime causes onshore flow leading to occasional cyclones and the dry continental tropical and marine west Mediterranean conditions cause winter rains, with rare snow. The multi-scale interactions of weather producing systems and the country's varying topography leads to highly variable weather patterns at intra-seasonal to inter-annual timescales. The multi-scale interactions in Eswatini leads to distinct and regular weather characteristics such as droughts, floods, extreme temperatures, veld and forest fires, lightning, and hailstorms. Notably, over a decade the intensity and frequency of extreme weather events such as droughts and heat waves have been observed to be on the rise. The Highveld for instance, has high incidences of thunderstorms characterized by ground lightning flash densities of more than 12 flashes/km^2/year that occurs during the austral summer. These intense thunderstorms are associated with weather systems of both tropical origin which at times include passages

---

[1] https://unfccc.int/sites/default/files/resource/swznc3.pdf

[2] https://www.thegef.org/projects-operations/projects/5065

[3] https://www.cbd.int/doc/world/sz/sz-nbsap-v2-en.pdf

[4] Swaziland's Third National Communication (TNC) to the United Nations Framework Convention on Climate Change (UNFCCC), 2016. https://unfccc.int/sites/default/files/resource/swznc3.pdf.

[5] https://unfccc.int/sites/default/files/resource/eswatini-climate-change-adaptation-plan-unfccc.pdf

[6] https://www.cbd.int/doc/world/sz/sz-nbsap-v2-en.pdf

of tropical cyclones from the southwest Indian Ocean and extra-tropical origin and their interactions[7].

Historical trends

5. Based on an examination of mean annual temperatures and average annual precipitation from 1991 to 2020, Eswatini experienced mean annual temperatures ranging from 14.5°C to 27°C and average annual precipitation of 810.8mm. In general, annual mean temperatures have risen in the majority of Eswatini's regions, with the greatest increases occurring between 2000 and 2010[8]. From 1980 to 2010, the frequency of extremely hot days (above 34°C) increased, whereas the frequency of chilly nights decreased[9]. There is evidence to suggest that the timing, duration, and intensity of the monsoon seasons have exhibited a progressive decline since 1980. Eswatini's western and northern regions exhibit the most significant fluctuations in temperature and precipitation, whereas the southern region is progressively becoming arid, and the eastern region is presently undergoing the most intense flash inundation.[10] The changes in mean annual temperature from 1901 to 2021 are depicted in Figure 2, with the greatest increase occurring between 2000 and 2021.

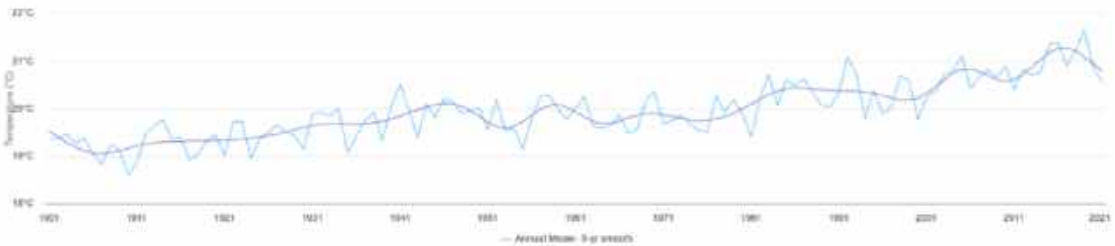


Figure 2: Observed Average annual Mean Temperature of Eswatini for 1991-2021 (Source: World Bank Climate Change Portal, 2023)

6. Annual precipitation in Eswatini varies from year to year and historical trends point towards decreasing precipitation over the years, and changes in the duration and intensity of rainfall and duration of dry spells[11]. In the past observations, in the period 1978-2018, the mean precipitation has decreased from -7.4% to -0.1% in the dry season and decreased from -3.4% to -1.0% in the rainy season. In the recent past, average precipitation decreased from -11.3% to -3.5% in the dry season and fluctuated between -3.4% and 1.7% in the rainy season.

Extreme Events

7. In 2016, the country experienced the most severe drought in 35 years, resulting in: food shortages, drying up of rivers, and livestock deaths. Drought severity, frequency, geospatial coverage has also increased; with the worst drought years in 1985-1986, 2005-2006, and 2015-2016[12]. Floods in 2000, 2008 and 2014 affected more than 250,000 people, while the storms of 2005 and 2006 affected 7,685 people[13]. Projections show that mean temperatures will keep increasing and hot days, dry spells floods and heatwaves, will become more frequent[14]. Figures 3 and 4 below show that droughts are the most common extreme weather events, followed by floods and storms.

---

[7] Swaziland's Third National Communication (TNC) to the United Nations Framework Convention on Climate Change (UNFCCC), 2016. https://unfccc.int/sites/default/files/resource/swznc3.pdf.

[8] World Bank (2021)

[9] World Bank Group (2021). Eswatini Country Climate Risk Profile. World Bank Report

[10] Swaziland's second National Communication to the UNFCCC

[11] World Bank Group (2021). Eswatini Country Climate Risk Profile. World Bank Report.

[12] Mlenga, D. H., Jordaan, A. J., & Mandebvu, B. (2019)

[13] https://www.emdat.be/

[14] Swaziland's second National Communication to the UNFCCC.

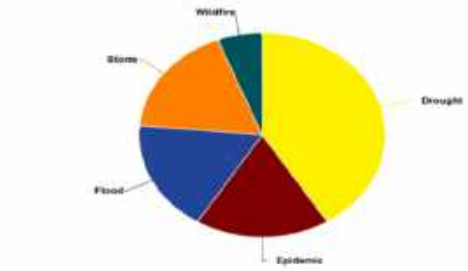


Figure 3: Average annual natural hazard occurrence (Source: World Bank Climate Change Portal, (2023)

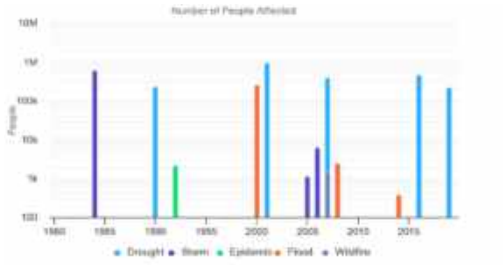
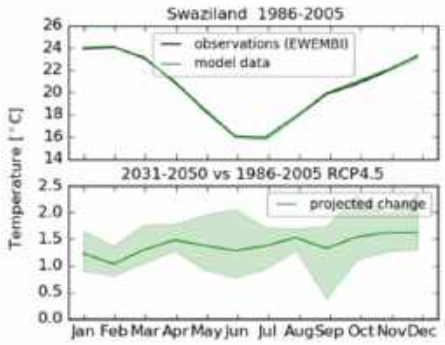


Figure 4: Key natural hazards for 1980-2020

Projections

8. Climate Projections based on the Representative Concentration Pathway (RCP4.5) scenario (Graphs 5 and 6) indicate that both minimum and maximum temperatures will increase in all seasons and in all agro-ecological zones in the country. The World Bank reports that temperatures are projected to increase through the 2090s and to rise by as much as 1.9°C by the 2050s, under an RCP8.5 scenario. Hot Days are expected to rise by as many as 24.4 days by the 2050s. Temperature is expected to increase year-round, with peaks felt in the hottest period of October to December, under RCP8.5[15].



Figures 5: Temperature projections

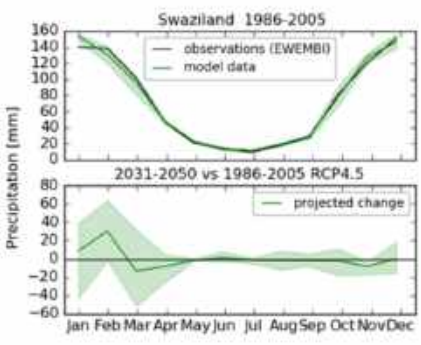


Figure 6: Precipitation projections (Source: FINRES report (2020)

It is anticipated that precipitation patterns will become more erratic and uncertain, leading to an increase in the frequency and severity of droughts and flooding. Figures 7 and 8 below illustrate comparable patterns in temperature and precipitation as determined by the multimodel ensemble utilising Shared Socioeconomic Pathways (SSPs).

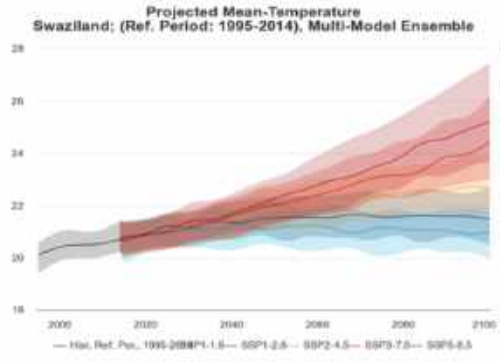


Figure 7: Projected mean temperature (1995-2014) Source: World Bank Climate Change Portal, (2023)

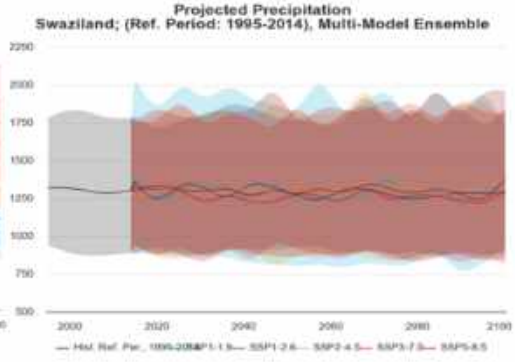


Figure 8: Projected mean precipitation

[15] IPCC, 2016

Ecosystems

9. Eswatini has four important ecosystems, these are the Montane grasslands, Savanna-woodland mosaic, Forests and Aquatic systems. The Montane grasslands are in the Highveld, the Savanna-woodland Mosaic is in the Middleveld and Lowveld while the Forests are mainly in the Highveld and the Lubombo mountains.

10. Climate change is projected to result in increased temperatures by 3 to 4 °C and reductions in precipitation within the next few decades. This will exacerbate the effects of all other pressures by reducing both terrestrial and aquatic ecosystems. In addition to contractions of suitable bioclimates, shifts are also projected, either way these vegetation changes will most likely result in the creation of novel plant communities. This will have adverse effects for species existing under current bioclimates and will render protected areas with static boundaries inefficient in protecting species maintained within their boundaries[16].

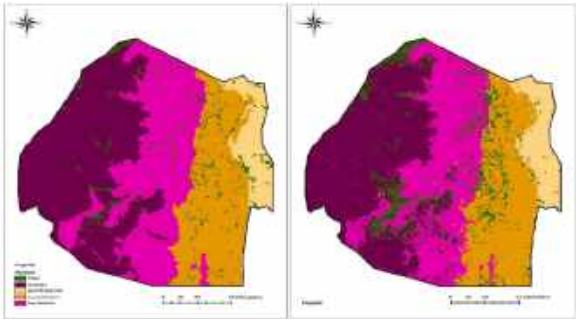


Figure 9: Baseline (left) and ecosystem assimilation.

11. Climate change is also expected to promote the proliferation of Alien and Invasive Species (AIPS) and increase the spread of bush encroachment adding to the pressures already facing the biodiversity of Eswatini[17]. This will affect rural communities in Eswatini that directly depend on local ecosystems products for most of their basic needs such as food, energy, water, medicinal and livelihood requirements. Research predicts that these ecosystems will be highly vulnerable to biome change in the future[18]. Many of the important impacts of climate change on biodiversity will be indirect at community and ecosystem levels, exacerbating existing stressors. In Eswatini, land use and cover change are both the cause and a consequence of climate change and is the major driver of current ecosystems and biodiversity change and a key cause of changes in freshwater ecosystems.

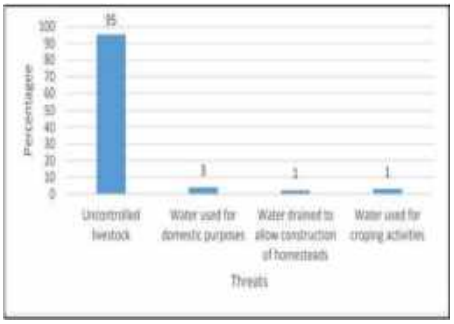


Figure 10: Threats to wetlands sustainability under Swazi nation land

12. The projected increase in the intensity and frequency of extreme weather events that relate to climate change, and its interaction with the patches of forest in the Lowveld will likely to be depleted by the 2050s. This will be because of the increased temperatures and decrease in precipitation, which is coupled with the increasing human pressures. The grassland biome appears to be one of the biomes most at risk of significant climatic and human-induced change. Areas with a climate envelope suitable for grassland are projected to be reduced and to persist only in the patches of highest altitude areas such as the western mountain peaks. The area with a climate envelope presently suitable for sour bushveld increases replacing some of the grassland climate envelope upslope albeit with uncertainty. It is highly likely though that the present ecosystem structure of the sour bushveld will shift towards more Lowveld bushveld structural characteristics as woodiness increases.

---

[16] Vulnerability And Adaptation Assessment Biodiversity and Ecosystems, UNEP, Government of Swaziland, 2014.

[17] Review and Update of the State of Environment Report (SOER), 2020. https://eea.org.sz/wp-content/uploads/2021/12/SOER-FINAL-DRAFT-08.01.2021-ISBN-WEB.pdf

[18] Assessing the Vulnerability of the Sector of Water Resources in Swaziland Due to Climate Change, Matondo (2012). https://www.researchgate.net/publication/268588775_Assessing_the_Vulnerability_of_the_Sector_of_Water_Resources_in_Swaziland_Due_to_Climate_Change.

13. In the case of wetlands, the major threats of climate change are not the direct impacts on vulnerable species but rather due to changing fire regimes, overgrazing, increase on invasive species, farming and overutilization (TNC). A large portion of the country's economy is heavily dependent on ecosystems services (grassland, savannah, forest and aquatic) to support livestock ranching, horticulture and agriculture, use of medicinal plants and ecotourism[19]. While there is still much to be done, Eswatini has taken strides towards better understanding challenges and setting the country to maintain species existences outside of current protected areas. Biodiversity and ecosystems are an interconnected system, the area and heterogeneity of available ecosystems determines the biodiversity (richness, abundance) an area can potentially sustain[20].

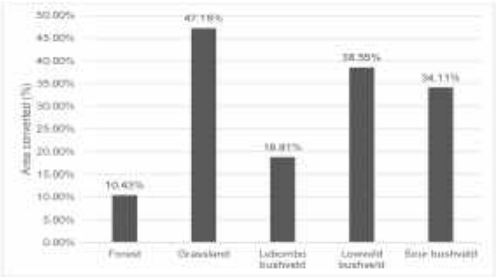


Figure 11: Ecosystems disturbance and conversion

14. The Aquatic ecosystem is made up of streams, rivers and wetlands. Only a tiny fraction (just over 3%) of these ecosystems is legally protected highlighting the fact that these ecosystems and the biodiversity they harbor, are under threat. The threat includes the observed high grazing pressures, which when coupled with the effects of fire frequency tend to promote bush encroachment[21]. The evidence shows that a lot of degradation that took place between 2000 and 2018 occurred within indigenous forests and woodlands. Cropland areas, specifically rain fed cropland, is also experiencing decline in productivity. This, however, should be attributed to the persistent periods of low rainfall in addition to other factors such as conversion of some cropland to settlements and other land uses.

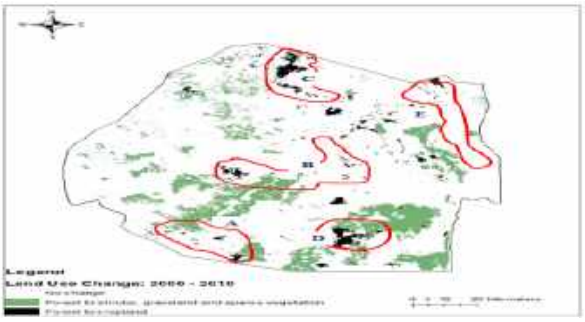


Figure 12: Five Land Degradation Hotspots for Eswatini Source SOER, 2020

15. To some extent, grasslands are also declining. Studies conducted in Eswatini have revealed that potential drivers for land degradation occurs in land that is prone to desertification processes such as climate, relief, soil and vegetation types. Land degradation in the form of deforestation is determined by an interaction of proximate and underlying factors primarily fuelwood use, human population density, human settlements, associated level of protection and land ownership status. Indeed, human activities can cause land degradation, and these include cultivation of fragile soils which are exposed to erosion, overgrazing, over exploitation of woody resources, uncontrolled fires, poor agricultural practices, irrigation schemes and irrigation of soils prone to salinization[22].

[19] Swaziland's Second National Biodiversity Strategy and Action Plan (NBSAP), 2016. https://www.cbd.int/doc/world/sz/sz-nbsap-v2-en.pdf
[20] Vulnerability And Adaptation Assessment Biodiversity and Ecosystems, UNEP, Government of Swaziland, 2014.
[21] https://www.thegef.org/projects-operations/projects/5065, 2019-GEF-PIR-PIMS4932-GEFID5065
[22] https://www.undp.org/sites/g/files/zskgke326/files/migration/sz/UNDP-SZ-SOER-Report-2021.pdf

16. Wetlands are recognized as important features in the landscapes of Eswatini that provide numerous beneficial services for people and for fish and wildlife[23]. Despite this value and benefits they remain threated by several socio-economic activities[24]. Several threats have endangered the wellbeing of the wetlands, and these include livestock trampling, climate change, overharvesting of resources, ecosystems conversion, alteration of stream flow, pollution, soil erosion, bush encroachment, uncontrolled grazing[25], uncontrolled grass fires, mismanagement of the wetlands (perpetuated by the absence of fencing) and the presence of alien invasive species[26]. Fauna has mostly been affected by degradation of the wetlands because tortoises, snakes, ducks and fish that were inhabitants of the wetlands, are not anymore[27]. Again, the country is currently threatened by the decrease in the perennial surface drainage, which will have major impacts on river flows and soil-water content, with potential serious socio-economic repercussions in rural areas[28]. To address this adverse effect, the GoE are developing a National Wetlands Policy -Draft (2020). The policy promotes the conservation and sustainable and wise use of wetlands and provides a framework for actions to guide all national stakeholders on how to take action to conserve and wisely-use the country's precious wetlands. In addition, the National Wetlands Strategic Action Plan (2021-2030) will support implementation of sustainable use of wetlands[29].

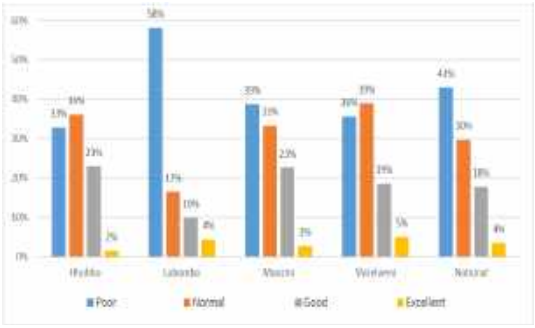


Figure 13: General national rangelands condition (VAC, 2017)

17. There is a necessity to advance actions towards protecting wetlands as soon as possible to restore the wetlands to their original state and functionality to harness and preserve all the wetlands' critical ecosystems services. There is also great interest from women groups who have expressed the desire to venture into handcraft projects that can be initiated by the availability of certain wetland plant species in large amounts[30].

[23] Draft National Wetlands Policy, 2020. Government of Eswatini Ministry of Tourism and Environmental Affairs

[24] Eswatini: Understanding the benefits of local wetland encourages community to protect it (IPS): Barza Wire (farmradio.fm)
[25] SWAZILAND ANNUAL VULNERABILITY ASSESSMENT & ANALYSIS REPORT 2017.
[26] https://www.unccd.int/sites/default/files/ldn_targets/Swaziland%20LDN%20TSP%20Country%20Report.pdf

[27] Eswatini: Understanding the benefits of local wetland encourages community to protect it (IPS): Barza Wire (farmradio.fm)
[28] Eswatini - Vulnerability | Climate Change Knowledge Portal (worldbank.org)
[29] https://www.undp.org/sites/g/files/zskgke326/files/migration/sz/UNDP-SZ-SOER-Report-2021.pdf
[30] Draft National Wetlands Policy, 2020. Government of Eswatini Ministry of Tourism and Environmental Affairs

18. As a pilot, an initiative to cultivate climate change resilient communities, wetland rehabilitation and protection have been carried in about 20 different communities in the country. Wetlands ecosystems were fenced and within 24 months they would return to their near optimal state. This offered an opportunity to generate alternative income for women through harvesting raw materials for handcraft, gardening, and traditional medicine[31].

19. The project called strengthening national protected areas systems[32] of Eswatini in 2020 established three integrated landscapes. Furthermore, the project developed the Lubombo Integrated Landscape Management Plan (ILMP 2020-2030), Ngwempisi Integrated Landscape Management Plan (NILMP 2020-2030) and Malolotj Integrated Landscape Management

20. Plan (MILMP 2020-2030). To cement the implementation of the integrated landscapes they were registered as associations to manage affairs of ecosystems within the landscapes[27].

Table 1: Aquatic ecosystems climatic change

MAJOR CHALLENGES WITHIN THE WATER SECTOR	ASSOCIATION TO CLIMATIC FACTORS
Decrease in ground water flows	Reduction in rainfall
Drying of small streams	Reduction in rainfall and extended drought
Decrease in ground water reserves therefore resulting in more dry boreholes	Intensity of rainfall in short space of time Lack of rainfall for the rest of the year
Decrease in water storage	Due to high intensity of rainfall in short space of time Inadequate management of springs , marshes , and wetlands as sources of water compromising their ability to filter and store water
Increase in water demand	Shortage of rainfall which has resulted in lower levels of water in dams and siltation Irrigation is the major user of water in the country and accounts for 96.6% of available supply. Irrigation is extensively used for growing sugarcane, citrus fruits, and vegetables. Due to climatic variables, most of the irrigation activities are located in the Lowveld region which also receives the lowest rainfall
Ground water recharge and quality	Decrease in rainfall and drought Groundwater recharge in the most critical areas of Swaziland is estimated at 2% in the Lowveld and 5% of annual rainfall in the Lubombo, however elsewhere going up to 20%. There is an increase in demand and use of the groundwater resources by communities in the rural and peri-urban areas.
Change in river morphology(fluvial geomorphology)	Flooding , Siltation ,drought Aquatic ecosystems are regulated by features and processes occurring at a range of spatial scales. At the largest scale, climate, geomorphology, and land use control channel morphology and stream hydrology, thermal regime and water chemistry, and biotic community structure. Climatic changes influences anthropogenic activities causing environmental disturbances which result in : changes in the stream flow regime through dams or diversions non-point source runoff from agriculture, urban or mining areas alteration of channel characteristics via sedimentation or siltation removal of riparian zone vegetation introduction of exotic or alien species
Decrease water quality	Flooding and Siltation
Decreases in runoff and stream flow	Drought
Interference of water run-off and use of high volumes of water	Expansion of alien invasive species and bush encroachment

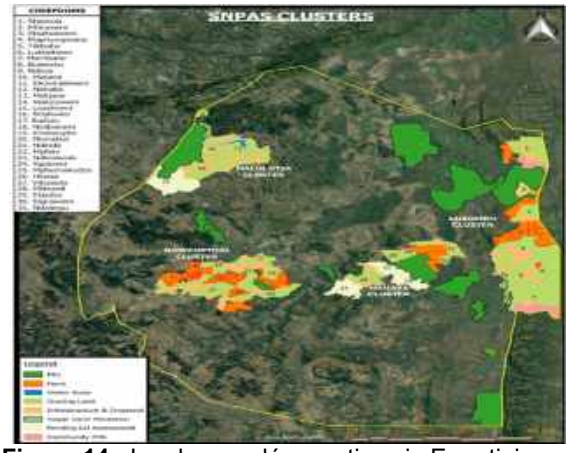


Figure 14 : Landscape démarcations in Eswatini Source SNPAS 2021).

Socio-economic context

21. According to the 2017 census report, the Eswatini population is estimated to be 1,106,451 and projections show that the population growth rate will be steady (1.2 per cent per annum) over the period from 2017 to 2038)[33]. It is estimated that approximately 76% of the country's population lives in the rural areas. The situation is such that the country's development landscape is skewed, characterized by high inequality, unemployment, and poverty among the rural population. About 59% of the people live below the national poverty line and 20.1% live in extreme poverty[34]. Approximately 70% of the population of which 60% of them are women, rely on subsistence farming in rural areas[35].

22. Gender roles and responsibilities especially in third world countries make women more vulnerable to

[31] Midterm Review Final Report: Strengthening the National Protected Area System of Swaziland (SNPAS) - PIMS 4932 (GEF ID 5065)

[32] Final Terminal Evaluation GEF 5 – Strengthening National Protected Areas System (SNAPAS) Project, 2021. https://erc.undp.org/evaluation/evaluations/detail/13302.

[33] 2017 - 2038 POPULATION PROJECTION - Based on THE 2017 Eswatini Population and Housing Census, 2020. https://eswatini.unfpa.org/en/publications/eswatini-population-projections-report2017-2038.

[34] Bertelsmann Stiftung, BTI 2022 Country Report — Eswatini. Gütersloh

[35] National Development Plan 2019/20 – 2021/22 Towards Economic Recovery

environmental hardships. Changes in the environment may affect everyone but affect women and men differently[36]. Men and women interact with the environment differently, and the perfect example is Eswatini. Like lower to middle-income states, women tend to be more involved in food preparation, which in essence requires resources from their environment including firewood and water. Wherein about 61% of Swazi National Land (SNL) farm holdings are less than one hectare in size, meaning that most farms are thus very small. The population increase is, in turn, exerting pressure on land availability for cropping and grazing, forcing households to produce crops on increasingly fragile lands.

23. Rural communities typically depend on climate sensitive sectors particularly agriculture as the basis for their livelihoods. Apart from climate change, communities of this nature are exposed to various other challenges, notably the high prevalence of HIV/AIDS infections in the country. The unpredictability of climate change makes subsistence farming unreliable and about 58.9% of the population (in 2020) lives on less than the $1.90 poverty line, the majority of whom live in rural areas (BTI, 2022)[37]. In Eswatini, like many other developing countries, the percentage of women are higher than the percentage of men in the country (TNC). The overall socio-economic well-being of the people of Eswatini is dependent on the achievement of a balance between development and conservation, which involves sustainable use of biodiversity (NBSAP). Cattle are the main livestock in addition to other animal species such as goats, sheep, pigs and poultry. The contribution of the livestock sub-sector to the agricultural sector GDP is about 4%. Beef and other livestock products contribute about 1% to total exports.

24. Eswatini has two broad livestock production systems, namely the commercial system and the traditional system. A majority (86%) of the cattle and 95% of small stock are found on SNL (SOER). Eswatini has close economic ties to South Africa, where she depends on about 85% of its imports and about 60% of exports. Eswatini is a member of the Common Monetary Area (CMA). The country's economy rebounded in 2021, despite the continued COVID-19 pandemic. Real GDP growth was estimated at 2.1 percent in 2021 rising from a 1.9 percent contraction in 2020. The third and fourth COVID-19 wave containment measures were not as restrictive as those of earlier waves, allowing firms to ramp up production in 2021. Economic growth was supported by a strong performance in the manufacturing sector due to improved demand from key export markets following the easing of lockdown measures in key destination markets in the region. The vaccination campaign, which reached about 29.2 percent of the population at end March 2022, helped to contain the spread of the virus and eased uncertainties on both demand and supply prospects (https://www.worldbank.org/en/country/eswatini/overview#1).

25. The agriculture sector's contribution to the country's GDP dropped from 12.3% in 2000 to 8.8% in 2019, partly due to recurring climate change induced droughts. Eswatini has a relatively diverse economy dominated by the agriculture and manufacturing sectors. Agriculture, forestry, and mining account for about 13% of Eswatini's GDP whereas manufacturing (textile and related processing) accounts for about 37% of GDP[38]. It is estimated that over 75% of smallholder farmers in Eswatini rely on rain-fed agriculture for their livelihoods, thus making them more vulnerable to climate change[39].

Implications and susceptibility to climate change

26. Eswatini is highly vulnerable to climate change impacts and was ranked 137 out of 181 countries in the 2020 ND-GAIN Index and regarded as being exceptionally susceptible to the adverse effects of climate change. The nation ranks 129th out of 181 countries in terms of its sensitivity, readiness to adapt, and exposure to the effects of climate change. In terms of vulnerability, it is positioned 32nd, and in terms of

[36] GENDER AND CLIMATE CHANGE Overview of linkages between gender and climate change, 2016 United Nations Development Programme

[37] Bertelsmann Stiftung's Transformation Index (BTI) Country Report, 2022. https://bti-project.org/en/reports/country-dashboard/SWZ

[38] https://unfccc.int/sites/default/files/resource/swznc3.pdf

[39] https://climateknowledgeportal.worldbank.org/sites/default/files/2021-08/15929-WB_eSwatini%20Country%20Profile-WEB.pdf

preparedness to adapt, it is positioned 74th.

27. The exposure to droughts has resulted in the loss of both crop and livestock productivity in the country, highlighting the relationship between climate change and food insecurity. This indicates that climate change impacts in the agriculture sector are already being observed in the country and such trends are likely to persist in the future. Livestock and crops production under rain-fed conditions have declined by over 30% on average over the last years. This has been evident especially since 2011/2012 till date. This is mainly because of increase in temperatures and below normal rainfall which has seen the country experiencing recurrent droughts and prolonged dry spells over the last decade. This has resulted in the area under cultivation for various crops especially maize consistently decreasing. According to IFAD climate adaptation in Rural development Assessment Tool (CARD) crop yields are also expected to decrease by 8.94% (managed grass), 8.06% (wheat), 6.68% (soy) and 6.60% (sunflower). Maize the staple crop is expected to decrease by 1.23% by 2030 assuming crops are not grown under irrigation. (Figure 15).

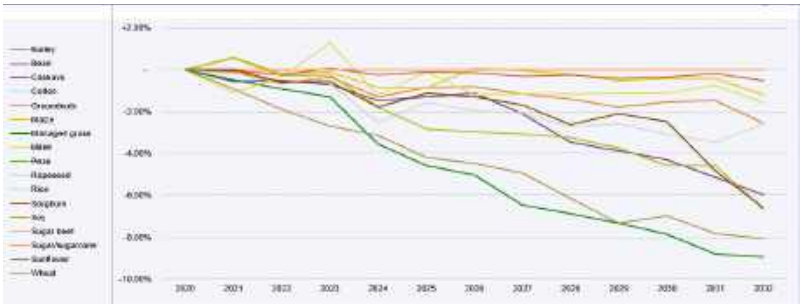


Figure 15: Crop yield simulations due to the impact of climate change[40]

28. The country experienced the worst drought in 2015/16 season and area under cultivation reduced significantly further, by 64%, compared to the previous years. Eswatini's exposure to droughts and extreme temperatures has therefore resulted in the loss of both crop and livestock productivity, highlighting the relationship between climate change and food insecurity.

29. Efforts to understand and respond to climate change impacts in the agricultural sector have been made through regional and international pilot interventions, policy development and farm level adaptation strategies and programmes[41]. Again, the country's forests and woodlands contribute to the economy and provide a range of goods to the country's population. For instance, a significant proportion (75%) of the country's population depend on firewood for energy (cooking and warmth), which is provided by the country's forests. This dependence is widespread and only low in urban areas. This creates a lot of pressure on the forest resources, resulting in higher rates of consumption compared to the rate at which the forest can regenerate. Now Eswatini is experiencing a rural energy crisis where demand for household energy has outstripped supply. This combination of high demand aggravated by low end-use efficiency has contributed to forest degradation, rural poverty and rural energy shortage. There are indications that fuelwood shortages exist in the Lowveld, Lubombo and parts of the Upper Middleveld as well as some parts of the Highveld, around dense settlements and arable areas[42] .

---

[40] *FAD (2019). Climate Adaptation in Rural Development Assessment Tool. Available at: https://www.ifad.org/en/web/knowledge/-/publication/climate-adaptation-in-rural-development-card-assessment-tool.*

[41] https://unfccc.int/sites/default/files/resource/swznc3.pdf

[42] https://www.undp.org/sites/g/files/zskgke326/files/migration/sz/UNDP-SZ-SOER-Report-2021.pdf

Vulnerability

According to the vulnerability profile in the country, 60% of the population is vulnerable to climate-related hazards[43]. Underlying socioeconomic factors, such as poverty, contribute to susceptibility. Shiselweni and Lubombo districts are socioeconomic vulnerability hotspots. The regions of Hhohho and Manzini are moderately vulnerable. Because these places have relatively high levels of employment and income, metropolitan areas, protected areas, private ranches, woods, and sugarcane plantations have far lower vulnerability levels than other sections of the country. Another important vulnerability in the country is reliance on ecological services. The rural population of Eswatini is particularly reliant on upstream ecosystems' provisioning and regulating services to ensure soil quality and provide access to water for household and agricultural use. Even though maintaining ecosystem services in Eswatini is a necessary component of supporting both rural subsistence livelihoods and commercial-scale agricultural productivity, the increased deterioration of ecosystems in Eswatini has had a negative impact on the population's cultural, economic, and social practices. These disruptions primarily affect the rural poor, particularly households that rely on subsistence farming for a living.

Human Development

30. According to the Human Development Report (HDR) compiled by the United Nations Development Programme (2021), Eswatini's Human Development Index (HDI) was 0.597[44]. This places the country in the Medium Human Development category and positioning it at 44 out of 191 countries[45].The HDR (2020) further highlights significant gender disparities in health, empowerment, and the labour market in Eswatini, with a value of 0.567, ranking 143rd out of 162 countries on the Gender Inequality Index (GII)[46]. In 2019, approximately, 31.3% of adult women reached secondary level of education compared to 33.9% of their male counterparts. These disparities are also reflected in the adjusted Inequality Human Development Indexes highlighted in Table 2. Gender inequality renders women more susceptible to and more deeply affected by HIV, external shocks and hunger, and climate change than their male counterparts. The measurement reflects gender inequality in reproductive health, empowerment, and economic activity. Notably, the country has made significant strides in human development concerning the review of environmental effects or developments brought about by anthropogenic activities. Humans need to interact with the environment to obtain food, water, fuel, medicines, building materials and many other things. Advances in science and technology have helped people to exploit the environment for their own benefit, but also introduced pollution and caused environmental damage. The impact of environmental problems on humans is significant, affecting all human activities, including health and socio-economic development [47]Notably, is that cattle and goats' population (the largest in rural area) have been on the decline (Figure 9) mainly due the shrink in the country's grazing land because of allocation of more land to resettle rural households[48].

Table 2: Inequality adjusted Human Development Index

	IHDI value	Overall loss (%)	Human inequality coefficient (%)	Inequality in life expectancy at birth (%)	Inequality in education (%)	Inequality in income (%)
Eswatini (Kingdom of)	0.432	29.3	29.0	25.1	24.1	37.9
Congo	0.430	25.1	24.9	22.8	20.9	31.0
Sub-Saharan Africa	0.380	30.5	30.5	29.7	34.1	27.6
Medium HDI	0.465	26.3	25.9	20.8	37.1	19.7

Adaptation measures

31. The country's vision for economic development is articulated in the National Development Strategy (NDS), which enunciates the country's vision 2022. The NDS is the country's overarching development framework,

[43] Dlamini, W. M. (2021). Climate risk mapping (Draft). Mbabane, Eswatini.
[44] https://hdr.undp.org/content/human-development-report-2020
[45] HDR21-22_Statistical_Annex_HDI_Table.xlsx (live.com)
[46] HDR21-22_Statistical_Annex_HDI_Table.xlsx (live.com)
[47] https://www.undp.org/sites/g/files/zskgke326/files/migration/sz/UNDP-SZ-SOER-Report-2021.pdf
[48] https://unfccc.int/sites/default/files/resource/swznc3.pdf

which promotes sustainable development and inclusive prosperity in the medium to long term. The nucleus of the vision is ensuring quality of life in the country whose critical dimensions are poverty eradication, employment creation, gender equity, social integration, and environmental protection. The vision fully supports community participation, inclusive participation, rural development, and empowerment. The attainment of this vision hinges on four thematic pillars namely, a) good governance, b) a vibrant and diverse climate resilient economy, c) environmental sustainability and d) highest human capital and social development. While environmental concerns have been mainstreamed (in the NDS) in the past few years, recently climate change has been considered a development priority. Increasing scientific evidence of climate change impacts on basic livelihood and infrastructure has brought about a general recognition that climate change should be incorporated into socio-economic development planning [49](.

32. The NDS seeks to balance the needs of the Swazi people with the environment's carrying capacity. Various national strategies to address climate change (within the context of national development) are outlined, including[50]:
    1. Mainstreaming climate change into national development, sectoral planning and budgeting.
    2. Promote the development and implementation of adaptation and mitigation actions that contribute to sustainable development, poverty eradication and adaptive capacity.
    3. Pursue capacity building to improve understanding of climate change.
    4. Develop a legislative framework for climate change.
    5. Promote and facilitate climate research and establish a national climate research centre.
    6. Modernization of meteorological, hydrological and agricultural observation networks.
    7. Establish a national framework for climate services to strengthen availability, production and application of science-based climate prediction services.
    8. Mobilize resources for implementation of climate change policy and strategy.
    9. Develop strategies for collecting sectoral data for modelling and inventory preparations.
33. Subsequently, the Eswatini's National Development Plan (2023-2028)[51] was developed with the aim of accelerating inclusive economic growth and sustainable development in the country, as outlined in the National Development Strategy. The plan proposes various climate related actions to address this national priority. Actions to raise awareness regarding environmental and climate change issues, notably in the education system, are also included, as are actions related to the development of climate smart and cost-effective agriculture technologies. The country's cabinet approved the National Climate Change Policy (2016), which supports the priorities outlined in the National Development Plan. The aim of the policy is to provide the enabling framework that will guide Eswatini in addressing the challenges posed by climate change, as per the relevant sectors in the country. The policy options are specifically aligned with the commitments found in the country's Nationally Determined Contribution and the actions prescribed to meet them [52].

Overall Objective: The project objective is to contribute towards reducing climate and human induced vulnerability of the agroecosystems of the Lubombo and Ngwempisi Landscape communities of Eswatini by increasing adaptive capacity of key local institutions and actors, through the deployment of good land, ecosystem management and climate resilient practices.

Specific Objectives: The project will have specific objectives that will inform the concrete climate change adaptation activities that aim to address the climate change risks and vulnerabilities that prevail in the communities. An integrated risk management approach will be adopted to address the interface between climate change, agriculture and food security to fulfil the following specific outcomes articulated in the table below.

---

[49] https://unfccc.int/sites/default/files/resource/swznc3.pdf

[50] https://www.undp.org/eswatini/publications/national-development-strategy-nds

[51] Eswatini National Development Plan 2023-2028 | United Nations in Eswatini

[52] https://unfccc.int/sites/default/files/resource/swznc3.pdf

Project / Programme Components and Financing:

Table 3: Project Components and Financing

Project/Programme Components	Expected Outcomes	Expected Concrete Outputs	Amount (US$)
1. Participatory and gender sensitive Capacity development within landscapes and rangelands.	**Outcome 1.1:** Improved landscapes and rangelands baselines, awareness and monitoring for agroecosystems resilience.	**1.1.1** Inclusive integrated agroecosystem assessment adopted to update biodiversity assessments done by the SNPAS project to inform adoption of climate smart technologies.	240,000
		1.1.2 Adopted use of information services Digital based knowledge and information management integrated for information sharing.	150,000
		1.1.3 Technology support for climate, weather early warning systems and advisories strengthened.	331,450
TOTAL FOR COMPONENT 1:			**721,450**
2. Strengthen multi-stakeholder institutional collaboration (public, private & communities) for strategic implementation of agroecosystem-based adaptation	**Outcome 2.1:** Improved coordination of landscapes by multi-stakeholders (Public, private and communities) for strategic frameworks of implementing the integrated agroecosystem approach.	**2.1.1** Training of trainer's modules developed to capacitate lead committees on ecosystem-based adaptation strategies.	150,000
		2.1.2 Institutional capacity building programs for committees to develop ecosystem-based management.	250,000
		2.1.3 Regional Consultative Observatory learning on landscapes coordination.	150,000
TOTAL FOR COMPONENT 2:			**550,000**
3. Stimulate climate-adaptive investments in integrated ecosystems (forest, wetlands and rangeland rehabilitation).	**Outcome 3.1:** Climate smart actions developed for integrated ecosystems adaptation.	**3.1.1** Pasture Management Plans developed and implemented	250,000
		3.1.2 Wetlands management plans developed and implemented	350,000
		3.1.3 Communal woodlots management plans developed and implemented.	150,000
	Outcome 3.2: Improved and catalyzed ecosystem-based restoration infrastructure in community landscapes for sustainable increased ecosystem services to sustain livelihoods.	**3.2.1** Two community and two public nurseries strengthened to supply restored ecosystems.	705,750
		3.2.2 Restored wetlands, water reservoirs and community ponds designed and established	2,000,500
		3.2.3 Technologies & practices adopted for Invasive Alien Species and soil erosion control in ecosystems.	500,000
		3.2.4 Agroforestry and silvopastoral technologies adopted	275,000
TOTAL FOR COMPONENT 3:			**4,231,250**
1. Upscale climate adaptive technologies for agroecosystems and sustainable alternative livelihoods.	**Outcome 4.1:** Disadvantaged group's transformative entrepreneurship promoted.	**4.1.1** Program on sustainable natural resources harvesting for handicraft and other products.	180,000
		4.1.2 Apiary sites (honey production) developed on restored ecosystems.	155,893
	Outcome 4.2: Incentivized climate smart agriculture for improved productivity.	**4.2.1** Drought tolerant, protein rich and early maturing crops promoted in rain fed agroecosystems.	724,277
		4.2.2 Catalytic program to switch from conventional to climate smart technologies.	1,500,000
	Outcome 4.3: Improved and sustainable commodity compliance to market requirements.	**4.3.1** Gender sensitive value chains platform strengthened to promote market driven production and minimize mal-adaptation.	80,000
		4.3.2 Capacity building program for strengthened value addition.	200,000
TOTAL FOR COMPONENT 4:			**2,840,170**
5. Total activity Costs (Component 1-3)			8,342,870
6. Project/ Execution cost (9.5%)			873,720
7. Total Project Cost			9,216,590
8. Project Cycle Management Fee charged by the Implementing Entity (if applicable) (8.5%)			783,410
Amount of Financing Requested			**10,000,000**

Table 4: Project Milestones Calendar

Milestones	Expected Dates
Start of Project Implementation	2025
Mid-term Review (if planned)	2027
Project/e Closing	2029
Terminal Evaluation	2030

PART II: PROJECT / PROGRAMME JUSTIFICATION

Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

34. Eswatini depends on healthy ecosystems for her economic and livelihood activities, including agriculture, tourism, and cultural activities. Healthy ecosystems interlinked with working landscapes and other open spaces form the ecological infrastructure of the country and are the foundation for clean air and water, fertile soils, health, and food. Climate change exacerbates pressure exerted on natural ecosystems, such as land use change related degradation. The proposed project of Strengthening Ecosystem- adaptation for Sustainable Livelihoods within Landscapes (SEASL) intends to promote an integrated well-functioning ecosystem through providing natural solutions that build climate resilience and help society adapt to the adverse impacts of climate change. This includes, buffering communities from extreme weather events such as floods and droughts, reducing erosion, increase natural resources for diversified local livelihoods, provide food and fibre. Furthermore, supports the country's traditional and cultural activities and provides habitats for animals and plants. The project will complement Financial Inclusion and Cluster Development Project (FINCLUDE) IFAD financed project. The project will accomplish this through an integrated suite of interventions coming from the four interlinked components that tackle climate change vulnerabilities and risks to food security by rural subsistence farmers found in the buffer zone communities that are nearby the core protected areas of the Ngwempisi and Lubombo Landscapes of Eswatini. The project design is informed by socio-economic and biodiversity studies conducted by the SNPAS project where the USD 10 million can help deliver sustainable results and builds government systems for replication of project outcomes.

35. Another approach adopted by the project for increasing the climate resilience of community ecosystems is incrementally build capacities of the poor and vulnerable smallholder farmers, through enhanced knowledge and skills (Component 1). This will be from the agroecological conditions assessments, which will inform the appropriate technologies and sustainable practices for the utilization of natural resources for improved livelihoods.

36. From the assessment, action plans will be developed where concrete productive assets, climate-adaptation and nutrition sensitive agricultural practices will be recommended for improved resilience, sustainable resource management and diversified livelihoods (Component 2).

37. The project will mainstream vulnerable or disadvantaged groups (women and youth) through an environmental and social safeguard assessment that will inform and concretize alternative entrepreneurial activities to ensure diversification of livelihoods intending to reduce the risks of high utilization pressure on one ecosystem over another, which will in turn enhance income streams for the rural poor (Component 4).

38. This will result in increased climate resilience of the target groups and of the ecosystems on which they depend. The project will mainstream participatory and sustainable, wetlands, forests and rangeland management for the stakeholders in the three landscapes (throughout the country) that were launched by the SNPAS project. The project is outlined such that an integrated risk management package is developed for catalytic funding, micro insurance, adoptive conventional switch to climate smart technologies, and structured markets for climate resilient products to enhance community's capacity to alleviate poverty (Component 3).

Component 1: Participatory Capacity development within landscapes for improved knowledge management (US$ 721,450).

39. This component emphasizes the critical need to assess vulnerabilities of ecosystems and their component species to climate change and its associated impacts, to help policymakers, practitioners, private sector and communities design and adopt appropriate policy and management measures that support ecosystem-based adaptation. Therefore, assessments generate an essential knowledge base necessary for sound climate change adaptation response options by society.

Outcome 1.1: Improved landscapes and rangelands baselines, awareness and monitoring on agroecosystems resilience.

40. The expected outcome of this component links with the MoA strategic element of enhanced information sharing and awareness of evidence-based adaptation through the mainstreaming of integrated agroecosystem assessment to update existing baselines. This will be done to improve the monitoring systems of natural resources within landscapes. The focus under this component is to attain an improved landscapes and rangelands baselines, awareness and monitoring on community agroecosystems resilience. This will generate information on prevailing practices and their degradation effects on specific ecosystems. The rationale of this component is that the data collection and processing will generate useful information to the public, private and community stakeholders. Furthermore, this component targets setting up a mechanism that will fill the knowledge gaps related to climate change and land degradation with relevance of promoting strategic developmental discussions including landscapes and rangelands planning. These activities collectively contribute to climate resilience in Eswatini by improving the understanding and monitoring of agroecosystems, leveraging technology for better information management, and enhancing early warning systems. By systematically addressing the vulnerabilities of agroecosystems and developing robust monitoring and information dissemination mechanisms, the project aims to build a more resilient agricultural sector capable of adapting to climate change impacts.

Output 1.1.1: Inclusive integrated agroecosystem assessment adopted to update biodiversity assessments done by the SNPAS project to inform adoption of climate smart technologies.

41. The observation of limited project delivery success for some projects has been attributed to the lack of proper understanding of climate change impacts in different communities' context. This has resulted in the limited ability to make informed decisions on most appropriate adaptation options, and on how these adaptation options would influence food security and nutrition. To correct that the programme approach would be to first lay the foundation of the project by developing evidence-based and systematic resilience building and adaptation intervention, with locality context. Eswatini has conducted several vulnerability assessments (VA) which in their nature are too generic with limited evidence to address agroecological vulnerabilities to climate change. A localized climate change impact analysis for specific ecosystems, crops grown, and livestock species will be carried out in the project target areas. This is to understand, using the most up-to-date and suitable climate change projections, how these will be impacted soon.

Activities

1.1.1.1. Assess the localized climate change impacts to identify local ecosystems vulnerabilities.
1.1.1.2. Document baselines of community-based climate vulnerability, which will update management plans.
1.1.1.3. Support the development of long-term institutional arrangements and regulatory and policy frameworks.
1.1.1.4. Develop participatory safeguards (environmental and social) by conducting interviews, qualitative and quantitative agroecological assets assessment.
1.1.1.5. Map project areas and highlight biodiversity and natural resources degradation hot spots.

Output 1.1.2: Adopted use of information services, digital based knowledge and information management integrated for information sharing.

42. The use of technological base for advancing knowledge management is critical. This will require the upgrade of the existing GIS portal with limited information on food systems and further expand the capacity of the land

degradation observatory system. These will introduce advanced data collection, storage, management, and communication using computers and software for remote sensing, GIS, modelling and forecasting. In general, the tools will assist in consolidating hazard and risk maps and to analyze historical data.

Activities

1.1.2.1. Facilitate the integration of the existing GIS portal platform to include agroecological (food systems) assessments and upgrading of functions of portal to accommodate new information and to conduct basic assessment.

1.1.2.2. Strengthen the land degradation observatory system for it to have a wider coverage of monitoring to gather more data that will also be published through the GIS portal.

1.1.2.3. Capacitate regulatory and mandated departments to monitor the land degradation processes induced by growing impacts of increased climate variability and change.

1.1.2.4. Facilitate the development and definition of user rights protocols, to define scope of system analysis and to determine equipment requirements, training needs, human resource development, and liaising with other government structures.

Output 1.1.3: Technology support for climate and weather information and early warning and advisories systems strengthened.

43. It has been observed that, the frequency and magnitude of drought, hailstorms, floods, and incidents of destructive insect pests i.e., fall army worm has increased. This emphasizes the importance of monitoring agroecological vulnerabilities in near real-time to provide early warning information to stakeholders. A paradigm shifts to a more risk reduction approach is required to ensure cost-effective and timely response to risks and disasters affecting livelihoods especial food systems.

Activities

1.1.3.1. Facilitate the development of a harmonized criteria and indicators, as well as appropriate procedures for analysis, warning, dissemination of information for decision-making.

1.1.3.2. Strengthen a multidisciplinary and inter-institutional platform for information sharing to affected stakeholders.

1.1.3.3. Promote the generation of new and more complete information which has to be properly disseminated to allow access to downscaled climate information systems, with a special emphasis on reaching the most vulnerable farmers, as well as providing training in order to turn this information management into actions in the field.

1.1.3.4. Conduct training for technicians and farmers on the tools required to manage a monitoring and early warning network and further engage participation in information dissemination for decision-makers and users of the system.

1.1.3.5. Facilitate development of a communications strategy for the project to define messaging modalities that are target group specific, cognizant of literacy, language, and access to ICT.

1.1.3.6. Facilitate a coordinated structure that will be put in place to develop weekly bulleting and radio spots and quarterly reports to share information of short and medium-term weather forecasts and long-term climate projections.

Component 2: Strengthen multi-stakeholder institutional collaboration (public, private & communities) for strategic implementation of agroecosystem-based adaptation (US$ 550,000.00).

44. Learning from the lessons of the Swaziland National Protected Areas Systems (SNAPAS) project, where working together with other partners including NGOs with experience working with communities in the various landscapes, and the University of Eswatini, was helpful. In some instances, women participation and the collaboration with other Government entities and departments has been less effective and more collaborative efforts are needed due to observed significant shortcomings as well as missed opportunities. Importantly, the newly established Landscape Associations (Las) need further assistance to become truly operational and meaningful. Without such support, there is high risk that they will become forums without action. Component 2 contributes to climate resilience in Eswatini by fostering better coordination and collaboration among various stakeholders, enhancing institutional capacities for ecosystem-based management, and leveraging regional knowledge and experiences. By strengthening multi-stakeholder collaboration, the project aims to develop

and implement more effective and integrated climate adaptation strategies within the agroecosystem context

Outcome 2.1: Improved coordination of landscapes by multi-stakeholders (Public, private and communities) for strategic frameworks of implementing the integrated agroecosystem approach.

45. The expected outcome of this component is to attain an improved coordination of landscapes by multi-stakeholders with a fare representation of women (Public, private and communities) for strategic frameworks of implementing the integrated agroecosystem approach. This will be done according to the provisions of the landscape forum, which has a management plan and according to the guidelines for community development plans as supported by the Tinkhundla Bill.

46. The landscape forum looks at underlying issues at a broader level and facilitate the mobilization of resources to address agroecological vulnerabilities within the communities under the landscape. At the landscape level there is a committee comprising representatives of communities, public, private and NGO's that advocate for financial support to funding mechanisms for the communities. These work closely with chiefdom development committees (CDC) who oversee development aspects in their respective chiefdoms. The CDC works with natural resource management committees (NRMC) from different communities. These NRMC spearhead development issues in their respective communities and report to CDC on progress made.

Output 2.1.1: Training of trainer's modules developed to capacitate lead committees on ecosystem-based adaptation strategies.

47. The landscape secretariat composed of representatives from communities, NGOs, private and public sector will be trained on governance and on climate change and systematic adaptation planning. This is to enable the secretariat to facilitate the local climate change adaptation planning process and to train other stakeholders in this process. A cadre of trainer of trainers on local climate change adaptation-planning will be put in place which will be able to scale up the approach in other localities even beyond the lifespan of the AF project. The training for the secretariat will include capacity assessment and project development skills, so that they can assist local communities to formulate simple concept notes for funding. These can target funding from the Agricultural Development Fund (ADF), Eswatini Environmental Fund EEF) and Small Grants from Global Environmental Facility (GEF) to address priority adaptation needs.

Activities

2.1.1.1. Mapping of potential coordination stakeholders at the landscape, chiefdom and community levels.
2.1.1.2. Analyze information gaps (conduct research on the lessons learned and best practices) on ecosystem-based adaptation.
2.1.1.3. Design training modules for lead community ambassadors to sustainably capacitate communities, chiefdoms and landscapes.
2.1.1.4. Train the leadership of landscapes as lead ambassadors.
2.1.1.5. Produce tailored awareness raising messages and materials on agroecosystems mainstreaming climate change, food security and nutrition nexus.
2.1.1.6. Lead ambassadors to capacitate their communities on concrete adaptive interventions that recommend site specific adaptive technologies and assets as informed by identified evidence-based gaps.

Output 2.1.2: Institutional capacity building programs for committees to develop ecosystem-based management.

48. There is need to expand the development or review of chiefdom development plans to ensure that the CDC adequately addresses issues of agroecosystems. Again, the establishment and revival of NRMC in communities to be strengthened to break the poverty cycle and dependency syndrome brought about by climate change impacts. These committees need to take ownership of climate change adaptation developmental initiatives required by respective communities. Relevance of the CDC and NRMC are to upscale community based natural resources management (CBNRM) activities, which now are happening in a

few communities.

Activities

2.1.2.1. Technical support for reviewing and strengthening functional capacities of existing Landscape Associations, Chiefdom development Committees (CDC) and Natural Resources Management Committees (NRMC).

2.1.2.2. Chiefdoms without Chiefdom Development Plans (CDP's) shall be capacitated to have the CDC and NRMC coordination functions in place.

2.1.2.3. Upscale knowledge sharing on concrete adaptation interventions within new geographical areas.

2.1.2.4. Develop simple M&E systems for chiefdoms and landscape development plans, to enable local authorities to properly monitor their implementation.

2.1.2.5. Provide institutional and capacity building to local authorities to implement natural resources conservation and adaptive frameworks.

2.1.2.6. Organize participatory planning sessions (Gender balanced) to review and update Chiefdom and landscape development plans in the areas of intervention to mainstream climate change adaptation

Output 2.1.3: Regional Consultative Observatory learning on landscapes coordination.

49. Look and learn educational tours will be undertaken in the country and within the region to observe and take-home lessons that can be instituted by the learning landscapes. This is a networking platform where experiences could be shared, collaborative actions through agreements, can be undertaken and mentorship or support opportunities could be availed. This is to address poor coordination or participation in the landscape forum due to limited exposure and experience on what is expected to be done. The participatory nature of the look and learn is expected to increase related interest and engagement by ensuring that each stakeholder will be able to draw specific benefits of their participation.

Activities

2.1.3.1. Identify existing landscape approaches within the Region and establish cooperative and information sharing collaborations.

2.1.3.2. Develop cooperation partnership agreements through MoU, with advanced landscapes for technical and joint collaborative efforts towards climate change adaptive interventions.

2.1.3.3. Plan an exchange or look and learn programme for mentorship and learning from advanced landscape initiatives.

Component 3: Stimulate climate-adaptive investments in integrated ecosystems (forest, wetlands, and rangeland) rehabilitation (US$ 4,231,250.00).

50. Taking the recommendations made from the SNAPAS project, there is a need to assist each of the LAs to further refine their priority actions considering the collaborative efforts required between the various landowners in the landscape. The revised planned actions should facilitate access to more climate finance facilities or funds because concreate adaptive interventions are expensive (requiring multiple sources of funding) and take time (require costed mitigation strategies). The component should attract mobilization of national resource (such as the Agricultural Development Fund (ADF), Rural Development Fund (RDF), Eswatini Environmental Fund EEF) towards concreate adaptation actions.

Outcome 3.1: Climate smart actions developed for integrated ecosystems adaptation.

51. This outcome will focus on the development of ecosystems resilience adaptation action plans across landscapes and chiefdoms. This will include schedules that will promote the maximizing of efficiency and leveraging on other similar plans/programmes for joint efforts. The component 4 activities collectively contribute to climate resilience in Eswatini by improving ecosystem health, promoting sustainable management practices, enhancing biodiversity, and mitigating the effects of climate change through adaptive land management and infrastructure development. The focus on gender sensitive community engagement

and capacity building ensures long-term sustainability and resilience against climate variability and change.

Output 3.1.1: Pasture Management Plans developed and implemented.

52. The situational analysis of this ecosystem will be determined with remedial bankable actions required to restore rangeland grass to support profitable livestock production. This will be through multiple integrated climate smart efforts aimed at increasing resilience to climate change of the natural resource, to support economic viable livestock productivity aiming at increasing income of community small scale farmers.

Activities

3.1.1.1. Community participation in identification of non-sustainable rangelands management practices leading to degraded ecosystems.
3.1.1.2. Technical support towards facilitating the generation of a SWOT analysis for the health of this ecosystem towards livestock productivity. Promote more heat and drought tolerant pasture crops and climate smart livestock management while providing better and nutritious pastures.
3.1.1.3. Conduct landowner's mobilization, especially engage community leadership and members on the development of the costed management plans for ownership and capacitation.
3.1.1.4. GIS mapping of rangelands degradation hotspots of chiefdoms and communities.
3.1.1.5. Provide technical support to create awareness to stakeholders on how the rangelands natural assets could be better managed for improved resilience and ecosystem functioning. This includes the improvement of fodder management by establishing sowing areas of perennial plants such as Lucerne and sainfoin to create a sustainable base for fodder in winter and for soil nutrition.
3.1.1.6. Engagement of relevant development partners operating in each community to also make inputs for sustained collaborative efforts.
3.1.1.7. Publication (as an awareness action) of management plans to attract more partnerships in advancing concrete adaptation efforts for improved livestock productivity.

Output 3.1.2: Wetlands management plans developed and implemented.

53. The marshes ecosystem occurs within the rangelands (grassland) ecosystem and are normally degraded by cattle trembling since they are not protected to control access. Success stories have been recorded in several projects where marshes have been protected through regeneration of wetlands flora and rise of water to surface flows. Again, marginalized groups such as women use wetland flora to develop handicraft products for income generation. Again, resurfaced water flows are used for human domestic uses, thus improving community and livestock health (through reduced distances to water sources).

Activities

3.1.2.1. Community participation in identification of degraded wetlands (marshes) within rangelands due to non-sustainable management practices.
3.1.2.2. Technical support towards facilitating the generation of a SWOT analysis for health wetlands ecosystem towards livestock productivity, alternative income sources, domestic uses and cultural benefits.
3.1.2.3. Conduct landowner's mobilization, especially engage community leadership and members on the development of the management plans and their management committees for ownership and capacitation.
3.1.2.4. Provide technical support to create awareness to stakeholders on how the wetlands natural assets could be better managed for improved resilience and ecosystem functioning.
3.1.2.5. Engagement of mandated regulating public departments for ensured compliance towards managing and sustainable use of the natural resources.
3.1.2.6. Publication (as an awareness action) of management plans to attract more partnerships in advancing concrete adaptation efforts for improved livestock productivity and livelihoods.

Output 3.1.3: Communal woodlots management plans developed and implemented.

54. The objective of this output is to restore rangelands degraded by invasive alien tree species such as Wattle, Gum etc. and expansive natural plants species such as *Dichrostachys cinerea* that can be managed to

sustainable woodlots. This will restore rangelands by limiting moisture and nutrients competition to natural grass species and thus promote shade tolerant non-nutritious species. Poor management of rangelands leads to change in natural ecosystem to another hence the need for integrated actions to restore them for improved grass biomass productivity to support higher stocking rates of livestock.

Activities

3.1.3.1. Community participation in the identification of areas mostly threatened by encroachment and expansion of other ecosystems other than initial state such as trees dominances in rangelands.
3.1.3.2. Technical support towards managing invasive and expansive tree species in the agroecosystems and classify potentials for woodlots for energy and household needs.
3.1.3.3. Conduct community mobilization to agree on rangelands management plans.
3.1.3.4. Using GIS map, the extent of change of grass ecosystem to forest ecosystem over time will help to predict impact over future years if restoration is not done. Then facilitate a participatory micro-zoning of woodlots to be sustainably managed.
3.1.3.5. Provide technical support to create awareness to stakeholders on how the woodlots natural assets could be better managed for improved resilience and ecosystem functioning.
3.1.3.6. Engagement of mandated regulating public departments for ensured compliance towards managing and sustainable use of the natural resources.
3.1.3.7. Publication (as an awareness action) of management plans to attract more partnerships in advancing concrete adaptation efforts for improved livestock productivity and livelihoods.

Outcome 3.2: Improved and catalyzed ecosystem-based restoration infrastructure in community landscapes for sustainable increased ecosystem services to sustain livelihoods.

55. The outcomes' objective is to promote adoption of concrete climate change adaptation initiatives and assets to mitigate adverse effects of extreme weather patterns on natural resources sustainability through a competitive grant mechanism mainstreamed within public structures for enhanced capacity.

Output 3.2.1: Two community and two public nurseries strengthened to supply restored ecosystems.

56. This output will promote carbon sequestration to reduce greenhouse gases in the atmosphere to improve air quality. Agroforestry activities will be supported by making it easier to procure quality tree saplings with the construction of four plant nurseries. These nurseries will provide for multiple benefits for ecosystem-based adaptation for erosion control, soil fertility improvement, and increased supply of tree-based foods for communities.

Activities

3.2.1.1. Set-up, rehabilitate or upgrade public nursery facilities.
3.2.1.2. Support development of manuals for managing nurseries and technical support towards training of beneficiaries on the maintenance of the nursery structures. The training will include site selection for nursery, planning of nurseries operational scheme, preparation of seeds / cuttings for planting, and norms and standards of seeds by species.
3.2.1.3. Conduct research on prevailing propagation techniques and capacitate beneficiaries on efficient propagation technologies applicable to different species.
3.2.1.4. Capacitate local community members to propagate plant species for sale to the project to complement supply and improve livelihoods at individual homestead level.
3.2.1.5. Facilitate a certification process for nurseries for improved recognition on good propagation practices.
3.2.1.6. Promote diversification of nursery products using native species for sustainable income generation.
3.2.1.7. Promote productivity of edible native species propagation with an economic viability for nontimber products (fruits, medicinal).

Output 3.2.2: Restored wetlands, water reservoirs and community ponds designed and established.

57. This output intends to increase resilience on water supply and livelihoods on detrimental effects of weather-

related shocks (28.3%) (drought, irregular rains and prolonged dry spells) constitute a higher %% (VAC, 2019). Again, this will increase livelihood resilience through promoting sustainable harvesting of natural resources.

Activities

3.2.2.1. Conduct participatory field surveys and water needs assessments based on availability and distance to nearest water sources for livestock in rangelands and for potential climate smart agricultural productivity such as fish and crops.
3.2.2.2. Water vulnerable sites mapping using GIS.
3.2.2.3. Conduct environmental impact analyses on water reservoirs establishments.
3.2.2.4. Design rainwater harvesting and cost-effective water protection infrastructures using nature-based solutions. Involve multiple stakeholders with interest in water resources management and utilization.
3.2.2.5. Train community NRMC on how to effectively manage water sources and monitor their sustainable use.
3.2.2.6. Promote sustainable utilization of water resources and their biological products (fish, biomass) for alternative livelihoods. Promote fishponds to reduce over harvesting of fish in natural riparian bodies.
3.2.2.7. Avail funding for reticulation of rangelands to provide water points in different locations.
3.2.2.8. Conduct quality assessment on water resources domestic use.

Output 3.2.3: Technologies & practices adopted for Invasive Alien Species and soil erosion control in ecosystems.

58. The objective of this output is to promote integrated and sustainable invasive alien species (IAs) control in multiple ecosystems interlinked with rangelands such as wetlands and forests. Long-term nature-based solutions will be promoted such as using natural species to control invasive alien species expansion.

Activities

3.2.3.1. Conduct landscapes biodiversity assessments to determine IAs infestation and determine ecosystem degradation caused.
3.2.3.2. Conduct research in innovative means to eradicate IAs and identify alternative uses replacing niches with native species.
3.2.3.3. Revegetate soils with poor ground cover to limit establishment and expansion of native species.
3.2.3.4. Develop a participatory and costed IAs control programme for different landscapes.
3.2.3.5. Capacitate communities on tools, technologies and how to control IAs integrating nature-based solutions.
3.2.3.6. Manage pressures that make ecosystems susceptible to invasions.

Output 3.2.4: Agroforestry and silvo-pastoral technologies adopted.

59. The objective of this output is to integrate tree production with livestock and crops management. This provides positive impacts on the environment, economy, and society. This will improve productivity in the short, medium, and long term based on a biologically diverse ecosystem that produces multiple products within the framework of sustainable land use. This will provide a diverse and healthy ecosystem that will enhance resilience in terms of climatic variations and related stress factors, including the reduction of local temperature leading to increased animal productivity.

Activities

3.2.4.1. Conduct site specific research on innovative agroforestry technologies.
3.2.4.2. Capacitate communities on how to improve agricultural micro-climate through the promotion of agroforestry systems even in degraded sloppy areas. This technology is applied to prevent soil erosion in slopes by the planting of water stress tolerant species.
3.2.4.3. Conduct forest restoration on degraded forest ecosystems within proximity of rangelands through planting about 25,000 trees from selected species that are resilient to climate change and meet some livelihood needs of the local communities.

3.2.4.4. Promote commercial woodlots within rangeland for diversified income generation for rangelands management and for improving management assets such as fence.
3.2.4.5. Improving nutrient source through leguminous shrubs palatable to livestock, especially in poor soils with less nutritious grass.

Component 4: Upscale climate adaptive technologies for agroecosystems and sustainable alternative livelihoods (US$2,914,277).

60. The expected outcome of this component is to strengthen resilience to climate change in the crop, livestock, forestry production systems and natural habitats in the target landscapes, chiefdoms, and communities. This component aims to improve livelihoods through the establishment of demonstration sites to promote climate smart and good agricultural practices that also target vulnerable groups and communities. The component 4 activities collectively contribute to climate resilience in Eswatini by enhancing sustainable agricultural practices, protecting, and utilizing natural resources efficiently, developing alternative livelihoods, and strengthening market linkages. The project's comprehensive approach addresses the multifaceted challenges posed by climate change, ensuring sustainable development and resilience in the agricultural sector and beyond.

Outcome 4.1: Disadvantaged group's transformative entrepreneurship promoted.

61. This outcome will focus on empowering women and youth groups and individuals will be identified and trained to develop their entrepreneurship skills and competitiveness through market links. Since women constitute 70% of the of the farmers populace, they are critical change agents in their communities for climate resilience. Therefore, targeting and collaborating with the National Women's and Youth Councils (will incentivize women and youth. Activities include sustainable natural resources harvesting for handicrafts, promoting alternative livelihood products, and establishing apiary sites for honey production on restored ecosystems.

Output 4.1.1: Program on sustainable natural resources harvesting for handicraft and other products.

62. The objective of this output is to ensure that rehabilitated natural assets such as wetlands, rangelands and forests should be utilized in a sustainable manner because should these resources be underutilized, they might pose other environmental hazards. Therefore, nontimber products utilization will be promoted to improve livelihoods.

Activities
4.1.1.1. Capacitate communities to implement their management plans, operationalize structures agreed upon and promote alternative livelihood products derived from the natural resources.
4.1.1.2. Capacitate NRMC to lead training of community members on how wetlands can be protected and sustainably utilized.
4.1.1.3. In the case of wetlands, resurfaced water will be naturally diverted for supporting crop production as informed by water volumes and recommended crops variety.
4.1.1.4. Sustainable harvesting of flora for handicraft products will be promoted and market linkages established for the products developed from the natural resources.
4.1.1.5. Develop publication products to promote success stories of wetlands protection, resultant livelihoods and ecosystem benefits to raise awareness to multiple stakeholders.

Output 4.1.2: Apiary sites (honey production) developed on restored ecosystems.

63. The objective of this output is to promote species biodiversity to promote ecosystems health through setting up apiaries to stimulate flora health while deriving nontimber benefits such as honey.

Activities

4.1.2.1. Community capacity building on the importance of restoring native flora communities such as forests and wetlands to derive economic and livelihood benefits.
4.1.2.2. Participatory site assessments for apiary viability will be undertaken to determine the most suitable sites. Communities will be trained on key indicators for determining viability.
4.1.2.3. Capacitate beneficiaries with skill development for making basic hives and procure safety/protective gear for managing honey production.
4.1.2.4. Support market linkages with potential markets.
4.1.2.5. Promote Youth and women to participate in initiatives of alternative livelihood opportunities.

Outcome 4.2: Incentivized climate smart agriculture for improved productivity.

64. The objective of this outcome is to promote climate change adaptation and natural resources management. The community-based pasture management techniques have led to the degradation of pastures through overgrazing. Pasture degradation is compounded by a changing climate with increasing temperatures, reducing access to water, increasing number of agricultural and hydrological drought events, changing precipitation patterns, reducing soil moisture levels causing increased plant stress and reducing the capacity of pastures to support ever-increasing numbers of cattle.

65. A catalytic grant mechanism will be established under the Agricultural Development Fund (ADF) and Eswatini Environmental Fund (EEF), where the ADF will provide incentives to de-risk agricultural productivity to enable sustainable resilience and adaptive capacity. This will be through commodity diversification and risk reduction in the form of micro insurance as a risk transfer scheme, which among other products will compensate for weather-related losses. The EEF will support land rehabilitation programmes to improve natural resources health and increase productivity.

Output 4.2.1: Drought tolerant, protein rich and early maturing crops promoted in rain fed agroecosystems.

66. The objective of this output is to provide capacity development and technical support for sustainable and climate-resilient agricultural practices. Production will be enhanced, and diversification will be supported for climate-resilient, nutritious value chains, including supporting the reduction of post-harvest losses (PHL), to enhance processing, and to increase access to markets.
67. Adaptation assets to be considered are for reducing soil erosion and addressing related land degradation, which are increasingly required in the landscapes due to existing degradation problems, which are worsened by greater drying and more intensive rainfalls, which is linked to climate change. The Eswatini Environmental Fund (EEF) will facilitate natural resources management grant aimed at rehabilitations.

Activities
4.2.1.1. Conduct an assessment to update baseline information on adaptive agricultural production and sustainable land management practices with suggested technical, economical, and socio-environmental feasibilities to avoid maladaptation.
4.2.1.2. Capacity building and technical support on erosion control techniques that can be adopted in each landscape for agroecosystems recovery for improved resilience.
4.2.1.3. Provide technical support for growing plant material that that has climate resilience properties to improve rural livelihoods.
4.2.1.4. Promote growing of climate tolerant species, especially to droughts, as well as diversification of cultivars and other products such as legume plants that contribute nitrogen to the soil.
4.2.1.5. Build climate-resilience of pastures by improving water reticulation and quality.
4.2.1.6. Improve fodder management through the establishment of sowing areas of perennial plants (lucerne) to create a sustainable base for fodder.
4.2.1.7. Promote sustainable grazing such as rotational grazing in order to provide defoliated pastures time to recover.

Output 4.2.2: Catalytic program to switch from conventional irrigation to climate smart technologies.

68. The objective of this output is to promote climate change adaptation and natural resources management in agroecosystems through grant mechanisms administered through the Agricultural Development Fund (ADF). Communities will be required to make proposals or business plans that contribute to the outputs of climate smart technologies by funding the switch from conventional means to more climate smart technologies. Eligibility criteria will include the presentation of community projects that will promote climate resilient infrastructure and renewable energy adoption.

Activities

4.2.2.1. Support water use efficiency initiatives to address projected climate change induced reduction in water availability and make crop production systems less vulnerable to climate change impacts.
4.2.2.2. Support climate smart mechanization to promote adoption of conservation agriculture for agroecosystems recovery for improved resilience.
4.2.2.3. Promote protected farming such as greenhouses and shade nets, which mitigate against extreme weather incidences such as excessive heat and hailstorms.
4.2.2.4. Support development of greenhouses to promote the harnessing of nature-based protein sources for livestock from black soldier fly.
4.2.2.5. Capacity building on the management and operation of the climate smart technologies.

Outcome 4.3: Improved and sustainable commodity compliance to market requirements.

69. The objective of this outcome is to strengthen the sustainability of nature based and alternative community livelihoods. Agricultural products will be linked with their potential markets to ensure sustainability in climate change adaptive interventions i.e., promotion of livestock off takes in rangelands to allow recovery from overgrazing. Again, agricultural crops produced through climate smart technologies will be linked with sustainable markets for continued productivity beyond project life. Other than agriculture products, in rehabilitated wetlands and indigenous forests within rangelands, there will be promotion of non-timber products (NTP) which have an economic viability and can improve community livelihoods.

Output 4.3.1: Gender sensitive Value chains platform strengthened to promote market driven productivity.

70. The objective of this output is to promote market linkages to stimulate market driven production. To achieve this output, the project will carry out awareness raising activities, strengthen existing market linkages on different commodities and provide business trainings for a number of selected youth and other marginalized community groups with agroecosystems entrepreneurship interest.

Activities

4.3.1.1. Identify the different agroecosystems business niches that need market linkages strengthening such as livestock and vegetable production, black solder fly and vegetable nurseries and non-timber products (honey, reeds etc.).
4.3.1.2. Conduct an analysis and diagnosis of the existing commodity producers, their organizations and cooperatives in the areas of intervention.
4.3.1.3. Create community awareness and mobilization on opportunities of agroecosystems livestock, crops and NTP to address women's and youth's needs and priorities.
4.3.1.4. Provide trainings in economic aspects, business plans, leadership, and entrepreneurship for selected young people and marginalized groups (women) on alternative livelihood from agroecosystem management.
4.3.1.5. Support the development of training tools such as the development of training curricula for farmers and community entrepreneurs.
4.3.1.6. Create markets for enhanced and diversified production, through linkages to the ongoing Home-Grown School Feeding (HGSF) programme of the GoE, which is supported by FAO and WFP.
4.3.1.7. Coaching of agroecosystems entrepreneurs in implementing their funded projects.

Output 4.3.2: Capacity-building program for strengthened value addition.

71. The objective of this output is to provide value chain support based upon a targeted and localized value chain analysis and marketing study for selected climate-resilient and nutrition sensitive crops and alternative livelihood NTP relevant to agroecosystems management. Value addition will be promoted to improve income generation and diversification of livelihoods. Sectorial assessment of prevailing value addition practices and technologies will inform approaches for the project interventions to build sustainable climate change resilience of crops/products that are likely to be selected during the AF project. The value addition will reduce post-harvest losses and attract more participation by communities therefore giving them more returns.

Activities

4.3.2.1. Promote value addition on agroecosystem products to be derived from the landscapes, such as crops, livestock and NTP.

4.3.2.2. Provide opportunities suitable to attract participation of marginalized groups (youth and women) such as storage facilities, and technology-oriented marketing actions.

4.3.2.3. Support and develop co-operatives and aggregation centers for farmer organizations or groups to allow for a more complete value chain that will ensure that smallholder farmers have more consistency in the market through value added supplies.

4.3.2.4. Provide farmers with climate sensitive market information and capacitate communities on value addition processes of specific commodities to inform business planning and facilitate structured market linkages.

4.3.2.5. Support in the acquisition of technologies, equipment's, and infrastructure for promoting post-harvest value addition.

4.3.2.6. Promoting post-harvest and market support to early-maturing climate-resilient cereal varieties, as mentioned above, as well as vegetables and small ruminants/poultry.

A. 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 and Gender Policy of the Adaptation Fund.

72. The project has been screened for environmental and social risks as per the Environmental and Social Policy of the Adaptation Fund and was found to have limited adverse environmental or social impacts. Any potential negative impacts because of this project are believed to be small in scale, limited to the project area, reversible and can be either avoided, minimized or addressed using recognized good environmental and social management practices. To mitigate negative impacts, the project will adhere to environmental and social policies, including the Gender Policy of the Adaptation Fund. This involves conducting thorough environmental and social safeguard assessments to identify and address any potential adverse effects. The project will implement participatory safeguards and management plans, ensuring that interventions are designed and executed with minimal environmental disruption and social upheaval. By actively involving communities in planning and decision-making processes, the project ensures that interventions are culturally sensitive, socially acceptable, and environmentally sustainable. Additionally, the focus on capacity-building and awareness-raising helps communities understand the importance of environmental conservation and social equity, promoting sustainable practices that align with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

<u>Economic Benefits</u>

73. Improved income generation activities at community level: Through the improved pasture management plans (Component 3, Output 3.1.1), communities will be able to improve livestock productivity thus consequently more income will be generated from livestock sales contributing significantly to community-level economic

improvement. Wetlands management's plans (Component 3, Output 3.1.2) will enable the production of biodiversity material which communities will benefit from harvesting to create and sell hand craft equipment for local and international markets native medicinal plants thereby generating additional income.
Communal woodlots under management (Component 3, Output 3.1.3) generate income through selling of firewood Communities will also generate income from sales of native plant seedlings from the two public nurseries for ecosystem restoration (Component 3, Output 3.2.1). These nurseries support both ecological restoration and economic development. Honey sales (Component 4, Output 4.1.2) from local natural plants with medicinal properties will increase profits to communities' women, men and vulnerable members of the community. This sustainable management of natural resources contributes to income diversification and environmental conservation. The focus on developing alternative income-generating activities, diversifies income sources, reducing reliance on a single ecosystem and thereby mitigating economic risks. Additional income generating activities are designed with a particular focus on women and youth, empowering these vulnerable groups through entrepreneurship and skill development, thereby fostering economic independence and resilience. Enhancing production, reducing post-harvest losses, increasing market driven products, usage of drought tolerant, protein rich and early maturing varieties, Component 4, Output 4.2.1) which are climate resilient will encourage gender responsive economic benefits.

Social Benefits

74. Improved food security and nutrition: The food security and nutrition policies have the mandate to always increase food security in Eswatini and food available for all. In the past decades there has been a fluctuation in the significant number of populations, which is chronic food insecure, on average 20% of the population. This project aims to revive the native plants that are drought tolerant and climate resilient to improve the food security statues of the country.

75. The adaptation to short maturing varieties of crops Component 4, Output 4.2.1) for food production will enhance food security in the country. The income from hand craft materials, honey sales, firewood sales and medicinal plants (Components 3 and 4) will improve food security for communities (women, men and vulnerable members of the community. The gender sensitive participatory. The establishment of gender sensitive participatory management plans will result in the communities being able to manage the extraction of their natural resources in the ecosystem. Through the establishment of multi-stakeholder institutional collaboration, which is rooted in participation, communities will have ownership of their natural resources thus benefiting their communities.

76. The whole of Lubombo region is faced with the issue of portable water, through this project from the restoration of wetlands (Component 3, Output 3.1.2) there will be a possibility of portable water for human usage. Portable water sources will significantly reduce the time and physical burden involved in fetching water from distant or unsafe sources.

77. The project integrates gender considerations at its core, recognizing the pivotal role women and youth play in community development and environmental stewardship in Eswatini. By empowering women and youth through targeted income-generating activities, capacity building, and participatory management plans, the project aims to foster gender equality and enhance the economic independence of these groups. This approach not only supports women and youth in becoming key actors in climate resilience and ecosystem management but also ensures their active participation in decision-making processes related to resource management and community development.

Environmental Benefits

78. Enhanced natural resources, biodiversity, and ecosystem services in project target areas: The productive assets developed under Component 3 such as the resource management plans, agroforestry and silvo-pastoral technologies will improve the natural resource base upon which livelihoods depend. Erosion control measures will reduce soil loss from the project areas and promote sustainable land use practices, reducing degradation and promoting ecological balance. Sustainable natural resources harvesting provided through this project, such as agroforestry and silvo-pastoral Component 3, Output 3.1.3):, will increase soil fertility and soil structure, as well as prevent biodiversity loss from the use of inorganic chemicals. These efforts not only

enhance biodiversity and ecosystem health but also provide crucial services such as water purification, soil stabilization, and carbon sequestration, which are vital in the context of climate change adaptation.

79. These initiatives to restoration and sustainable management of critical ecosystems (Component 4): such as forests, wetlands, and rangelands are complemented by efforts to educate and engage communities in environmental stewardship, ensuring long-term commitment to ecosystem preservation **(**Component 2) to manage natural resources sustainably.

B. Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.

80. The cost effectiveness of the project is evident compared to the current statues of the country. Proceeding ignoring the current climate issues in the country will have a negative impact on the rural livelihoods more especial in the Lubombo region. The effects of climate have ripple effects on food security, availability of portable water, availability of arable land for cultivation and loss of biodiversity in the communities. This is evident on the fluctuations on crop production not meeting national foods requirements, hikes in food prices and increase in food imports. In the absence of effective adaptation in the rural communities of the country, extremely high costs are being accrued to address the effects of droughts. For example, the 2015/16 drought cost the country 7.01% of the country's GDP or 18.58% of Government expenditure.

Table 5: Benefits generated against alternative

Component	Benefits Generated	Alternative to Project
1. Participatory and gender sensitive Capacity development within landscapes and rangelands. USD 721,450	The project will enable adoption of climate smart technologies to improve rangelands and landscapes baselines, improve knowledge and information management and early warning systems thus increasing adaptive capacity of the landscapes.	With the current status quo the landscapes are not able to operationalize their management plans for adoption of climate smart technologies. The lack of baselines, digital information services and early warning systems results in lack of adaptation action making the landscapes remain vulnerable to the effects of climate change.
2. Strengthen multi-stakeholder institutional collaboration (public, private & communities) for strategic implementation of agroecosystem-based adaptation USD 550,000	Strengthened capacity of multi-stakeholder (Public, private and communities) coordination of the landscapes for strategic frameworks will enhance sustainability of an integrated approach on agroecosystems restoration and sharing of good practices	Without capacitation and multi stakeholder coordination adaptation efforts will be unsustainable and land degradation and loss of biodiversity will not be curbed. Institutional adaptation capacity will be limited. Traditional and communal coordination structures will remain incapacitated and not advocates for adaptation
3. Stimulate climate-adaptive investments in integrated ecosystems (forest, wetlands and rangeland rehabilitation) USD 4 231,250	Ecosystems management plans will ensure long term conservation and enhance resilience. Strengthening of nurseries, wetlands, reservoirs, IAPS control, agroforestry and silvopastoral will provide supply for ecosystem restoration. Restored will strengthen aquatic ecosystems services and livelihood for the communities	The landscapes are currently faced with degraded pasture, wetlands, uncontrolled spread of communal woodlots, IAPS resulting in an increase in the less palatable grasses, decrease in availability of water and loss of biodiversity.
4. Upscale climate adaptive technologies for agroecosystems and sustainable alternative livelihoods USD 3,070,000	Programs on sustainable harvest of natural resources, apiary development, drought tolerant crops, market driven production and value addition will curb food insecurity, provide livelihood and sustained sources of income.	Harvest of natural resources such as thatch from wetlands is currently unsustainable, fishing is not controlled, crops are suffering from heat waves and drought thus non-sustainable livelihood and a gap to meet national food requirements resulting in high food prices.

81. Eswatini State of Environment report 2021 shows that there is an increase in the less palatable grasses species because of land degradation, loss of productive land due to soil loss and erosion. Crop lands adjacent to water ways and water bodies are used for production of maize and vegetables thus planting on the buffer zone of the water bodies. In providing sustainability of the aquatic bodies' protection is necessary which can be enabled through this project. Through protection of these aquatic bodies soil erosion which is due to

livestock movement can be managed. The adoption of the traditional structures in the communities to manage the natural resources through management plans provides a sense of sustainability and ownership by the communities whereby extraction rates of the resources can be monitored.

82. The cost effectiveness of the fund in the integrated landscape management systems prioritizing biodiversity in agriculture will enhance the soil and water conservation and eradication of alien invasive plant species for increased productivity and sustainable use of the land, croplands, water, wetlands and rangelands. The state of the environment report is a resourceful tool for identifying rangeland hots spots in the country. Effective conservation and environmental management of the landscape implementing the various livelihoods for food and nutrition security and income generation will support the long-term sustainable use of the various resources in the landscape.

83. Land and water conservation stimulate the sustainable use of Aquatic and terrestrial resources, which will ascertain the regulated and monitored use of the resources. Wetland management is of great importance since the unregulated cropping in wetland will result in constricted water availability and contaminated water resources through eutrophication thus compromising aquatic life and resources and effective fisheries sector. Sustainable rangeland management and effective stocking rates will benefit an agro pastoral community through the sustainable management practices, which will control the density of animals and stimulate off-takes through market linkages and conserved animal genetics that are resilient to climate change hazards. The support of plant and animal genetics that exhibit traits of resilience to the changing climate is envisaged to support the development of local gene diversity for increased trait exchanges for improved adapted local seed varieties that will be accessed by small holder farmers at lower cost to hybrids that are climate sensitive.

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

84. The project is hinged on the national adaptation plan through the practices that are implemented by the community as it pursues its livelihoods for food and nutrition security. The community will require capacity building on the NAP to effectively identify problem areas to influence the adoption of climate smart approaches that are contributing to the nationally determined contributions to support the effective drive for climate resilience.

85. The National Development Plan (NDP) 2023/24-2027/28 supports the improvement of livelihoods through poverty eradication, environmental protection, gender equality and employment creation through a complete integration of environmental management and enforcement in the Eswatini development trajectory. The NDP has also mainstreamed the critical environmental and climate change impacts that compromise livelihoods and income generating activities thus resulting in lower economic activity and compromised food and nutrition security. The AF project has been aligned with the NDP to promote alternative livelihoods arising from ecosystem management where youth and women can benefit through the strengthening value chains.

86. The review of the National biodiversity strategy (2016-2022), which recognizes environmental management and sustainable development and alignment objectives of integrated landscape management. The project is in line with the National Determined Contributions (NDC) of 2021, which represents a progression beyond the 2015 NDC by adopting an economy wide GHG emissions reduction target of 5% by 2030 compared to the baseline scenario and help achieve a low carbon and climate resilient development. This economy wide emission reduction can increase to 14% with external financing and this translates to 1.04 million tons fewer GHG emissions in 2030 compared to a baseline scenario.

87. The Eswatini Environment Action Plan (SEAP) has the following objectives; provide a state-of-knowledge overview of the environmental conditions in the country; identify, prioritize and where possible quantify environmental problems; propose solutions to immediate environmental problems in the form of programmes

and projects, and institutional and legislative reforms, together with details of their funding requirements and their human resource/capacity-building needs; establish a framework which provides coherent direction for the process of environmental monitoring and action planning in the future; and provide a framework for continuous development and environmental policy dialogue within the country and with donor partners. This aligns with component 1 of the project where vulnerability assessments will be developed to provide adaptation knowledge. Again, component 2 develops remedial actions through management plans.

88. Eswatini National Irrigation Policy: The main objective of this policy is to ensure that the irrigated agriculture sub-sector in Eswatini contributes fully to economic growth and poverty alleviation in accordance with the Government's Stated Strategy; the National Development Goals, the Water Act of 2003 and the need to use the country's limited natural resources in a sustainable fashion. This policy was able to bring clean piped water to the rural areas of the country more especially the semi-arid and arid areas, which is commonly known as community water. The effects of droughts and aridity is mainly experienced in the water and sanitation sector due to the direct linkages and this AF project intends to restore degraded water sources and promote sustainable utilization of irrigation water through efficient irrigation technologies.

89. Food Security Policy (2005) and Food Nutrition Policy (2010): All people in Swaziland at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. The project objectives are enshrined in the food and nutrition policy that seek to reduce poverty and improve food security through the ecosystem approach to terrestrial management, soil degradation and management. Therefore, the project in compliance with national environmental laws, categories and regulations will consider the social aspects of existing livelihoods in their various localities, avoid deterioration of existing livelihoods through assessment of sociological issues and predominant livelihoods.

90. Fisheries Policy (2011): The policy seeks to ensure access to sustainable use of aquatic resources for socio-economic development purposes. The project will contribute to the management and efficient use of the aquaculture and fisheries resources through the ecosystem approach to fisheries livelihoods development.

91. Livestock Development policy: The policy objectively seeks to improve and strengthen the quality and reproductive performance of livestock and to ensure risk analysis efficiency, food safety and ensure access to sustainable food, nutrition, and health security. Rangeland degradation control and management programs are part of the livestock policy objectives, and the AF project informs the management of the ecosystems within rangelands to ensure the contribution to socio-economic development.

92. Comprehensive Africa Agriculture Development Programme (2010): CAADP is a multi-sectorial and continental Policy that objectively seeks to increase agricultural output and productivity, increase the earnings for those engaged in agriculture by promoting adoption of diversification and sustainable intensification and use of appropriate technology, enhance food security, ensure sustainable use and management of land and water resources. The AF proposed project will offer catalytic funding for switching conventional practices to climate smart technologies.

93. Environmental Policy: The policy promotes the enhancement, protection and conservation of the environment and the attainment of sustainable development in Eswatini. The project intends to protect wetlands and forest ecosystems through sustainable livelihoods.

94. National Gender Policy (2019–2030): Provides a framework for gender equality and equity in Eswatini by providing guidance for stakeholders and institutions at all levels on how to advance gender equality and equity, and to mainstream gender across all sectors. The alignment of this AF project is through promoting women and youth participation in alternative livelihoods and their participation in community ecosystem management committees.

95. Draft National Wetlands Policy (2020): Promotes the conservation and sustainable and wise use of wetlands.,

which forms the pillar of interventions of the project on wetlands interventions.

96. Revised Nationally Determined Contribution (2021): Promotes adopting an economy-wide GHG emissions reduction target of 5% by 2030 and help achieve a low carbon and climate resilient development. The project activities on restoration of ecosystems (grasslands, wetlands, and forests) improves carbon sink and reduces emission of greenhouse gasses due to reduced degradations.

97. Third National Communication to the UNFCCC (2016): This is considered as a major effort to shape climate change actions and policy development and facilitate its integration to broader national development priorities. the AF project intends to strengthen national and community natural resource management strategies for enhanced adaptation interventions.

D. Describe how the project/programme 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.

98. The programme will comply with the Adaptation Fund standards and policies, such as the Social and Environmental Policy and Gender Policy of the Adaptation Fund and will align and adhere to the national laws and codes of the Government of Eswatini. IFAD's social, environmental and climate assessment procedures (SECAP) are fully aligned with AF related policies. The proposed project complies with the various laws related to the project's implementation, such as environmental, agricultural and water resource acts and laws. Related line Ministries in Eswatini will be instrumental in strengthening compliance and alignment with the laws and policies of the country. Relevant government Ministries will be further engaged during design to ensure that activities comply with relevant national standards. The relevant technical standards applicable to the project include EWS, water supply, water harvesting, irrigation systems, plant and animal production and selection, ecological infrastructure, construction will be further elaborated at full proposal development. A full detailed analysis, evaluations and consultations with the competent services will be carried out during the environmental and social impact study during the full proposal design.
99. An Environmental and Social Management Plan in line with the ISO 14001 Environmental Management System Standards and the Environmental and Social Policy of the Adaptation Fund, including a Risk Assessment for local interventions as Unidentified Sub-projects will be prepared during proposal development stage.
100. The programme will also be aligned to IFAD's nine Environmental and Social standards under the SECAP. The includes biodiversity strategy, resource efficiency and pollution prevention, cultural heritage, indigenous peoples, Labour and working conditions, community health and safety, physical and economic resettlement, financial intermediaries and direct investments, and climate change. The priorities, as mentioned earlier, comply with the Fund and national policies and regulations for Eswatini.
101. The Environmental and Social Management Plan (ESMP) that will be articulated in this project will consider and track risks that have been identified at proposal stage; screen for any new risks during the implementation of the project and serve to monitor and report on the mitigation measures. The monitoring and reporting measures proposed in the ESMP will be fully integrated in the monitoring plan of the project. The ESMP will not allow the implementation of activities, including undefined sub-projects, with high risk. The proposed project will fully comply with national laws particularly the National Environmental Management Act, the Adaptation Fund's Environmental and Social Policy and the IFAD social and environmental standards. During implementation IFAD and partners will ensure effective coordination with the Eswatini Environmental Authority (EEA) to duly comply with the requirements established within the National Environmental Regulation and Guidelines. A screening form will be developed by EEA for each sub-project and reviewed before implementation starts.

Table 6 Policy and project compliance

Law/Policy	Description and Project Compliance
Pesticide Management Act, 2017	Applies to pesticide intended for import into, use in, or export from Eswatini, whether for agricultural, forestry, veterinary, or public health uses. No project activity will support import or export of pesticides
Biosafety Act, 2012	The Act makes provision for mechanisms for ensuring the safe handling, transfer and use of products of biotechnology. The project has no activity on biotechnology.
Waste Regulations, 2000	These Regulations regulate the management of solid waste and liquid waste disposed of on land and are binding on the State. The will no harmful waste perpetuated by this project
Environmental Management Act 2002	The objectives of this Act are to establish a framework for environmental protection and the integrated management of natural resources on a sustainable basis. the project will contribute to environmental protection and management of natural resources
National Food Security Policy for Swaziland	Policy seeks to provide a guideline for the strategies and measures that must be adopted in order to improve food security for all people in Swaziland. The project will contribute to food security through climate adaptive food production
Swaziland National Climate Change Policy, 2016	This Policy lays down strategies to ensure a sustainable, climate resilient and inclusive low-carbon green growth society. Project proposed interventions will enhance resilience to climate change.
National Water Policy, 2018	Policy seeks to promote efficient and sustainable use of water resources through strengthening the institutional framework. Project will develop wetland management plans, restore wetlands amongst other resilience building activities.
Swaziland National Irrigation Policy	The main objectives of the Policy are to ensure that the irrigated agriculture sub-sector in Swaziland contributes fully to economic growth and poverty reduction. Project will strengthen capacity on climate smart irrigation technologies.
Water Act, 2003	The Act makes provision for the management and conservation of water resources, including groundwater, The project will restore degraded water sources.
Natural Resources Act, 1951	Guides on supervision over natural resources; (b) to promote the conservation and improvement of natural resources; (c) to advice the Minister of Agriculture on the proper conservation, use and improvement of natural resources. Project will promote sustainable management of natural resources
Forest Preservation Act	This Act places restrictions on the cutting of indigenous or government timber and provides otherwise for the protection of such timber. Project will promote controlled woodlots and afforestation
Plant Control Act	This Act makes provision for a wide range of measures for the protection of plants, plant reproduction material and timber against diseases and pests including noxious weeds, insects (including honeybees), alien animals and mushrooms. Project will control AIPS

E. Describe if there is duplication of project/programme with other funding sources, if any.

102. Several climate change related projects and programmes are on-going while others are planned in Eswatini. It is acknowledged that some projects may look like this proposed project but with distinctive differences as articulated on Table 5 below. Numerous discussions with the developers of the other almost similar projects concept notes had been done, and clear unique distinctions were made. It is important to identify synergies and avoid duplications to maximize the use of scarce resources. This project will complement other projects like the SNPAS and FINCLUDE project. Based on the projects listed in Table 6 there is no possible duplication with all listed projects. However, further consultations at design stage with the implementing entity will ensure that risk of duplication is minimized.

Table 6: Measures to avoid duplication of projects from other funding sources.

Project Name	Entity	Duration	Description	Alignment
Currently completed projects				
Lower Usuthu Sustainable Land Management Project	MOA /ESWADE	2010-2014	The specific project objectives are: 1) to promote development and mainstreaming of a harmonised, cross-sectoral approach to SLM at the national level. 2) to reduce land degradation, biodiversity loss and mitigate climate change in the Lower Usuthu River Basin area through the application of sustainable land management practices which will contribute to adaptation to climate change. 3) to improve the livelihood opportunities, resilience, and food security of rural communities (men, women and children), including catalysing development of a range of alternative complimentary livelihood opportunities, and 4) to manage the project effectively and disseminate result appropriately.	Complementarity This project introduced conservation agriculture and climate smart practices, chiefdom development planning, land rehabilitation and re-forestation. It also helped in the drafting of the Swazi Nation Land Commercialisation Bill. The Proposed "Strengthening Agro-Ecosystem adaptation for Sustainable Livelihoods within Landscapes" will build on the lessons learnt from this project to ensure that best practices are up scaled to other communities
Active projects				
Small Holder Market Led Project	MoA/ ESWADE	2016- 2023	The project outcomes are: Outcome 1: Chiefdom Development Planning process institutionalized in each of the four Regions. Outcome 2: Increased land area under diverse and resilient market-led production systems in all four Regions. Outcome 3: National capacity to establish, implement and promote policies and programmes to meet Swaziland's convention targets; and to share lessons nationally and regionally.	Complementarity no duplication The project has upscaled the concept of Chiefdom Development Planning to 37 Chiefdoms out of a total of 365 Chiefdoms in the country. The Chiefdom Planning improves land use demarcation for various uses within the chiefdoms and preservation of environment. The Proposed "Strengthening Agro-Ecosystem adaptation for Sustainable Livelihoods within Landscapes" project will further upscale the ecosystems preservation within landscapes in other chiefdoms or communities with an approach of ensuring harmony between land uses.
Water Harvesting, Small and Medium Dams Project (WHDP)	MOA	2017-2023	The project purpose is the sustainable enhancement of smallholders' irrigated crops in project areas based on approaches that reduce vulnerability to climate risks, support improved water resource management and promote access to markets. The project results are: Result No. 1. Water storage capacity increased Result No. 2. Production capacity for smallholder enhanced. Result No. 3. Institutional capacity strengthened	Complementarity This project is mainly focused on infrastructure development for increasing water harvesting and irrigation development to enhance commercialization. The "Strengthening Agro-Ecosystem adaptation for Sustainable Livelihoods within Landscapes" project will mainstream the Agro-Ecosystem adaptation approaches to the commercial approach of this project.
Pipeline projects				
Increasing the resilience of Eswatini's agro-pastoral communities through integrated	UNDP	TBC	The project proposed outcomes are: Outcome 1: Increased capacity of rural support institutions. Outcome 2: Increased food and nutrition security of rural households. Outcome 3: Increased access to water for rural communities. Outcome 4: Land productive capacity enhanced.	Complementarity This project is mainly concentrated on the water catchments of the Lubombo region, with the use of national policies as a way of governance. For knowledge management this project will use Agro-Ecosystem accounting protocols at catchment level.

ecosystem and watershed management			Outcome 5: Diversified rural livelihoods. Outcome 6: Sustainable funding for watershed management. Outcome 7: Rural communities access credit and livestock value chains	On community based natural resource management catchment plans and rangeland management plans will be used for controlling IAPs with the approach of a regional integration on early warning systems. The "Strengthening Agro-Ecosystem adaptation for Sustainable Livelihoods within Landscapes" project focus on the landscapes of Ngwempisi and Lubombo region on the protected areas buffers. Coordination at landscape and community will be used for governance. Agro-Ecosystem habitat assessment at community level will be used for knowledge management. Community development plans, landscape plans, integrated Agro-Ecosystem management plans will be used for IAPs control, while agriculture sector mainstreaming will be used for early warning systems.
Improving climate resilience in the ESwatini through the integrated management of mountain ecosystems	UNEP	TBC	The project proposes to build the climate change resilience of eSwatini's most vulnerable populations by introducing a bottom-up, integrated management approach in mountain ecosystems. The proposed outcomes are: Component 1. Strengthened institutional and technical capacity of the government, local authorities, and communities for implementing integrated climate-resilient management of mountain ecosystems. Component 2. Enhanced climate resilience of communities and mountain ecosystems supported by innovative finance mechanisms. Component 3. Knowledge management to support the mainstreaming of the integrated climate-resilient catchment management approach.	Complementarity This project is mainly concentrated on the Highveld mountains water catchment, with the use of national policies as a way of governance. For knowledge management this project will use natural resource accounting at catchment level. On community based natural resource management catchment plans and natural resource management plans will be used for controlling IAPs with the approach of water sector mainstreaming on early warning systems. The "Strengthening Agro-Ecosystem adaptation for Sustainable Livelihoods within Landscapes" project focus on the landscapes of Ngwempisi and Lubombo region on the protected areas buffers. Coordination at landscape and community will be used for governance. Agro-Ecosystem habitat assessment at community level will be used for knowledge management. Community development plans, landscape plans, integrated Agro-Ecosystem management plans will be used for IAPs control, while agriculture sector mainstreaming will be used for early warning systems.
Restoration of ecosystems, integrated natural resource management and promotion of SLM in Mbuluzi River Basin of	UNEP	2020-2023	The project promotes ecosystem restoration for a productive Mbuluzi River landscape and effectively managed protected areas providing critical ecosystem goods and services. The project outcomes are as follows: Outcome 1: The Government of Eswatini adopts and starts enforcing an updated policy, institutional and legislative framework for SLM and ecosystem restoration. Outcome 2: Reduced Land degradation through capacity strengthening for innovative SLM technologies in productive landscapes across 60,700 ha of the	Complementarity no duplication While both projects share the overarching goal of enhancing climate resilience and sustainable agriculture, they target different aspects of these challenges. The GCF readiness project lays the foundational groundwork for climate finance and decision-making in agricultural sectors, while the Ecosystems Adaptation project specifically focuses

Eswatini			Mbuluzi River Basin. Outcome 3. Capacity strengthening for Effective management of the three nature reserves of (Malolotja Nature Reserve, Mlawula nature reserve and Hawane Dam (Ramsar site) in the basin is undertaken Outcome 4. Women and youth engagement strategy on biodiversity and land degradation developed and implemented.	on sustainable livelihoods in landscapes through capacity building, institutional strengthening, and technological upscaling. This complementary approach ensures a holistic and multi-faceted strategy towards climate resilience and sustainable development in Eswatini.
Laying the foundations for increased climate adaptation and mitigation in Eswatini's Agricultural Sector	FAO	2021-2023	The readiness programme i) support strengthening of Functional Multilevel climate change coordination structures in the agricultural and related sectors to respond and act on CC impacts; ii) document incentives and instruments for catalyzing adoption and mainstreaming of climate smart technologies, approaches and practices along agricultural value chains (VC); iii) document innovative, integrated, affordable and replicable tools to protect vulnerable farmers from the consequences of climate-related shocks; iv) create inventory of VC specific concrete climate change adaptation infrastructure and assets as well as climate adaptive interventions along key value chains with gender, environmental and social impact assessments of their implementation ; and, v) develop Eswatini's Baselines for MoA/COSPE/FAO GCF SAP project and any other future GCF proposals as well as GEF/Adaptation Fund	The proposed FAO project complements the Readiness project by focusing specifically on climate change in the main agricultural value chains. It aims to gather detailed and operational agricultural sector-specific data and information, which will not duplicate but rather build upon and utilize the data collected under the National Adaptation Plan (NAP) Readiness project. This will ensure harmonization of data collection between the FAO and NAP Readiness projects

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

103. The Government of Eswatini acknowledges the potential opportunities that the Adaptation Fund project presents to develop and improve, evidence-based and systematic approaches for coordination and enhanced implementation of climate change responses. These include community participation planning approach and regional early warning systems, which include cluster formation for information sharing and learning. Documentation of good agricultural practices that are climate resilient for lessons learnt from communities and knowledge management products will be used in sensitizing communities for more informed community-based planning.

104. Climate change impact assessment will be conducted to identify local ecosystems vulnerabilities for learning and knowledge sharing. This assessment will strengthen the development of baselines, community-based climate vulnerability and capacity assessment, which will update management plans and the institutional, regulatory and policy frameworks. Stakeholder engagements will be done to ensure that assessment generate safeguards (environmental and social) by conducting interviews, qualitative and quantitative agroecological assets assessment. Workshops will be conducted to share with stakeholders results of assessment for their awareness and sensitizing for policy directives. Stakeholder engagements will be done to ensure that qualitative and quantitative agroecological assets assessments generate and share results.

105. In endorsing orderly learning and dissemination of this, the project will develop a digital based knowledge and information management under Component 1, which will stipulate the innovative approaches and activities of the project will be documented and shared. Dissemination of information through reports multimedia and sharing events like capacity building trainings. Organize workshops and dialogues to raise awareness on climate change adaptation, generate political will and integrate the vulnerability assessment outcome and stakeholders' input into the relevant strategic framework and investment plans. There will be training for technicians and farmers on the tools required to manage a monitoring and early warning network and further engage participation in information dissemination for decision-makers and users of the system. A coordinated structure will be put in place to develop weekly bulleting and radio spots and quarterly reports to share information of short- and medium-term weather forecast and long-term climate projections.

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

106. A technical working group, technical committee and steering committee were established through the advice of the Ministry of Agriculture and the Food and Agriculture Organization. There were three consultative meetings with the technical working group, three consultative meetings with the Technical Committee, one consultative meeting with Steering Committee and two consultative meetings with the National Designated Authority office. Additional information is provided in Annex 2.

107. **Technical Working Group consultation**: The Technical working group was established on the 17th of April 2022. The technical working group consist of officers from the different departments of the Ministry of Agriculture. These departments include Department of Land Use Development and Planning, Department of Veterinary Service and Livestock, Crops department, fisheries unit, Department of Economic Planning Service. The first consultative meeting with this working group was held on the 18th of April 2022 where the initial concept note development was done, second consultative meeting on the 15th of August 2022, third

meeting on the 21st of November 2022. In all the subsequent consultative meetings with the Technical Working Group, inputs from all the department participants were incorporated to improve the concept note.

108. **Technical Committee Consultation:** This committee provides a forum for stakeholders to engage on pertinent developmental issues in the agriculture sector, and to provide technical guidance on proposed agricultural sector climate finance initiatives by making recommendations to the Steering Committee for its consideration. The composition of this committee includes Ministry of Agriculture-Department of Land Use Development and Planning, Department of Economic Planning Service, Crops Department, Department of Veterinary Service and Livestock. Ministry of Tourism and Environmental Authority- Department of Forestry, Department of Meteorology (Climate Change). Ministry of Natural Resources and Energy-Department of Water Affairs. Ministry of Economic Planning and Development, National Disaster Management Agency, Coordinating Assembly of Non-Governmental Organization, Deputy Prime Ministers Office-Vulnerability Assessment Committee. The consultative meetings with the Technical Committee were held on the following dates 29th July 2022, 11th of August 2022 and 23rd November 2022. The concept note was presented to this committee by the project management unit, whereby inputs were also incorporated.

109. **Community level Consultative sessions:** building on the SNPAS project integrated landscape management plans community consultation processes, further consultation was conducted to provide an opportunity to verify, co-design and finalize activities together with the targeted communities. Communities that were consulted included Shewula and Tikhuba under the Lubombo Landscape and KaZulu and Luzelweni under the Ngwempisi landscape. The community consultations were led by the Eswatini National Trust Commission (ENTC), a government parastatal that executed the SNPAS project, Tenvelo organization (a community-based organization that works with the communities), extension officers and rural development officers of the communities. Women consulted were community farmers, members of the community development committee and members of community trusts of livelihood projects. Issues that were raised by the community members in the Lubombo Landscape with a representation of 47% women were having limited and labor-intensive conservation agriculture implements, high agricultural inputs prices and lack of profitable market for agricultural produce, loss if livestock and crops due to lack of proper transboundary fence, poor rangeland management, inversion of IAPS. Proposed interventions were trainings on Conservation Agriculture (CA), provision of mechanized CA implements, fencing of rangelands, replanting of nutritious grasses on rangelands, paddocking and rotational grazing, nature-based solutions for controlling IAPS, restoration of wetlands to enable resurfacing of water for livestock, irrigation and thatch production and agro-forestry tree nursery. Under the Ngwempisi Landscape issues that were raised by women included low women participation, labour intensive conservation agriculture practices. Other issues raised by the communities included 63% were outbreak of crops pest and diseases, loss of essential soil microorganisms due to use of pesticides, lack of capacity on nature-based solutions for Community Development Committees (CDCs), rangelands and wetlands degradation by IAPS, lack of palatable grass for livestock resulting in reduced livestock market price and costly transportation of produce to market. Proposed interventions by the community included capacity building on natural resources management for CDCs, capacity building in use of nature-based solutions to control insects and macro-organisms, restoration of rangelands through reseeding of indigenous grasses and fencing, nature-based solutions of controlling IAPS including making liquid fertilizer from them, fencing of rangelands, provision of water resources through wetland restoration and building of earth dams bee keeping of which they need capacity building and inputs and lastly market linkage for their produce. All proposed interventions informed co-design of the project proposal.

110. Steering Committee consultation: This committee consists of principal secretaries from the Ministry of Agriculture, Principal from the Ministry of Tourism and Environmental affairs, and the Assistant Food and Agriculture Organization Representative Officer. The concept note was presented to this committee once for their inputs to improve the concept.

111. National Designated Authority (NDA) office: The NDA is with the Principal Secretary of the Ministry of Tourism and Environmental Affairs and her officers. The NDAs office has the role of reviewing all concept

note to check for synergies, relevance, duplications from other previous and current developed concept notes. The concept note was presented to the NDA's office on the 24th of March 2022, and 27th May 2022.

112. Consultative meetings with other stakeholder (UNEP, UNDP): The Ministry of Agriculture and Food and Agriculture Organization held a discussion with United Nation Development Programme (UNDP) on the 10th of August 2022 to articulate on the synergies and alignments of their proposed projects. Also, with UNEP similar consultation meeting was held on the 25th of August 2022. Table 6 clarifies the alignments from the three projects.

113. The outcomes of the gender consultations were integrated into the concept note design, ensuring that the project addresses the specific needs and challenges identified by women in the communities. This includes a focus on training and capacity building in natural resource management, support for nature-based solutions to agricultural challenges, and the establishment of market linkages for community produce. In summary, the project's consultative process, which actively involved a range of stakeholders from technical experts to community members, with a particular emphasis on including women's voices, has resulted in a concept note that is comprehensive, context-specific, and responsive to the diverse needs of the Eswatini population. The integration of gender considerations ensures that the project addresses key issues affecting women, promoting inclusive and sustainable development.

Table 7: Pipeline project initiatives reviewed for project initiative overlaps.

Organization	**UNDP**	**UNEP**	**FAO/IFAD**
ASPECTS	**Integrated Watershed Management for Agro-pastoral Resilience**	**Improving climate resilience in the Kingdom of eSwatini**	**Strengthening Agro-Ecosystem-adaptation for Sustainable Livelihoods within Landscapes (SEASL)**
Project area selection	Lubombo region,	Highveld Mountains	Landscapes (Ngwempisi & Lubombo)
	Water catchment	Water catchment	Protected areas buffers
Governance/ legislative frameworks	National Policies	National Policies	Coordination at landscape & community
Knowledge management/ Assessments	Ecosystem accounting protocols	Natural resources accounting	Ecosystem habitat assessment
	Catchment level	Catchment level	Community level
Community Based Natural Resource Management	Catchment Plan	Catchment Plan	Landscape plan
	Rangeland MP	NRMP	CDP, Integrated Agro-Ecosystem management
	IAPs control	IAPs control	IAPs control
Early warning system	Regional integration	Water sector mainstreaming	Agric sector mainstreaming

H. Provide justification for funding requested, focusing on the full cost of adaptation reasoning

Table 8 Baseline scenario vs alternative benefits.

Baseline Scenario	**Alternative benefits of Adaptation Fund Project**
From national governments to local community groups, women are vastly underrepresented in decision making. The country has failed to achieve a 30% target of women in national political decisions and this underrepresentation also extends to community level committees, where women are generally underrepresented. In many communities, cultural norms and time-intensive household care duties often impede women's abilities to participate in community consultations and decision-making processes about sustainable management initiatives. This means that when it comes to natural resources and Agro-Ecosystem management, women's needs, priorities and knowledge are often ignored or overlooked, impacting their empowerment and agency and undermining the effectiveness of sustainable management solutions.	Component 2 addresses an improved coordination of landscapes by multi-stakeholders (Public, private and communities) which must be composed of women for their increase in participation on strategic frameworks of implementing the integrated agroecosystem approach. At Chiefdom level, training will be conducted to indicate the importance of gender balance as a natural resource of development committees.
Climate change in Eswatini is projected to result in increased	The project intends to promote agroforestry practices in communities

temperatures by 3 to 4 °C and reductions in precipitation within the next few decades. This will exacerbate the effects of all other pressures by reducing both terrestrial and aquatic ecosystems.	by capacitating farmers on how to improve agricultural micro-climate through the promotion of agroforestry systems even in degraded sloppy areas. This technology is applied to prevent soil erosion in slopes by the planting of water stress tolerant species.
The grassland biome appears to be one of the biomes most at risk of significant climatic and human-induced change. Areas with a climate envelope suitable for grassland are projected to be greatly reduced. Climate change is expected to promote the proliferation of Alien and Invasive Species (AIPS) and increase the spread of bush encroachment adding to the pressures already faced by rangelands. In 2010, a mapping and survey exercise indicated that 80% of the country was invaded by at least one of the IAPS.	Output 3.1.1 will entail range land and Agro-Ecosystem condition assessment to determine remedial bankable actions required to be undertaken to restore rangeland grass to support profitable livestock production. This will be through multiple integrated climate smart efforts aimed at increasing resilience to climate change of the natural resource, to support economic viable livestock productivity aiming at increasing income of community small scale farmers
Subsistence livestock and crops production under rain-fed conditions have declined by over 30% on average over the last years due to climate change impacts. Maize production has been steadily dropping from 84,371 ha in 1990 to the lowest 25,749 ha produced in 2016.	Output 3.2.2 interventions include the design of rainwater harvesting and cost-effective water protection infrastructures using nature-based solutions. This includes training of the community natural resources management committee on how to effectively manage water sources and monitor their sustainable use. Again, reticulation of rangelands to provide water points in different locations will be undertaken to reduce travel distances by livestock to water sources.

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

114. The capacity building process of the project allows training local leaders who will be able to build capacity within the communities themselves.

115. The project management structure has been built into an existing national Agricultural Sector Climate Change Coordination Mechanism (ASCCCM) which was facilitated through the GCF Readiness and Preparedness Project[53]. This structure reviews proposed project initiatives and aligned them with country programming frameworks and ensure that mandated private and public entities are fully participating in the design, implementation and upscaling of project initiatives to realize long-term benefits. Key stakeholder representatives from different sub sectors of agriculture and related sectors form the coordination mechanism for agriculture related projects see Figure 16 below.

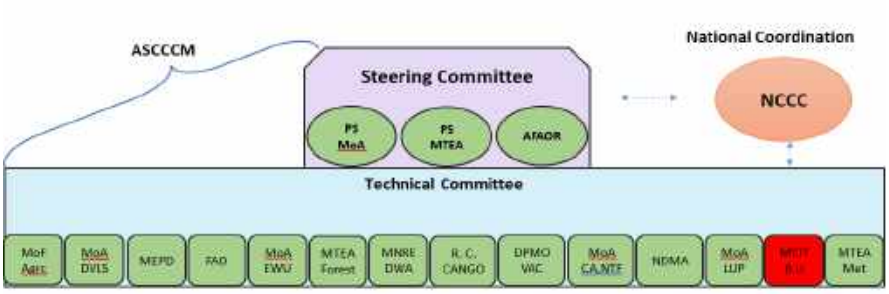


Figure 16: Agricultural Sector Climate Change Coordination Mechanism (ASCCCM)

116. In the agricultural sector, the sustainability of the proposed project depends on the new knowledge provided by the adaptation initiatives, the use of innovative cost-effective technologies, and the monitoring of the effects of climate change and its variations. Efforts will be made to capture the long-term sustainability of the proposed sustainable land management and adaptation measures by supporting an adequate monitoring system.

53

117. The project promotes initiatives that will continue to provide results beyond the years of implementation. As an example, the rehabilitation of degraded landscape, the restoration and improvement of irrigation water systems, infrastructures, pastures have long-term lifespan. However, these initiatives require regular maintenance after the project implementation period. The participation of local organizations, community authorities, development partners and especially the commitment of local beneficiaries (individuals and organizations) make it possible to preserve and even continuously improve the initiatives.

118. Sustainability will be further supported through mainstreaming and cross-sectoral, multi-stakeholders increasing public awareness and knowledge to farmers, community leaders, and other relevant regional and national officers on climate change and alternate adaptation measures in agriculture and water management.

119. In line with the many activities including awareness raising on climate change, more measures will be undertaken to transform people of Eswatini's attitude and practices in sustainable adaptation to climate change.

120. The project will furthermore strengthen the sustainability of the proposed interventions by supporting the land related policies and legislation and facilitating further investments in support of sustainable land management and climate smart agriculture.

121. In order to sustain project activities beyond the project implementation period Community management plans will be developed, which will clearly define the responsibilities of all actors engaged in the implementation of the project at community level. Agreements on the maintenance of the sustainability of project outcomes will be developed and signed with all stakeholders during the full project development phase. Development of an Exit Strategy during the proposal development and initial implementation stages will be very vital in ensuring sustainability of the project.

122. Lessons learnt from other projects may be positive while others are negative. These lessons learnt should also for a basis for the sustainability of the project. The sustainability of the outcomes is largely due to:

- Ensuring a participatory approach.
- The implementation of activities that are accessible and acceptable to large groups of population.
- Involvement of development partners.
- Capacity building of communities and different service provider.
- Close cooperation with community leaders and community members.
- Public awareness on progress and outcomes of the project.
- Raising population's awareness on the objective, results and maintenance benefits.
- The existence of a legally binding agreement with communities on the maintenance and sustainability of project results.

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

123. The proposed project concept is expected to be in Moderate risk **Category B** in accordance with the Adaptation Fund's ESP as it has very limited adverse environmental or social impacts. The potential risks were identified relating to resource efficiency and pollution prevention, labour and working conditions and, community health, safety and security. The project envisages application of new technologies and light constructions, during which the soil will not be damaged, and the environment will not be polluted. Activities will be identified during the preparation of the fully developed project proposal to allow for adequate risk identification and impact mitigation and prevention, as well Environmental and Social Management Framework (ESMF) and Environment and Social Management Plan will be developed. Site specific

Environment Impact Analyses will be developed in line with national laws where required. The ESMPs will include monitoring and compliance considerations as well as the grievance redress mechanism.

Checklist of environmental a principles	ther assessment Required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law	As detailed in section II – E the project will be in compliance with relevant Laws, Degrees and Acts in Eswatini. All activities of the project are in line with Eswatini laws; there is no need for additional assessment of conformity.	
Access and Equity		The project will not reduce or prevent communities in the targeted areas from accessing basic services. The project will take a number of transparent steps that will help ensure that the benefits of the project are being distributed fairly with no discrimination nor favoritism. Project targeting will comprise targeting criteria based on gender and age quotas. The project will advertise broadly for the implementation of an outreach / mobilization strategy."
Marginalized and Vulnerable Groups		Project does not have negative impacts on Marginalized and Vulnerable Groups. The inclusion of marginalized and vulnerable groups will be ensured through the targeting and beneficiary selection criteria
Human Rights		According to the most recent Office of the High Commissioner on Human rights (OHCHR) Special Procedures Report mentioning that there are no pending Special Procedures for Eswatini. Human rights will always be part of consultations and be monitored at all times.
Gender Equality and Women's Empowerment		Through targeted consultations project design and implementation will ensure that gender considerations are integrated in each activity. The project targeting strategy will have gender quotas and during project formulation women machinery will be consulted at national and local level and a full Gender Assessment will be conducted that will enable the appropriate risk screening of the ESP 5 on Gender Equality and Women's Empowerment
Core Labour Rights		Eswatini has been a member of the International Labour Organization (ILO) since May 20, 1975,. Since joining the ILO, Eswatini has ratified 33 ILO Conventions. This includes eight out of the ten Core Conventions and two out of the four ILO governance (or priority) Conventions, with the rest being technical Conventions. The eight Core Conventions that Eswatini has ratified are: C029 - Forced Labour Convention, 1930 (No. 29). C087 - Freedom of Association and Protection of the Right to Organize Convention, 1948 (No. 87). C098 - Right to Organize and Collective Bargaining Convention, 1949 (No. 98). C100 - Equal Remuneration Convention, 1951 (No. 100). C105 - Abolition of Forced Labour Convention, 1957 (No. 105). C111 - Discrimination (Employment and Occupation) Convention, 1958 (No. 111). C138 - Minimum Age Convention, 1973 (No. 138). C182 - Worst Forms of Child Labour Convention, 1999 (No. 182). This ratification record indicates Eswatini's commitment to fundamental labour rights, as outlined in these conventions.
Indigenous peoples	Not applicable	
Involuntary Resettlement	The project does not require or warrant any resettlement of communities. Any activities that may result in resettlement will not be financed by the project.	
Protection of Natural Habitats	There is no risk the project sites will not be located in "(a) legally protected; (b) officially proposed for protection; or (c) recognized authoritative sources for their high conservation value, including as critical habitat	
Conservation of Biological Diversity		There will be no negative impacts on the biological diversity as most of the concrete adaptation activities will promote conservation of biodiversity. There are no threatened species or biosphere, Programme reserves or Ramsar sites in the project area. However, a full assessment will be conducted at full proposal stage.
Climate Change		There will be no negative impacts on climate change as no project activity will promote the emissions of GHG.

Pollution Prevention and Resource Efficiency		There will be no emissions and effluent discharge that might pollute the land, water and air from all technologies and practices that will be adopted through the project. Where resources are used such as water and land, efficient use will be promoted and for any agrochemicals, safe handling, use and disposal will be promoted.
Public Health	Project interventions will have no negative impact on public health but will have a positive effect on public health through sustainable increased ecosystems services that will sustain livelihoods and indirectly impact human health.	
Physical and Cultural Heritage		Eswatini ratified the Convention Concerning the Protection of World Cultural and Natural Heritage on November 30, 2005. With this ratification, it became the 181st State Party to adopt the convention. Low adoption of adaptation technologies and practices due to cultural heritage will be mitigated through capacity building. The project activities will not be implemented in areas with physical cultural heritage assets. Also, the project area will not be located in UNESCO World Heritage. However, further assessments will be done at the full proposal stage.
Lands and Soil Conservation		No negative environmental impacts will be exerted in project sites to promote Invasive alien species and soil erosion. The project activities will not result in the loss of otherwise non-fragile soil. However, further assessments will be done at full proposal stage

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

Table 10: Project objectives' alignment with the results framework of the Adaptation Fund

Project Objective(s)[1]	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
1. Facilitating capacity development in a participatory approach that is gender sensitive within landscape and rangelands as for improved knowledge management.	No. of participants	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	Indicator 3.2. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	721,450
2. Strengthening the institutional arrangements at the landscape and community-levels, with relevance to the national policies directive.	No. of functional institutions from landscape to community level	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic & environmental losses	Indicator 2.1. Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased	550,000
3. Stimulating climate-adaptive investments in agroecosystems important for adaptive livelihoods such as forest, wetlands and rangeland rehabilitations.	No. of nature-based interventions	Outcome 4 Increased adaptive capacity within relevant development sector services and infrastructure assets	Indicator 4.2. Physical infrastructure improved to withstand climate change and variability-induced stress	4,231,250
4. Upscaling of climate-adaptive technologies for agroecosystems and sustainable alternative livelihoods which will consider risk transfers through micro-insurance and other financial inclusion strategies.	No. of catalytic funding mechanisms	Outcome 6. Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	Indicator 6.2. Percentage of targeted population with sustained climate-resilient alternative livelihoods	3,070,000
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**

Outcome 1.1 Improved landscapes and rangelands baselines, awareness and monitoring on agroecosystems resilience.	No. and types of surveillance systems applied	Output 1.1 Risk and vulnerability assessments conducted and updated	Indicator 1.1 No. of projects/programmes that conduct and update risk and vulnerability assessments (by sector and scale) Indicator 1.2 No. of early warning systems (by scale) and no. of beneficiaries covered	721,450
Outcome 2.1 Improved coordination of landscapes by multi-stakeholders (Public, private and communities) for strategic frameworks of implementing the integrated agro-ecosystem approach.	No. of active landscape committees	Output 2.1: Strengthened capacity of national and sub-national centers and networks to respond rapidly to extreme weather events Output 3.2 Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	Indicator 2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events (by gender) Indicator 2.1.2 No. of targeted institutions with increased capacity to minimize exposure to climate variability risks (by type, sector and scale) Indicator 3.2.1 No. of technical committees/associations formed to ensure transfer of knowledge	550,000
Outcome 3.1 Climate smart actions developed for integrated ecosystems adaptation.	Area under climate smart technologies	Output 3.2: Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	Indicator 3.2.1 No. of technical committees/associations formed to ensure transfer of knowledge	750,000
Outcome 3.2 Improved ecosystem-based restoration infrastructure in community landscapes for sustainable increased ecosystem services to sustain livelihoods.	No. of eco-entrepreneur projects and area restored	Output 6. Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.1. No. and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or community livelihood strategies	3,481,250
Outcome 4.1 Disadvantaged group's transformative entrepreneurship promoted.	No. of gender and socio-economic transformative enterprises	Output 6. Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	Indicator 6.2.1. Type of income sources for households generated under climate change scenario	410,000
Outcome 4.2 Incentivized climate smart agriculture for improved productivity.	No. of adaptive technology promoted	. Output 6. Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability.	6.1.1. No. and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or community livelihood strategies	2,300,000
Outcome 4.3 Improved and sustainable commodity compliance to market requirements.	No. of successful market linkages	Output 6. Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	Indicator 6.2.1. Type of income sources for households generated under climate change scenario	360,000

[1] The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology, but the overall principle should still apply

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

A. Record of endorsement on behalf of the government[2]

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 as possible if a regional project/programme:

Mr Khangweziwe Mabuza Principal Secretary Tourism and Environment Affairs of Eswatini	Date: 8 January 2024

MINISTRY OF TOURISM AND ENVIRONMENTAL AFFAIRS

Tel: ++268 404 6420 / 404 1714/8
Fax: ++268 404 5415 / 404 6438
E-mail: ps_tourism@gov.sz /
mintour@realnet.co.sz

P. O. BOX 2652
MBABANE H100
ESWATINI

8th January 2024

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

Subject: Endorsement for Strengthening Agro-Ecosystem Adaptation for Sustainable Livelihoods within Landscapes (SEASL)

In my capacity as designated authority for the Adaptation Fund in Eswatini, I confirm that the above national grant 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 Eswatini.

Accordingly, I am pleased to endorse the above grant proposal with support from the Adaptation Fund. If approved, the project will be implemented by International Fund for Agriculture Development and executed by Food Agriculture Organization and Ministry of Agriculture.

Sincerely,

MINISTRY OF TOURISM AND ENVIRONMENTAL AFFAIRS
PRINCIPAL SECRETARY
08 JAN 2024
P.O. BOX 2652
MBABANE- ESWATINI

KHANGWEZIWE MABUZA
PRINCIPAL SECRETARY

B. Implementing Entity certification

C.

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 and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender 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.	
Implementing Entity coordinator: Mr Juan Carlos Mendoza Casadiegos, Director, Environment, Climate, Gender and Social Inclusion Division	
Date: 15 January 2024	e-mail: juancarlos.mendoza@ifad.org
Ms Janie Rioux Senior Technical Specialist – Climate Change- AF coordinator ECG division	email: j.rioux@ifad.org
Project contact person: Ms Paxina Chileshe, Regional Lead Environment and Climate Specialist	
e-mail: p.chileshe@ifad.org	
Mr Francesco Rispoli, Country Director for Eswatini	
e-mail: f.rispoli@ifad.org	

[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.

Annex 1: Indicative Results framework for the project proposal

Project Objective / Output	Indicator	Baseline	Target	Means of verification	Responsibility	Comment
Project Objective: **The project objective is to contribute towards reducing climate and human induced vulnerability of the agroecosystems of the Lubombo and Ngwempisi communities of Eswatini by increasing adaptive capacity of key local institutions and actors, through the pilot of good land management practices and climate resilient practices**	Number of beneficiaries (disaggregated by gender and youth) who have received support from the project as a proxy for increasing adaptive capacity to respond to the impact of climate change	0	At 4,400 households (at least 45% women and 50% youth)	Project Progress Report	PMU	A stable agroecosystem environment with improved gender transformative initiatives
Component 1: 1. Capacity development on a participatory approach within landscapes for improved knowledge management.						
Output 1.1.1 **Integrated agro-ecosystem assessment adopted to update biodiversity assessments done by the SNPAS project to inform adoption of climate smart technologies.**	Number of agroecosystems assessment reports	3	5	Assessment and management reports	PMU, Eswatini Environment Authority (EEA), Eswatini National Trust Commission (ENTC) and community	The update or expansion of agroecosystem assessment in communities will be compiled per landscape
Output 1.1.2 **Adopted use of information services** **Digital based knowledge and information management integrated for information sharing.**	Number of land degradation status reports.	The digitally earth observatory system currently functional at 25% of its potential	75% functionality	Land degradation status reports	PMU, MoA, ESWADE	Currently system piloted in 10 chiefdoms and the target is to roll it out to more than 30 chiefdoms
Output 1.1.3 **Technology support for climate/weather early warning systems and advisories strengthened.**	Fully functional information dissemination system	Delayed information system	Real timely disseminatio n	Reports, bulletins, flyers	PMU, MoA, NDMA, MTEA	Delayed flow, current early warning is more reactive than being proactive
Component 2. Strengthen multi-stakeholder institutional collaboration (public, private & communities) for strategic implementation of agro-ecosystem based adaptation						
Output 2.1.1 **Training of trainer's modules developed to capacitate lead committees on ecosystem-**	Number of lead trainers trained (disaggregated by gender and youth)	0	20	Reports and module booklets	PMU, ENTC, MTAD, EEA, MoA	Landscape committees currently not functional to capacitate communities
	Number of modules developed	0	3			

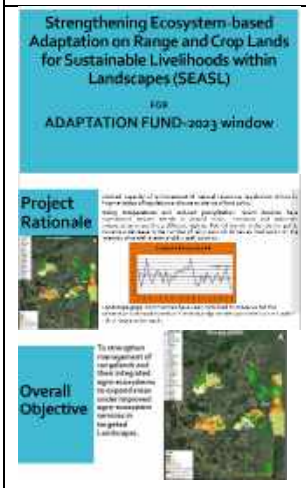
based adaptation strategies.						
Output 2.1.2 Institutional capacity building programs for committees to develop ecosystem-based management	% of targeted chiefdoms have developed ecosystem-based management plans	8	15	Ecosystem-based chiefdoms development plans	PMU, MTAD, ENTC, EEA, MNRE	Strengthen the mainstreaming of natural resources management in chiefdom development plans
Output 2.1.3 Regional Consultative Observatory learning on landscapes coordination.	% of targeted institutional representatives participation	0	90% participation	Learning tour reports	PMU, Landscape committees and MoA	A platform to share experiences from advance landscapes in the region and to foster collaborative efforts
Component 3. Stimulate climate-adaptive investments in integrated ecosystems (forest, wetlands and rangeland rehabilitation.						
Output 3.1.1 Pasture Management Plans developed and implemented	% of executed plans	0	90%	Pasture management plans, Implementation progress reports	PMU, MoA, Landscape committees, community natural resources management committees	Landscape structures supported to effectively manage rangelands
Output 3.1.2 Wetlands management plans developed and implemented						
Output 3.1.3 Communal woodlots management plans developed and implemented.						
Output 3.2.1 Two community and two public nurseries strengthened to supply restored ecosystems.	Number of community and public nurseries completely strengthened	0	4	Implementation progress reports	PMU, MoA, MTEA, EIRMIP	Restored ecosystems will more resilient to climate change and provide alternative livelihood
Output 3.2.2 Restored wetlands and water reservoirs designed and established	Number of designed and established wetlands and water reservoirs	0	15	Design reports, Implementation reports	PMU, MoA, ENTC, DWA	Wetlands and water reservoirs established to strengthen their ecosystem services
Output 3.2.3 Technologies & practices adopted for Invasive Alien Species and soil erosion control in ecosystems.	Number of integrating control methods applied, Area of land from which technologies have been adopted	0	4	Progress reports on adoption integrated methods	PMU, EEA, ENTC, MTEA	There is a need to implement the 2021 IAPS strategy which proposes an integrated control approach
Output 3.2.4 Agroforestry and silvopastoral technologies adopted	Area of land on which technologies has been adopted	0	10,000ha	Implementation progress report	PMU, MoA, MTEA	Agroforestry and silvopastoral will strengthening mitigation of soil degradation
Component 4. Upscale climate adaptive technologies for agroecosystems and sustainable alternative livelihoods.						
Output 4.1.1 Program on sustainable natural resources harvesting for handicraft	Number of chiefdoms on which the program has been fully initiated	0	15	Implementation progress report, Chiefdom	PMU, MTEA, ENTC, EEA	Program will improve sustainable utilization of natural resources

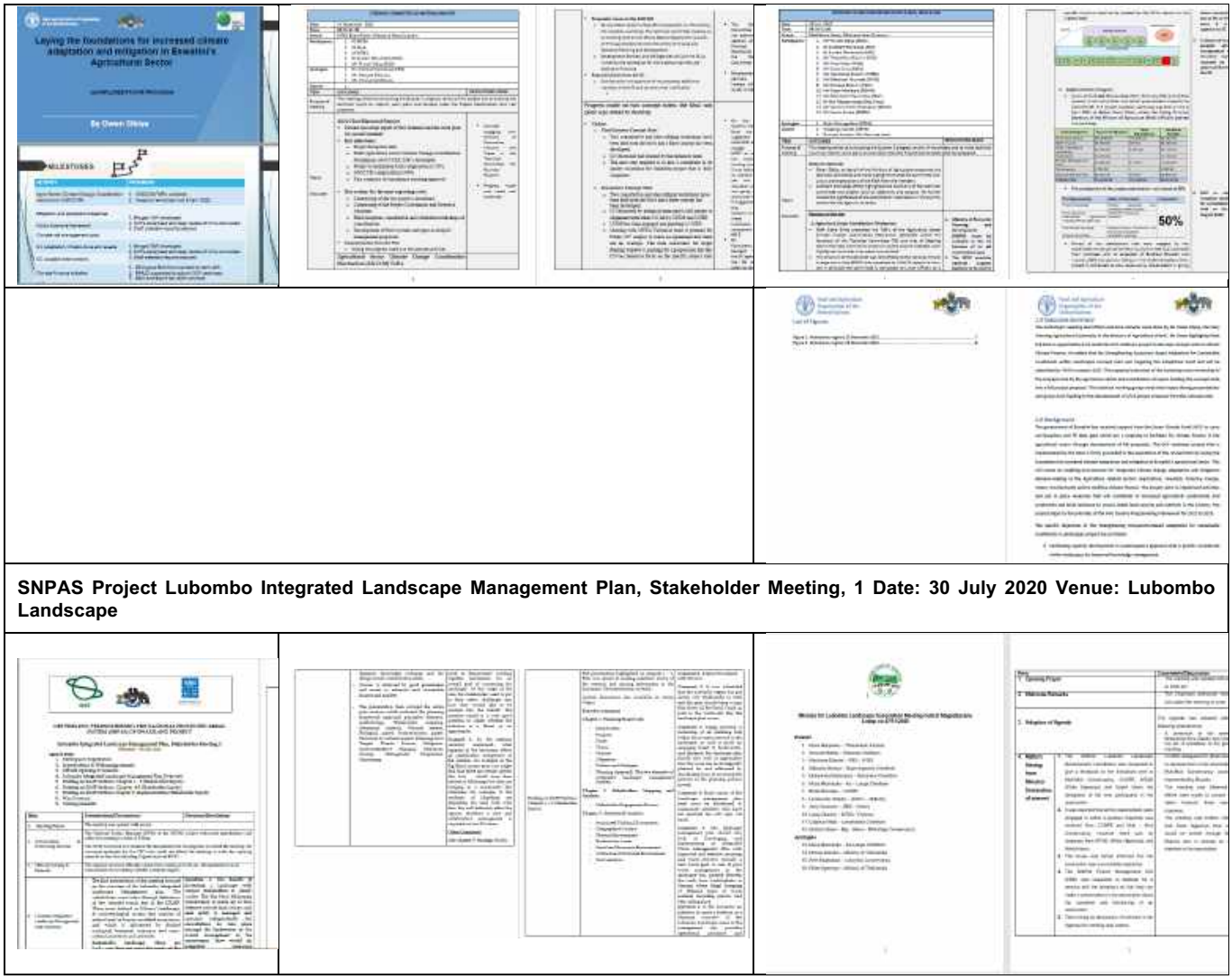
and other products.				natural resource reports		
Output 4.1.2 Apiary sites (honey production) developed on restored ecosystems.	Number of apiary sites developed	0	20	Implementation progress report	PMU, MoA, MTEA, ENTC	Apiary sites will bring a sustainable alternative livelihood to communities
Output 4.2.1 Drought tolerant, protein rich and early maturing crops promoted in rain fed agroecosystems.	Number of crops and varieties adopted	0	90%	Implementation progress report, Production reports, Nutrition reports	PMU, MoA	Drought tolerant and early maturing varieties are an adaptation strategy
Output 4.2.2 Catalytic program to switch from conventional irrigation to climate smart technologies.	Area of land on which climate smart irrigation technologies have been adopted	0	10,000ha	Program implementation progress report	PMU, MoA	Program will incentivize the switch from conventional to climate-smart technologies
Output 4.3.1 Value chains platform strengthened to promote market driven productivity.	Number of successful market linkages	0	10	Implementation progress report, Value chains and market reports	PMU, MoA,	Market driven productivity will strengthen sustainability and livelihood
Output 4.3.2 Capacity building program for strengthened value addition.	Number of individuals and communities capacitated by program (disaggregated by gender and youth)	0	20	Implementation progress report	PMU, MoA	There is a need for value addition capacity building for enhanced market linkages

ANNEX 2 . 2.1 Community Consultations

Attendance Registers	Pictures
Shewula Communities - Lubombo Landscape 20 June 2023	
	
Tikhuba Communities - Lubombo Landscape 21 June 2023	
	
KaZulu Communities - Ngwempisi Landscape 22 June 2023	
	
Luzelweni Communities - Ngwempisi Landscape 23 June 2023	
	

2.2 Stakeholder Consultation

<table>
<tr><th>PRESENTATIONS</th><th>REPORT WITH ATTENDANCE REGISTRAR</th><th></th></tr>
<tr><td colspan="2">NDA & MoA, Inception meeting on proposed concepts Date: 3 March 2022Venue: Mbabane</td><td>Development of log-frame for Concept note.Date: 18 May 2022
Venue: Piggs peak</td></tr>
<tr><td> 
</td><td>   </td><td>  </td></tr>
<tr><td colspan="2">Technical Committee meeting Date: 29 July 2022 Venue: Mbabane</td><td></td></tr>
<tr><td colspan="2">   </td><td></td></tr>
<tr><td colspan="3">Development of log-frame for Concept note. Date: 16 August 2022, Venue: Piggs peak</td></tr>
<tr><td colspan="2">  </td><td>   </td></tr>
<tr><td colspan="2">Steering Committee Meeting, Date: 21 September 2022, Venue: Mbabane</td><td>Finalisation of Agro-ecological Concept Note, Date: 22 November 2022,
Venue: Zulwini</td></tr>
</table>



SNPAS Project Lubombo Integrated Landscape Management Plan, Stakeholder Meeting, 1 Date: 30 July 2020 Venue: Lubombo Landscape

ANNEX 3. Preliminary Gender Analysis

1. **Demography, Health, and Education:** In Eswatini, progress on women's rights has been made. It has made advances in areas such as the school attendance of girls, which is now higher than that of boys´ from secondary school onwards [1], yet challenges remain. The adolescent birth rate is relatively high, and a significant percentage of women report experiencing physical and/or sexual violence. Furthermore, as of 2020, substantial gaps exist in gender-related data, particularly in areas such as unpaid care, domestic work, and ICT skills, hampering efforts to monitor and achieve gender-related Sustainable Development Goals (SDGs)[2].
2. At the household level, decisions on the disposal of income (particularly that earned by men) and the use of assets are typically made by men. This is because women´s participation and influence in decision-making processes at both household and community level is limited. The lack of male labour due to migration and prevailing gender norms contribute to the gender gap in agricultural production. About 49.44 percent of households in Eswatini are headed by women, one of the highest in the Southern Africa region [3].
3. **Women in Agriculture:** Women are major actors in global efforts to reduce and reverse land degradation, despite having unequal and limited access to land. Nearly half of the global agricultural workforce is female, yet less than 20 percent of women own land. Once they adopt their husband´s last name, married women cannot request land from chiefs without their husband´s consent. Although men may allot women small portions of land to cultivate, household land is passed on from fathers to sons. Ensuring women's access to land and associated assets is crucial for their economic empowerment

and broader gender equality in agricultural transformation [4]. Social norms also limit women's access to agricultural inputs, extension and financial services [5].

4. **Gender-Based Violence:** Gender-based violence is a significant issue in Eswatini, disproportionately affecting women and girls. While its manifestations are varied and span across economic, emotional, psychologic, physical, and sexual violence, data available on sexual violence reveal the dimension of the problem. Approximately one in three females have experienced some form of sexual abuse by age 18, and nearly half of the women report having experienced some form of sexual violence in their lifetime. The country passed a bill on Sexual Offences and Domestic Violence in 2015. Work has also been done to develop a National Strategy for the Prevention and Response to Violence. Multi sector referral systems are being established at national and regional level. The health sector is also integrating capacities to deal with cases of sexual violence [6].
5. **Differentiated Climate Change Impacts on Gender:** Climate change significantly affects livelihoods and well-being, with women experiencing more negative impacts compared to men. Eswatini ranks 143/162 countries in the 2019 gender inequality index, with a value of 0.567. The measurement reflects gender inequality in reproductive health, empowerment, and economic activity [7]. The main areas affected include agricultural production, food and nutrition security, health, water and energy, and climate-related disasters, migration, and conflict. Women face challenges due to their limited control over or access rights to assets or capital endowments, crucial for adapting to and coping with climate change impacts. Without adaptive and mitigatory measures it is expected that climate change will have an increasingly negative impact on rural women who are the primary producers of household food. Without investments that facilitate access to water, fuel, and other productive inputs, women´s workload and burden will continue to increase.
6. **Response to Climate Change Gender Inequalities:** Eswatini has made efforts to address gender inequalities in the context of climate change. In 2023, the National Gender Policy was revised to incorporate climate action, ensuring that policies and programmes related to the environment, natural resource management, disaster management, climate change, and energy management are gender-sensitive and responsive [8].
7. **Initial description of planned project responses to gender:** The project aims to sustain livelihoods, particularly by empowering disadvantaged groups and promoting transformative entrepreneurship among them. Specifically targeting vulnerable groups and communities with initiatives like upscaling climate adaptive technologies for agroecosystems and sustainable alternative livelihoods. One key focus is on women and youth groups, who are identified as critical change agents in their communities. The project aims to empower these groups by training them to develop their entrepreneurship skills and enhance their competitiveness through market links.

---

[1] Central Statistical Office, December 2019
[2] Country Fact Sheet | UN Women Data Hub
[3] Central Statistics Office, May 2018
[4] Improving women land rights to fight degradation | United Nations in Eswatini
[5] Kingdom of Eswatini Vulnerability Assessment Committee, July 2020.
[6] UNFPA, 2022
[7] UNDP, 2020
[8] https://www.jstor.org/stable/i40156908