ADAPTATION FUND

CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme:	Zimbabwe Adaptation for Drought and Agro-Production Transformation in Semi-arid Regions (Z-ADAPT)
Country:	Republic of Zimbabwe
Thematic Focal Area:	Water management, Agriculture and Ecosystem resilience
Type of Implementing Entity:	Multilateral Implementing Entity
Implementing Entity:	International Fund for Agricultural Development (IFAD)
Executing Entities:	Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (MLAFWRD)

Amount of Financing Requested: USD 12,000,000 (Twelve Million United States Dollars)

Project Formulation Grant Request (available to NIEs only): Yes ☒ No ☐

Amount of Requested financing for PFG: 150 000 (in U.S Dollars Equivalent)

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: 7/31/2026

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

Project Background and Context:

1. **Geography and natural resources:** The Republic of Zimbabwe, is a landlocked country in Southern Africa, with a total land area of about 390,757 square kilometers, bordered by the Zambezi River to the north and the Limpopo River to the south. A high central plateau (the Highveld) forms a major watershed between the Zambezi River system to the north and the Limpopo River system to the south, while the Eastern Highlands and the Lowveld create sharp altitudinal gradients that shape climate, hydrology, soils and land-use potential across the country[1]. The physical geography significantly influences the climatic conditions, hydrological systems, and agricultural viability of the nation, requiring a sophisticated comprehension of the environment to formulate successful climate adaptation strategies. Zimbabwe is divided into five separate agro-ecological zones, referred to as Natural Regions, categorized mostly by precipitation patterns, soil quality, and vegetation compatibility. Natural Regions I and II in the eastern highlands and highveld receive sufficient precipitation for intense agricultural cultivation.

2. Zimbabwe is largely a semi-arid country characterized by low, erratic rainfall and recurring droughts. Average annual rainfall is around 650 mm, but it varies dramatically by region, from only 350-450 mm in the southern lowveld (Natural Region V) to over 1,000 mm in the Eastern Highlands[2]. Overall, only 37% of Zimbabwe's land receives rainfall adequate for agriculture, with the rest prone to moisture deficits[3]. The country has experienced a long-term drying trend: rainfall has declined about 5% since 1901 and is projected to decrease by a further 15% by 2060 (and up to 25% by 2080) under climate change, especially in the already dry south-west[4]. Southern provinces including parts of Matabeleland, Masvingo and Midlands that lie in Natural Regions IV and V have already observed rising temperatures, more frequent mid-season dry spells, and prolonged droughts since the 1950s[5]. Climate models predict a hotter, drier future with a late onset of rains and intensified intra-seasonal droughts in these areas[6]. For example, rainfall in southern Zimbabwe could decrease by around 15% with a 20% reduction in runoff by mid-century, leading to higher food deficits and livestock losses if no adaptation measures are taken[5] .

3. Zimbabwe's climate is predominantly summer-rainfall (roughly November–March), but rainfall and temperature patterns vary significantly with elevation and exposure. National planning and agricultural practice commonly use agro-ecological "Natural Regions" (I–V) to reflect this variability, ranging from higher-rainfall zones (especially in the eastern highlands) to **semi-arid** areas where mean annual rainfall is typically in the 450-600 mm range and seasons fail frequently[7]. In recognition of climate change impacts on farming suitability, Government has also moved toward revising agro-ecological zoning to better reflect emerging climatic realities and planning needs[8].

4. Natural resources underpin both rural livelihoods and national development, yet they are under increasing pressure from climate variability and land-use change. Large parts of the drier regions are characterized by sandy soils with inherently low nutrient retention and low water-holding capacity, which can amplify drought impacts and increase sensitivity to short dry spells. Where catchments are degraded, accelerated runoff and erosion contribute to sedimentation of small reservoirs and water bodies, reducing effective storage and reliability over time**[9].**

5. Hydrologically, the country depends on highly seasonal flows in many sub-catchments, making water availability particularly sensitive to rainfall variability and drought. Zimbabwe's recent policy framing highlights recurrent severe drought episodes, such as 1991-1992, 2001-2002, 2015-2016, and 2018-2019**,** and their far-reaching impacts on agriculture, water resources and rural welfare, underscoring the centrality of water security and climate-risk-informed resource governance in national resilience planning[8.]

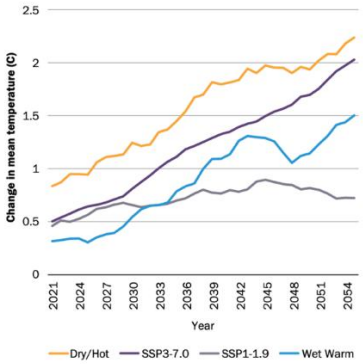
National Context and Climate Baseline/ Observed Trends:

6. Zimbabwe's ND-GAIN (Notre Dame Global Adaptation Initiative) score reflects high climate change **vulnerability** (due to reliance on rain-fed agriculture, water/energy stress) and low **readiness**, ranking it poorly globally, needing urgent investment in resilience, despite modest GHG emissions, as it strives for development through strategies like its updated Nationally Determined Contribution (NDC) for reduced emissions and adaptation[10].

[1] FAO 2016: Country Profile: https://openknowledge.fao.org/server/api/core/bitstreams/b43602b2-724e-45ed-8861-727d0381b66e/content
[2] Government of Zimbabwe (2022). *Fourth National Communication to the United Nations Framework Convention on Climate Change.* Ministry of Environment, Climate, Tourism and Hospitality Industry, Harare.
[3] Madzwamuse, M. (2010). *Climate Change Vulnerability and Adaptation Preparedness in Southern Africa – Zimbabwe.* Heinrich Böll Stiftung. (Citing that only around 37% of Zimbabwe receives adequate rainfall for agriculture, with the rest in semi-arid zones).
[4] Government of Zimbabwe (2020). *"Understanding Climate Risks over Zimbabwe."* Climate Change Management Dept., Ministry of Environment
[5] Green Climate Fund (2020). FP127: Building Climate Resilience of Vulnerable Agricultural Livelihoods in Southern Zimbabwe
[6] Government of Zimbabwe (2023). *National Climate Change Adaptation Plan.* Ministry of Environment, Climate, Tourism and Hospitality Industry.
[7] Food and Nutrition Security Profile 2022: https://www.fnc.org.zw/wp-content/uploads/2023/04/Hwange-District-Profile.pdf
[8] UNFCCC: Zimbabwe NDC 3.0 (2024): https://unfccc.int/sites/default/files/2025-02/Zimbabwe%20NDC3.0%20Country%20Statement_2025_35.pdf
[9] Dalu, T., Tambara, E.M., Clegg, B. et al. Modeling sedimentation rates of Malilangwe reservoir in the south-eastern lowveld of Zimbabwe. Appl Water Sci 3, 133–144 (2013).
[10] ND GAIN Matrix Zimbabwe: https://gain-new.crc.nd.edu/country/zimbabwe#:~:text=GDP%20(PPP)%20per%20capita%20(,the%20186th%20most%20ready%20country.

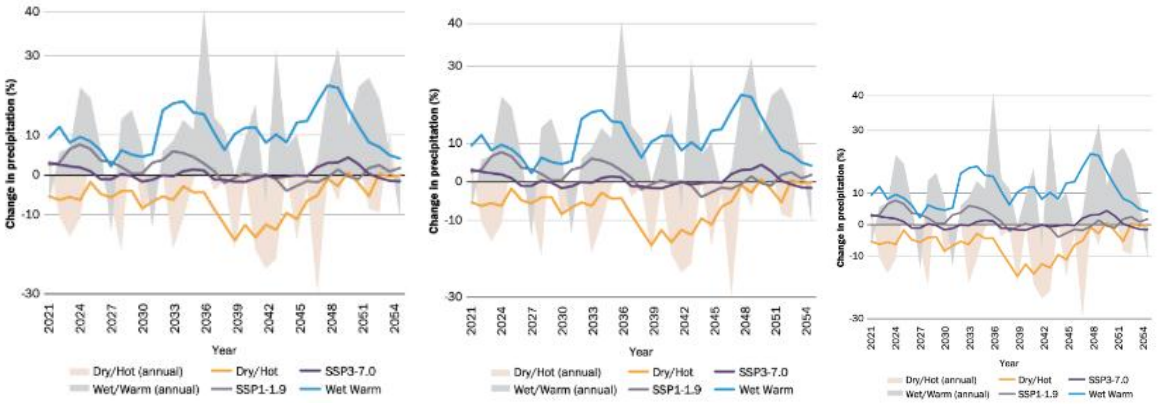
7. The World Bank Country Climate Change Development Report (CCDR) 2024[11] mentions that though there are both risks of wet and dry shocks, Zimbabwe faces greater downside risk from dry shocks than from wet shocks. The evidence from existing climate variability, observed climate change, and projected climate change suggests that the risks of droughts will continue to be higher than the risk from floods and storms, but that both dry and wet shocks will persist. This frames Zimbabwe's adaptation challenge in that climate proofing need to build resilience to both wet and dry shocks, even if greater emphasis needs to be put on managing dry shocks. Figures 1 and 2 depict this variability.

Figure 1: Zimbabwe change in mean temperature



Source: World Bank 2023a

Figure 2: Zimbabwe change in mean precipitation (lines 5-year moving average, shaded area annual variation)

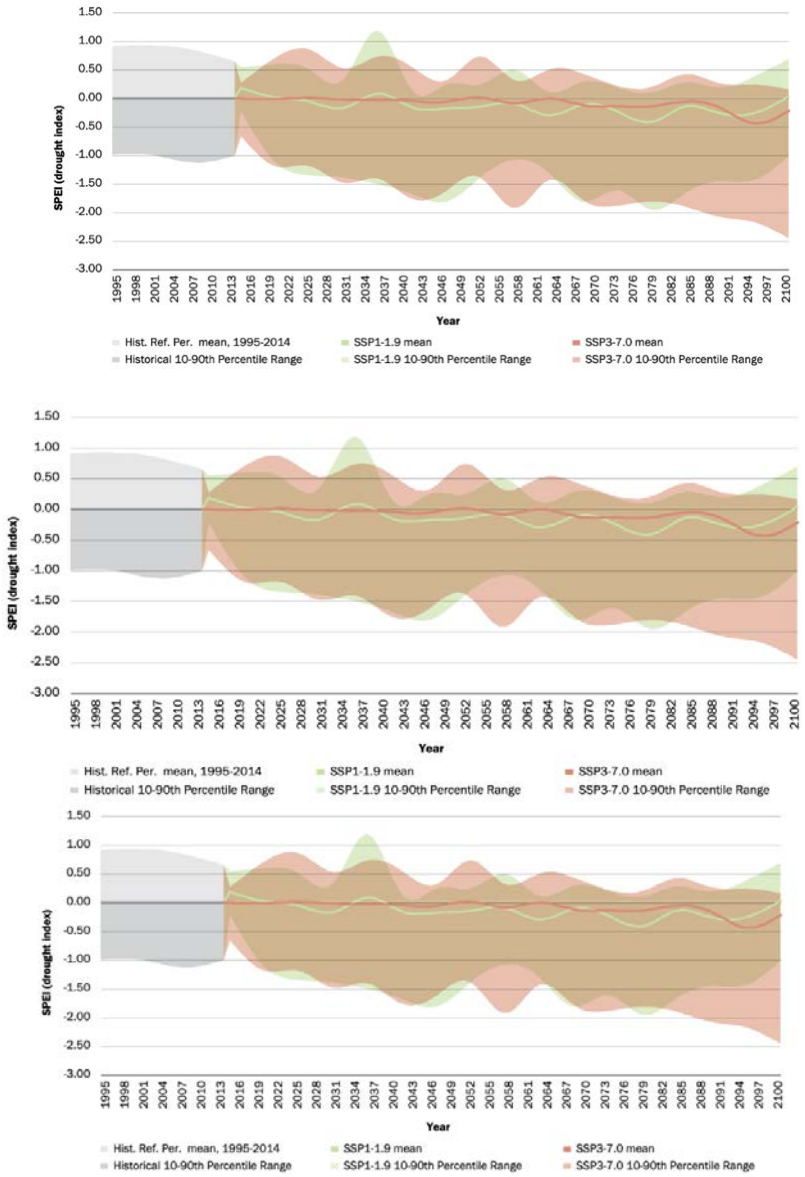


Source: World Bank 2023a

8. The combination of higher temperatures and lower precipitation will increase the risk of drought (WB CCDR 2024)[13].The frequency and intensity of extreme events is increasing: devastating droughts, flash floods, and even tropical cyclones (notably Cyclone Idai in 2019) have struck more often in recent decades[6]. Zimbabwe has experienced repeated hydrometeorological shocks, including multi-year droughts affecting much of the south and center of the country, localised flash flooding in floodplains and urban areas, and, in the eastern highlands, landfall of tropical cyclones such as Cyclone Idai in 2019. While Cyclone Idai's most severe impacts were concentrated in eastern districts, it illustrates the multi-hazard nature of Zimbabwe's climate risk profile and the way national shocks propagate through food systems, markets and public finances. For the semi-arid districts in Masvingo and Matabeleland South, the dominant and recurrent climate hazards are drought, higher temperatures and erratic rainfall; occasional intense rainfall events are nonetheless considered in the climate-resilient design of water and horticulture infrastructure.

[11] World Bank CCDR 2024: https://openknowledge.worldbank.org/server/api/core/bitstreams/a7e43475-55b0-4b6c-bfb1-5c23ebad1957/content

Figure 3: Annual SPEI drought index projections for SSP1–1.9 and SSP3–7.0 multi-model ensembles (reference period 1995-2015)



Source: World Bank CCKP

9. Between 1950 and 2003, Zimbabwe recorded multiple drought episodes (2 extreme and 4 severe droughts), and droughts accounted for 6 of the 10 worst natural disasters from 1991–2013[12]. Without adaptation, climate variability and shocks could cause over a 2% decline in GDP by 2030 (mainly via agricultural losses), undermining decades of development gains[13].

10. **Future Warming Projections:** Climate model projections indicate significant warming for Zimbabwe's semi-arid regions by mid-century, especially under high-emission pathways. By 2040–2059, mean annual temperatures in Zimbabwe are projected to increase by roughly +2.2 °C above the late 20th-century baseline, assuming a high emissions scenario (comparable to RCP8.5 or the newer SSP5-8.5). This magnitude of warming is on par with regional projections for southern Africa in IPCC assessments, which foresee a 2–3 °C rise by mid-century if global emissions continue a high trajectory. Notably, Zimbabwe's semi-arid zones (southern and western districts) may warm slightly more than the national average. For instance, national analyses based on CMIP5/6 models (as summarized by the World Bank's Climate Portal) show an approximate of 2.2 °C median increase by 2050 under RCP8.5. By end-of-century, this scenario

[12] UNDP & Government of Zimbabwe (2016). *Mapping of Selected Hazards Affecting Rural Livelihoods in Zimbabwe: A District and Ward Analysis*
[13] World Bank Climate Change Knowledge Portal – Zimbabwe Country Profile: *Climate Impacts on Growth*.

could result in +5 °C or more of warming in parts of Zimbabwe[14]. These projections for mid-century warming are consistent across various studies[15] [16] [17] [18] [19] and carry high confidence they highlight the urgency for adaptation in Zimbabwe's hottest and driest regions, which are already experiencing temperature stress.

11. Climate model simulations for Zimbabwe indicate an ongoing drying trend, especially within the southern and western regions. Based on historical losses of approximately 5% in annual precipitation since 1901, forecasts indicate a further decrease of 10-20% in seasonal rainfall and runoff by mid-century in critical catchments, accompanied by increased frequency of intra-seasonal dry spells and abbreviated rainy seasons. The changes are most evident in Natural Regions IV and V, where precipitation are anticipated to decline below 450-500 mm in several years, considerably increasing the likelihood of agricultural drought and water scarcity[11].

12. ***Geographic focus, Natural Regions IV and V:*** The most climate-vulnerable areas of Zimbabwe are the drought-prone Natural Regions IV and V in the south and west of the country. These agro-ecological zones are characterized by low annual rainfall (generally below 500–600 mm), a high frequency of mid-season dry spells, and periodic outright droughts that make rainfed farming extremely risky[20].

Figure 4: Drought Hazard, Vulnerability, and Risk maps for Zimbabwe

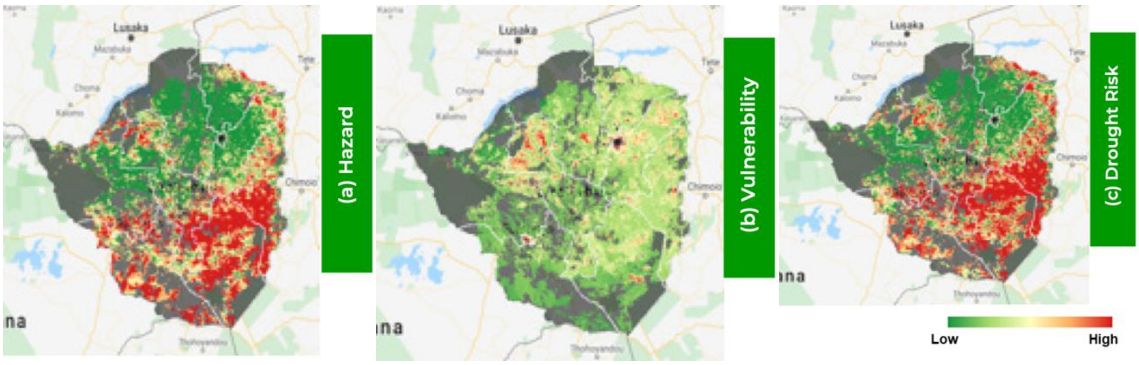


Table 1. Major droughts in Zimbabwe (Source: EM-DAT, 2020)

Year	Location	Affected Population
1981	Central, South, East and West	1.9 million
1990	No data*	110,000
1998	Southern (Matabeleland)	800,000
2001	Central, North, South and West	3 million
2007	Central and East	1.9 million
2010	Manicaland, Mashonaland Masvingo, Matabeleland, Midlands	254,000
2013	Manicaland, Masvingo, Matabeleland, Mashonaland Central, Midlands	3.7 million
2019	** No data provided from source*	1 million

13. Natural Region IV (covering much of southern Midlands, Masvingo and parts of Matabeleland) receives only about 450-600 mm of rain in a good year and suffers severe dry spells almost every rainy season[8]. Natural Region V the driest zone encompassing the southern lowveld and northwest normally gets under 450 mm of rain per year, with highly erratic and unreliable rainfall patterns[8]. In these regions, crop failures are common: rainfed agriculture yields a good harvest only once in every 4-5 years on average[21]. Most smallholders still attempt to grow staple crops (maize, sorghum, millet) on these marginal lands, but yields are extremely low and total crop failure is a constant threat[8]. Recurrent droughts in the semi-arid south have already led to significant declines in agricultural output, for instance, long-term data in Chiredzi District (Region V) show around 15% decrease in rainfall since 1980 accompanied by eight major droughts through 2004[10]. Annual rainy seasons have shortened and become more erratic, with more frequent *"false starts"* to the rains and prolonged dry spells that impact rainfed crops[22]. While Natural Regions IV and V extend into several provinces, the

[14] Climate Risk Profile: Zimbabwe (2021): The World Bank Group.
[15] Dube, N. (2023). Forty years of climate risk research in Zimbabwe–1980–2021. *Development Southern Africa*, *40*(6), 1308-1342.
[16] Mutasa, C. (2019). Zimbabwe's Climate: Past, Present and Future Trends. *Climate Change Law in Zimbabwe: Concepts and Insights*, *11*.
[17] Masimba, O., Gumindoga, W., Mhizha, A., & Rwasoka, D. T. (2019). An assessment of baseline and downscaled projected climate variables in the Upper Manyame sub-catchment of Zimbabwe. *Physics and Chemistry of the Earth, Parts A/B/C*, *114*, 102788.
[18] Maviza, A., & Ahmed, F. (2021). Climate change/variability and hydrological modelling studies in Zimbabwe: a review of progress and knowledge gaps. *SN Applied Sciences*, *3*(5), 549.
[19] Samu, R., & Akıntuğ, B. (2020). Pre-disaster planning and preparedness: drought and flood forecasting and analysis in Zimbabwe. *Water Sa*, *46*(3), 448-457.
[20] FAO (2000). *The Five Natural Regions of Zimbabwe.*
[21] FAO (2000). *Smallholder Irrigation Development in Zimbabwe – Socio-Economic Impact.*
[22] Adaptation Fund/UNDP (2012). *Coping with Drought and Climate Change – Zimbabwe Case Study (Chiredzi District).*

focus geographically concentrates on the south-western lowveld districts of Masvingo and Matabeleland South, which experience some of the lowest and most variable rainfall in the NR IV–V belt and are already facing recurrent drought emergencies.

14. These climate change stresses are further stressed by poor soil conditions: around 70% of Zimbabwe's arable land consists of sandy soils with low water and nutrient retention, especially in the semi-arid regions, which exacerbates crop wilting and yield losses during dry periods[23]. Overgrazing, unsustainable cultivation on fragile soils, deforestation and uncontrolled burning have stripped hillslopes and micro-catchments of woody and herbaceous cover. functions of these landscapes rather than providing only environmental co-benefits.
15. **Sensitivity and Adaptive Capacity of Smallholder Farming Communities:** Smallholder farmers in Zimbabwe's semi-arid Natural Regions IV and V, which extend across parts of Masvingo, Matabeleland South, southern Midlands and Manicaland, face acute climate risks due to erratic rainfall (approximately 350–650 mm/year), frequent droughts, and late or shortened rainy seasons.[20.] At least one in three crop seasons results in total failure, further impacted by heat extremes and degraded soils. These communities rely heavily on rain-fed agriculture and face high hazard, exposure, and sensitivity, with minimal adaptive capacity. Worsening food insecurity, affecting over half of rural households, combined with water scarcity, poor infrastructure, and degraded land has created a fragile rural economy highly vulnerable to climate shocks. In this context, restoring critical landscape functions, through agroforestry, gully and riverbank rehabilitation, and protection of riparian buffers, becomes an essential adaptation measure to reduce communities' sensitivity to climate shocks and enhance their adaptive capacity.

16. Poverty, gender inequality, and youth exclusion further reduce resilience. Over 76% of rural households live below the poverty line, and 35% are female headed, facing barriers in land tenure, finance, and extension access[24] [25]. For example, Zimbabwe National Statistics Agency data (cited by UNDP), show around 35% of rural households are headed by women. These households typically face greater barriers (e.g. weaker land tenure and less access to credit, inputs and extension services) Meanwhile, youth (68% of Zimbabwe's population) face 84% unemployment and little stake in agriculture due to lack of land and opportunity[26]. Less than 5% of cultivated land is irrigated, and insurance penetration is below 2%[27], while access to credit, drought-tolerant inputs, and reliable climate information remains limited. Zimbabwe's irrigation coverage is extremely limited. FAO notes that only about 124,000 ha of land are currently equipped for irrigation. By comparison, Zimbabwe's total arable land is on the order of millions of hectares. Thus, only a few percent of cultivated land are irrigated (well below 5%)[28]. This makes most farming entirely rain-fed.

17. ***Socio-Economic Vulnerability:*** Zimbabwe's rural population (nearly 68% of the total 15 million people) is highly dependent on rain-fed agriculture and natural resources, making climate variability a direct threat to livelihoods[11]. Smallholder farmers, who produce the bulk of food in communal areas, have seen their maize yields stagnate below 1 tonne/ha in drought years, less than a quarter of potential, due to erratic rains and extended dry spells[29].

18. The semi-arid districts of Chiredzi and Masvingo in Masvingo Province and Matobo and Mwenezi in Matabeleland South, are among the poorest and most food-insecure parts of Zimbabwe. These districts lie within the drier portions of Natural Regions IV and V, where recurrent droughts, shorter and more erratic rainy seasons, and high temperatures repeatedly undermine rainfed production and livestock systems. Poverty levels, food insecurity and dependence on climate-sensitive livelihoods are consistently higher than national averages in these four districts, with women- and youth-headed households disproportionately affected. By focusing on this south-western cluster of districts, the project targets the sub-set of NR IV and V where climate risk, exposure and socio-economic vulnerability intersect most acutely. During the 2021/22 lean season, about 2.7 million rural Zimbabweans (26% of the rural population) were food insecure, requiring humanitarian assistance[30]. Child undernutrition is high, national stunting prevalence stands at around 26%, a "high" level by WHO standards, with even worse rates in drought-affected districts[31].

19. Climate-induced crop failures and livestock losses are a key driver of this food insecurity pattern. In years that are impacted the most, communities in these impacted districts like Chiredzi, Mwenezi or Nkayi often rely on food aid to survive[10]. Moreover, approximately 80% of Zimbabwe's rural inhabitants live in Natural Regions III, IV and V, where rainfall is erratic

[23] Madamombe, S.M. *et al.* (2024). "Climate change awareness and adaptation strategies by smallholder farmers in semi-arid areas of Zimbabwe." *Int. Journal of Agricultural Sustainability, 22*(1).
[24] UNDP: https://www.undp.org/zimbabwe/publications/zimbabwe-poverty-and-poverty-datum-line-analysis-zimbabwe-2011/12#:~:text=,in%20urban%20areas
[25] Chimedza, R. Draft Gender and Zimbabwe's maize value chain in the context of climate change.
[26] UNICEF: https://www.zimbabwesituation.com/news/84-of-youths-in-the-informal-sector-unicef/
[27] https://gcrratings.com/wp-content/uploads/2025/03/Insurance-Sector-Risk-publication-20-March-2025.pdf#:~:text=
[28] FAO: https://www.fao.org/zimbabwe/fao-in-zimbabwe/zimbabwe-at-a-glance/en/#:~:text=Zimbabwe%20has%20the%20potential%20to,to%20existing%20input%20and%20output
[29] Mushore, T., Manatsa, D., Pedzisai, E., Muzenda-Mudavanhu, C., Mushore, W., & Kudzotsa, I. (2017). Investigating the implications of meteorological indicators of seasonal rainfall performance on maize yield in a rain-fed agricultural system: case study of Mt. Darwin District in Zimbabwe. *Theoretical and Applied Climatology*, *129*(3), 1167-1173.
[30] Koyratty, N., Jones, A. D., Schuster, R., Kordas, K., Li, C. S., Mbuya, M. N., ... & Shine Trial Team. (2021). Food insecurity and water insecurity in rural Zimbabwe: development of multidimensional household measures. *International journal of environmental research and public health*, *18*(11), 6020.
[31] Zimbabwe Vulnerability Assessment Committee (ZimVAC) (2022). *Rural Livelihoods Assessment Report.* Food and Nutrition Council.

many households in these areas cannot produce enough food even in good rainfall years, due to the challenging conditions and lack of irrigation[9]. This leaves a large swath of the population extremely vulnerable to climate shocks. Further to this, the human impacts of recent droughts illustrate the stakes: for example, the 2018–2020 drought led to massive crop failures, livestock die-offs, and water shortages, contributing to rural poverty and migration.

20. ***Gender and Youth dimensions:*** Climate change is magnifying existing social inequalities in Zimbabwe. Women are disproportionately vulnerable to climate shocks. About 80% of women in Zimbabwe live in rural areas, and women constitute 60–70% of subsistence farmers[13]. However, they have *less access to productive resources*, only an estimated 20% of women hold land rights, and female-headed households (which make up 35% of rural households) have poverty rates around 70%[32]. Recurrent droughts increase women's labor burdens (as they must walk ever-longer distances for water and firewood and find ways to feed their families from failing crops) and threaten their economic security. Gender disparities in land ownership and decision-making power also mean women have fewer options to adapt or diversify livelihoods. The project's target regions include many women farmers who need support to implement climate-smart practices and access finance, inputs, and irrigation. Only 5.5% of rural households have piped (safe) water access. This means women and girls must spend hours each day collecting water (UNDP).

21. ***Youth in rural Zimbabwe*** face a related challenge, with few formal jobs, they rely on agriculture yet often do not control land or capital, and many young people have been leaving farming communities due to unviable incomes. Notably, *"age disparities in land allocation"* have been identified, meaning younger farmers struggle to obtain land to farm. Climate stress is further driving rural-to-urban migration among youth, as farming becomes less reliable. Engaging and empowering youth in climate-resilient agriculture and value chains is therefore critical to both create livelihood opportunities and harness their energy and innovation for adaptation. Zimbabwe has an extremely young population, about 68% of Zimbabweans are underage[33]. However, formal employment for young people is very scarce: UNICEF reports that roughly 84% of Zimbabwean youths are engaged only in the informal sector due to lack of formal jobs (i.e. youth unemployment is extremely high). Combined with scarce land access, this leaves many young people with little stake in agriculture sectors.

22. ***Climate impacts on Agriculture and Water:*** Agriculture plays an important significance of Zimbabwe's rural economy and is inherently climate sensitive. The sector is already strained by decades of rainfall variability and episodic disasters [34]. Every major drought result in sharp drops in crop production, for instance, the severe drought of 2015/16 caused maize production to decline by over 50% [35].

23. A World Bank assessment found that without adaptation, a "dry climate" scenario could cause a **2-5% annual reduction in agricultural GDP** in the coming decade, undermining overall economic growth[7]. Rainfed crop yields for staples like maize, sorghum and groundnuts show strong positive correlation with rainfall trends, indicating the outsized influence of weather on food production[36].

24. In the vulnerable regions farmers report that *rainfall has become not only scarcer but more erratic*, with rains starting late or ending early, often punctuated by mid-season droughts that wither crops at critical growth stages [37]. Livestock production particularly cattle raising, is also impacted by increasing drought frequency, as rangeland pastures dry out and water points evaporate, leading to animal starvation and disease. For example, in southern provinces, drought-related cattle mortality has increased in recent years, with thousands of herd losses reported in 2019-2020 due to lack of forage and water. These climate-driven agricultural losses threaten rural incomes, food security and nutrition.

25. The horticulture sub-sector is especially vulnerable to climate change. Horticultural crops (fruits, vegetables) are high-value but often water-intensive and sensitive to temperature extremes [38]. Once a flourishing export industry earning over USD100 million annually in the 1990s, Zimbabwe's horticulture sector has seen output plummet to around USD10 million in exports currently, due to a combination of factors including the collapse of commercial farms, inadequate investment, and increasing climate stresses[39]. Smallholder farmers struggle with unreliable rainfall and limited irrigation infrastructure

[32] IFAD Design Report (2022) – *Horticulture Enterprise Enhancement Project (HEEP), Zimbabwe*.
[33] EU: https://www.eeas.europa.eu/delegations/zimbabwe/call-applications-youth-between-age-18-30-years-be-member-team-europe-youth-sounding-board-ysb_en#:~:text=In%20Africa%2C%20three%20quarters%20of,them%20from%20realising%20their%20full
[34] Mwadzingeni, L., Mugandani, R., & Mafongoya, P. (2022). Risks of climate change on future water supply in smallholder irrigation schemes in Zimbabwe. *Water*, *14*(11), 1682.
[35] Frischen, J., Meza, I., Rupp, D., Wietler, K., & Hagenlocher, M. (2020). Drought risk to agricultural systems in Zimbabwe: A spatial analysis of hazard, exposure, and vulnerability. *Sustainability*, *12*(3), 752.
[36] World Bank & GFDRR (2019). *Zimbabwe Agriculture Sector Disaster Risk Assessment.*
[37] Ndlovu, E., Prinsloo, B., & Le Roux, T. (2020). Impact of climate change and variability on traditional farming systems: Farmers' perceptions from south-west, semi-arid Zimbabwe. *Jàmbá: Journal of Disaster Risk Studies*, *12*(1), 1-19.
[38] Dube, N. (2021). Climate Change Risks in Horticultural Value Chains: A Case Study from Zimbabwe. In *Climate Change in Asia and Africa-Examining the Biophysical and Social Consequences, and Society's Responses*. IntechOpen.
[39] Government of Zimbabwe – Horticultural Recovery & Growth Plan (2020). (Cited in IFAD HEEP documents

to support horticulture. Many communal irrigation schemes and community nutrition gardens depend on boreholes or small dams that are strained by lower rainfall and higher evaporation [40].

26. ***Water security is a major limiting factor****:* Zimbabwe's Internal Renewable Water per capita has declined, and seasonal water scarcity in the south is acute. By September of drought years, many rivers and shallow wells run dry. Women and girls often walk long distances to fetch water, and competition for water for people, livestock and crops intensifies [41] [42]. The existing irrigation assets are insufficient of an estimated 120,000 ha of land under irrigation nationally, only around 11% is in smallholder schemes[9]. Most communal farmers in Regions IV and V therefore rely on rainfed production or rudimentary watering of gardens, leaving them highly exposed to rainfall failure.

27. ***Climate change is expected to worsen water stress***, with projections of 10-20% reduced runoff in key catchments by 2050[4]. This translates to smaller stream flows, lower reservoir levels, and faster depletion of groundwater in dry zones. In turn, that will further constrain crop production and even basic consumption needs. The cyclical droughts have already led to episodes of drinking water shortages and livestock dying of thirst in Matabeleland South and Masvingo[43]. In already water-stressed catchments, these trends are interacting with land degradation, deforestation and unsustainable drainage of wetlands to reduce baseflows, lower reservoir levels and accelerate depletion of shallow groundwater.

28. Where vegetative cover has been removed, intense rainfall episodes increasingly translate into rapid runoff, flash floods and high sediment loads, rather than slow infiltration and gradual release of water. This combination of reduced recharge, higher evaporation losses and sedimentation of small dams and canals amplifies drought risk for downstream users and further undermines the reliability of water supplies for horticulture and domestic use. Therefore, there is a **need to prioritize ecosystem-based and land restoration measures**, such as stabilization of gullies and riverbanks, protection and re-vegetation of riparian buffers, and agroforestry in upper catchments, as **climate adaptation interventions** that restore infiltration, groundwater recharge and flow regulation, thereby increasing the resilience of water and horticulture systems to future climate extremes.

29. **Policy context and baseline programs:** Zimbabwe has developed a comprehensive climate policy framework that recognizes the significant threats climate change poses to national development. The recently finalized National Adaptation Plan (2023), Nationally Determined Contribution (2021), Vision 2030, and National Development Strategy 1 all emphasize urgent adaptation in water and agriculture, particularly through irrigation development, climate-smart agriculture, early warning systems, and the empowerment of vulnerable groups such as women and youth. The forthcoming Climate Change Act and existing National Climate Policy (2017) further embed climate resilience in national planning, with Zimbabwe's participation in SADC initiatives ensuring regional coordination and early warning integration.

30. Zimbabwe has also strengthened strategic alignment between climate action and medium-term development planning. National development frameworks (including the emerging National Development Strategy 2 -NDS2 direction) position climate resilience as an enabling condition for macroeconomic stability, food security and inclusive growth, particularly in climate-sensitive rural economies[44]. In parallel, Zimbabwe's National Adaptation Plan (NAP) provides the backbone for prioritising adaptation actions, sequencing investments, and improving coordination across institutions and partners; the NAP sets out the governance arrangements, stakeholder engagement approach and technical workstreams needed to operationalise the plan at scale[45].

31. **Baseline Programs and Strategic Fit:** Z-ADAPT builds on a strong baseline of complementary donor and government programs, including the GCF FP127 project in southern Zimbabwe (UNDP), IFAD's Smallholder Irrigation Revitalisation Programme, WFP's rural resilience initiatives, and AfDB's Agricultural Value Chain and Livelihoods Enhancement Project (AVCLEP). These efforts have introduced climate-smart agriculture, rehabilitated water infrastructure, and piloted inclusive approaches in drought-prone districts. Z-ADAPT complements these initiatives by addressing critical adaptation gaps in water security, community-scale horticulture resilience, climate information and inclusive financial capability. Consistent with the IFAD-supported Horticulture Enterprise Enhancement Project (HEEP), Component 3 will build on planned participatory climate information services with the Meteorological Services Department (MSD), using SMS, community radio and extension-based agro-advisories, and will strengthen last-mile dissemination and feedback using water-availability and asset-functionality monitoring generated under Component 1.

[40] Mwadzingeni, L., Mugandani, R., & Mafongoya, P. L. (2021). Assessing vulnerability to climate change in smallholder irrigation schemes of Zimbabwe. *Sustainability*, *13*(18), 10023.
[41] Nzombe, A. M. (2021). *Climate Change and the Socio-Economic Livelihoods of Rural Women in Semi-Arid Region of Mbire District in Zimbabwe* (master's thesis, University of South Africa (South Africa)).
[42] Chigavazira, T. (2019). *The vulnerability of women to droughts in Mudzi District, Zimbabwe: The complexities of livelihood strategies and responses* (Doctoral dissertation, University of the Witwatersrand, Johannesburg (South Africa)).
[43] Simba, F. M., Chikodzi, D., & Murwendo, T. (2012). Climate change scenarios, perceptions and crop production: a case study of Semi-arid Masvingo Province in Zimbabwe. *Journal of Earth Science & Climatic Change*, *3*(3), 1-7.
[44] Republic of Zimbabwe (Office of the President and Cabinet). Public address/statement referencing national development planning direction including NDS2.
[45] National Adaptation Plans – Zimbabwe (2024): https://unfccc.int/documents/641981

32. **Problem Statement:** Zimbabwe is already experiencing severe climate impacts, with recurrent droughts, rising temperatures and intra seasonal rainfall variability causing direct losses to agricultural production, water availability and rural livelihoods, particularly in the semi-arid western and southern provinces. These regions are seeing a confluence of intensifying hazards including prolonged droughts, mid-season dry spells, heatwaves, and erratic rainfall patterns that are undermining rain-fed and irrigated agriculture, water security, and rural livelihoods. Local assessments show that droughts are the most frequently cited hazard by communities (reported by over 90% of respondents), followed by heatwaves (64%) and erratic rainfall patterns. Chiredzi in the Lowveld, for example, experiences peak temperatures of around 39 °C and evaporation rates of 10 -13 mm/day. Climate projections indicate that these stressors will worsen: the annual mean temperature in Zimbabwe's semi-arid zones is projected to increase by approximately 2.2 °C by mid-century under a high-emissions scenario, accompanied by reduced and more variable rainfall across all seasons.

33. These hazards are particularly acute in Natural Regions IV and V, where soils are degraded, adaptive capacity is low, and vulnerability is high. Smallholder farmers in these regions especially women and youth depend heavily on climate-sensitive livelihoods, yet lack access to resilient infrastructure, diversified income sources, and timely climate information. The adaptive capacity (AC) remains constrained by poor access to finance, insecure land tenure, and low coverage of resilient water infrastructure. Limited access to affordable, climate-resilient financial services (seasonal credit, input loans, savings and micro-insurance) prevents farmers from investing in irrigation, improved seed and diversification, making climate-resilient financial inclusion a critical adaptation gap that Z-ADAPT will address through Component 2.

34. Using the Intergovernmental Panel on Climate Change (**IPCC) 2014 Risk Factors**[46] (exposure, vulnerability, and hazard), and the Development-Adaptation Continuum [47]. Key criteria included:

35. **Climate Vulnerability (Exposure and Hazard):** As per the IPCC 2014 Risk Factors, exposure to hazards including prolonged droughts, mid-season dry spells, heatwaves, and erratic rainfall patterns was a key determinant. Vulnerability mapping aligned with the Development-Adaptation Continuum, focusing on regions where adaptive capacity can be enhanced through targeted interventions such as climate resilient infrastructure and livelihood strategies.

36. **Socioeconomic Vulnerability (Vulnerability):** IPCC 2014 emphasizes vulnerability as a combination of susceptibility to harm and limited capacity to cope. The four districts (Chiredzi, Masvingo, Matobo, and Mwenezi**)** were recognized as having economically disadvantaged communities dependent on agriculture and rural livelihoods, making them particularly vulnerable to climate shocks. Gender considerations have been included, focusing on regions with active women-led cooperatives and identifying potential to empower women and youth through training and initiatives to build capacity.

Project Targeting: Geographic Focus and Beneficiaries

37. The Z-ADAPT project directly targets four semi-arid districts: Chiredzi, Mwenezi and Masvingo in Masvingo Province, and Matobo in Matabeleland South Province. These districts lie predominantly within drought-prone Natural Regions IV and V and combine high climate exposure, recurrent water scarcity, food insecurity and dependence on climate-sensitive smallholder agriculture. Within the four districts, wards and communities will be prioritised where: (i) poor and food-insecure smallholder farmers are concentrated; (ii) communities are engaged or pre-identified under HEEP-supported horticulture value chains; and (iii) national risk profiles and local consultations confirm high exposure to agricultural drought, crop failure and water scarcity. Consultations undertaken in other provinces informed project design but do not expand the project's geographic targeting beyond these four districts.

38. Targeted beneficiaries include smallholder households engaged in or transitioning to horticulture, with a strong focus on women and youth-headed households and other vulnerable groups identified through participatory vulnerability assessments. Z-ADAPT is expected to directly reach approximately 12,000 households (about 60,000 people) across Chiredzi, Mwenezi, Masvingo and Matobo, with at least 50% women and 30% youth. Indirect beneficiaries, including household members, downstream water users and communities accessing climate information services, are estimated at approximately 125,000 people. Final beneficiary numbers will be confirmed during full proposal preparation through detailed community-level targeting. Transparent criteria will prioritise poverty, climate exposure, gender, age and engagement in climate-sensitive livelihoods, with public validation and disclosure processes to minimise elite capture and ensure equitable access to project benefits
    i. Prioritization of female-headed households, youth, and highly climate-vulnerable communities;
    ii. Use of participatory community validation processes to confirm beneficiary selection;

[46] Intergovernmental Panel on Climate Change (2014). Climate Change 2014: Impacts, Adaptation, and Vulnerability: https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-PartA_FINAL.pdf
[47] Singh, H., & Bose, I. (2021). Artificial distinction between climate change adaptation and development restricts access to climate finance for developing countries.

iii. Application of clear eligibility criteria, including poverty status, climate exposure, and engagement in climate-sensitive livelihoods;
iv. Public disclosure of beneficiary selection lists at community level to enhance transparency and accountability.

These measures will minimize risks of elite capture and ensure that project benefits reach the most vulnerable populations.

39. **Gender Assessment:** Building on the national evidence base and the stakeholder consultations undertaken the preliminary gender assessment confirms that climate shocks and stresses (particularly recurrent droughts and flood events) have differentiated impacts on women, men, girls and boys in the targeted rural districts. Zimbabwe continues to face pronounced gender inequalities (Gender Inequality Index: 0.53 in 2021), and women's adaptive capacity is constrained by unequal access to productive assets, finance, extension services and decision-making. Women are highly represented in climate-sensitive rural livelihoods, about 57 percent of those whose livelihoods are linked to agriculture are women, and women account for around 81 percent of contributing family workers yet they remain under-represented among landholders, including under customary tenure[48]. The Global Gender Gap Index for Zimbabwe remains below parity (0.747 in 2025), reinforcing the need for deliberate gender-responsive targeting and empowerment measures[49]. Climate variability and resource scarcity amplify women's time poverty (unpaid care and domestic work), increase the distance and time spent collecting water and fuelwood, and heighten exposure to safety risks at and on routes to water points[50]. Qualitative evidence notes that women and girls may travel long distances to access water (including reported trips of up to 15 km) and queue for extended periods during drought, reducing time for income-generating activities and increasing exposure to harassment and violence[51]. Empirical evidence from rural Zimbabwe indicates that drought shocks are associated with increased water-point violence, and this effect is statistically significant for households where the water-fetcher is a woman or girl[52]. These pressures intersect with persistent risks of gender-based violence and early marriage; recent data indicate that 33.7 percent of women aged 20–24 were married before 18 (2019) and 18.2 percent of women aged 15-49 experienced physical and, or sexual intimate partner violence in the past 12 months (2019)[53]. Peer-reviewed evidence also points to high lifetime exposure to physical, emotional and sexual violence among Zimbabwean women, underscoring the importance of safe engagement modalities and referral pathways[54]. The Government has articulated commitments to gender-responsive climate action, including through the Zimbabwe Climate Change Gender Action Plan[55].

40. To address these gaps, the project will adopt a gender-responsive targeting and implementation approach consistent with the Adaptation Fund Gender Policy and IFAD's gender and social inclusion commitments. At least 50 percent of direct beneficiaries will be women and girls and at least 30 percent will be youth; women's representation will be ensured in community institutions supported by the project (e.g., water user committees, farmer groups and local climate-risk planning and governance platforms), including in leadership roles. The project will undertake a detailed gender assessment during full proposal preparation to refine gender-differentiated vulnerability, needs and constraints, identify barriers to participation and benefit-sharing, and develop a costed Gender Action Plan. The Gender Action Plan will operationalize three strategic pathways: (i) strengthen women's and girls' voice, agency and leadership in local climate-risk governance and planning; (ii) improve women's access to, and control over, climate-resilient assets and services (climate information, water infrastructure, inputs, finance and market linkages), including labour-saving measures that reduce unpaid care burdens; and (iii) reduce gender-based violence and safety risks exacerbated by climate stress (e.g., safer water-point design/management, awareness, and referral linkages), with tailored support for female-headed households and other vulnerable groups. Practical measures will include: targeted outreach through women's groups and local leaders; facilitation by female extension workers where feasible; separate consultation spaces for women and girls when needed; training schedules and venues that accommodate care responsibilities (including provision for childcare and safe transport as feasible); materials adapted for low literacy; and a project Grievance Redress Mechanism with safe, confidential channels and SEA/SH-sensitive procedures. Monitoring and evaluation will track sex- and age-disaggregated indicators, conduct periodic audits of project processes to identify exclusion risks, and apply corrective actions throughout implementation.

[48] World Bank (2023). Zimbabwe Gender Assessment. https://documents1.worldbank.org/curated/en/099062823005513984/pdf/P179911-42c466aa-ebc8-4252-906b-a5f4a115199d.pdf
[49] Statbase: Zimbabwe – Gender Gap Index (Global Gender Gap Index series). https://statbase.org/data/zwe-gender-gap-index/
[50] UN Economic Commission for Africa (ECA). Zimbabwe situation analysis report: gender statistics, gender monitoring and reporting systems (section on Gender, Environment and Climate Change). https://www.uneca.org/eca-events/sites/default/files/resources/documents/gender-poverty-social-policy/workshop-gender-statistics-gender-monitoring-and-reporting-systems/zimbabwe_situation_analysis_report.pdf
[51] Leadership Initiative for Climate Justice (LINCZ). Gendered impacts of climate change in Zimbabwe. https://www.lincz.ca/hub/gendered-impacts-of-climate-change-in-zimbabwe
[52] Chigusiwa, L., Kembo, G., and Kairiza, T. (2023). Drought and social conflict in rural Zimbabwe: Does the burden fall on women and girls? Review of Development Economics, 27(1), 178–197. https://doi.org/10.1111/rode.12944
[53] UN Women Data Hub – Zimbabwe country profile and key gender statistics. https://data.unwomen.org/country/zimbabwe
[54] Bengesai, A. V. & Chikhungu, L. (2024). Violence Against Women and Girls in Zimbabwe: A Review of a Decade of the Empirical Literature. Trauma, Violence, & Abuse, 26(4), 769–788. https://pmc.ncbi.nlm.nih.gov/articles/PMC12397546/
[55] UNDP (2022). Zimbabwe Climate Change Gender Action Plan (publication page). https://www.undp.org/zimbabwe/publications/zimbabwe-climate-change-gender-action-plan

Theory of Change

41. **Main Climate Problem:** Zimbabwe's semi-arid districts in Natural Regions IV and V face increasing climate risks driven by recurrent droughts, rising temperatures and erratic rainfall. These climate hazards are interacting with degraded micro-catchments, high evaporation losses, fragile sandy soils and limited irrigation coverage, reducing water availability and undermining smallholder agricultural productivity and rural livelihoods. As climate shocks intensify, households experience declining crop yields, livestock stress and income losses, forcing coping strategies such as distress sales of assets, reduced dietary diversity and curtailed farm investment. Women and youth are disproportionately affected due to limited access to productive assets, finance and climate information services. These interacting climate hazards and structural vulnerabilities constitute the core climate adaptation challenge that Z-ADAPT seeks to address by strengthening climate-resilient water systems, agricultural production practices and climate risk governance.

42. Climate change is increasing the frequency and severity of droughts, heat stress and rainfall variability, resulting in declining water availability, reduced agricultural productivity, degradation of natural resources and increasing livelihood vulnerability. The project addresses these climate risks through an integrated adaptation pathway combining climate-resilient water infrastructure, ecosystem-based adaptation, climate-smart horticulture, climate information services and strengthened adaptive capacities of vulnerable households.

43. **Overall Objective:** The overall objective of Z-ADAPT is to Reduce climate vulnerability and strengthen the adaptive capacity of smallholder farming households in drought-prone districts of Zimbabwe's semi-arid regions by increasing reliable access to climate-resilient water systems, enabling adoption of climate-smart horticulture and diversified livelihoods, and strengthening climate information services and institutional capacity for climate-risk-informed decision making. The theory of change underpinning Z-ADAPT is that **if** (i) reliable, climate-resilient water access is restored and protected, (ii) farmers and producer groups adopt proven climate-smart horticulture practices and strengthen market linkages and basic financial capability, and (iii) climate information and early warning are operationalised for last-mile use and embedded in local institutions, **then** households can shift from reactive coping to climate risk-informed and risk aware production and livelihood strategies reducing drought-related exposure and losses, stabilising food and income outcomes, and improving adaptive capacity over time.
    This is achieved through three reinforcing pathways:

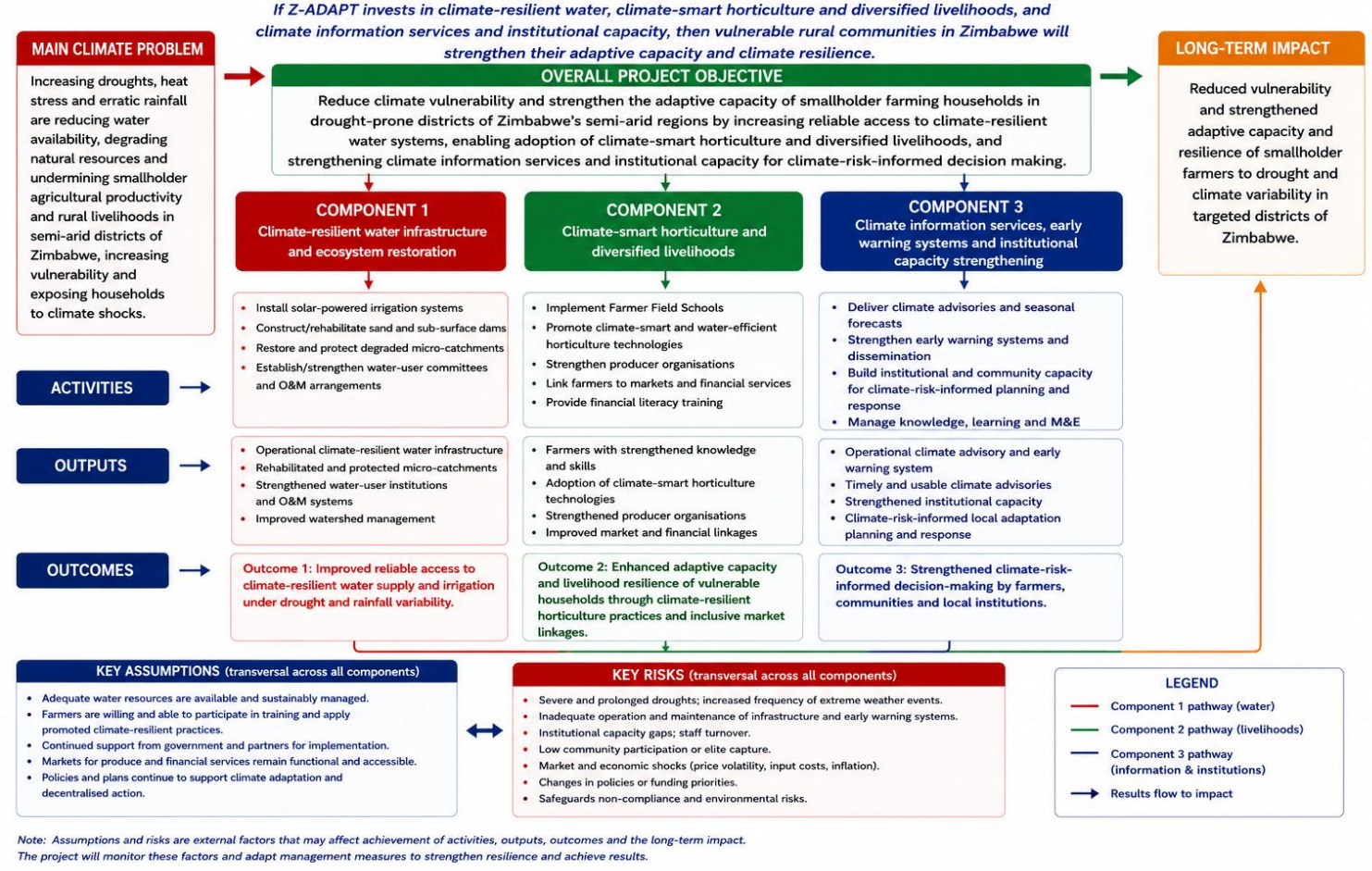
44. **Component 1: (Climate-resilient water infrastructure and ecosystem restoration)** Component 1 addresses the primary climate constraint of water scarcity through climate-resilient water infrastructure and targeted ecosystem based adaptation. Activities include installation of solar-powered irrigation systems, construction/rehabilitation of sand and sub-surface dams, restoration and protection of degraded micro-catchments, and strengthening of water-user governance and O&M arrangements. These activities generate outputs including operational climate-resilient water infrastructure, rehabilitated and protected micro-catchments, and strengthened water-user institutions and O&M systems. These outputs contribute to improved reliable access to climate-resilient water for vulnerable households and community production systems under drought and rainfall variability.
45. Component **2: (Climate-smart horticulture and diversified livelihoods):** Component 2 strengthens farmers' adaptive capacity through climate-smart horticulture, livelihood diversification and improved market and financial linkages.. Activities include Farmer Field Schools, seasonal coaching on water-efficient technologies and improved inputs, and financial literacy training linked to savings groups and financial institutions where available. Activities include Farmer Field Schools, seasonal coaching and demonstration of climate-smart and water-efficient horticulture technologies, strengthening of producer organisations and market linkages, and financial literacy and facilitated linkages to existing financial services. These activities generate outputs including farmers with strengthened knowledge and skills, adoption of climate-smart horticulture technologies, strengthened producer organisations and improved market and financial linkages. These outputs contribute to enhanced adaptive capacity and livelihood resilience of vulnerable households through climate-resilient horticulture practices and inclusive market linkages.
    Component 3: (Climate information services, early warning systems and institutional capacity strengthening): Component 3 strengthens climate information services and institutional capacity to enable climate-risk-informed decision making. Activities focus on co-producing and disseminating localized climate advisories through existing channels; strengthening last-mile early-warning dissemination and feedback; and building the capacity of MSD, the Department of Agricultural Technical and Extension Services, Rural District Councils and other local institutions to integrate climate risk into planning and services. The component strengthens and operationalises existing national systems rather than financing new weather stations or creating parallel early-warning infrastructure.
46. Cross-cutting: Gender Equality and Social Inclusion (GESI) Pathway. The three components are underpinned by a deliberate GESI approach that ensures women, youth and other marginalised groups are not passive recipients but active agents of adaptation. Targeted outreach, inclusive governance quotas (at least 50% women and 30% youth in all project-supported committees and Farmer Field Schools), gender-responsive infrastructure design, and GALS-based capacity building are embedded across Components 1, 2 and 3. A dedicated Gender Action Plan, developed during the full proposal stage, will operationalise three strategic pathways: strengthening voice and agency; improving access to and

control over climate-resilient assets and services; and reducing gender-based violence and safety risks exacerbated by climate stress.

47. Cross-cutting: Environmental and Social Safeguards and Grievance Redress. All project activities will be implemented in compliance with the Adaptation Fund Environmental and Social Policy. The project is classified as Category B. An Environmental and Social Management Plan (ESMP) will be prepared during the full proposal stage, covering site-specific risks related to water infrastructure, ecosystem restoration, and community engagement. A Grievance Redress Mechanism (GRM) with safe, confidential, and SEA/SH-sensitive channels will be established before implementation begins, with escalation pathways to Rural District Councils, IFAD, and the AF Secretariat where required.

48. **Assumptions and Risks:** Assumptions and risks operate transversally across all three component pathways and may influence the achievement of activities, outputs, outcomes and the long-term impact. Key assumptions are that: (i) adequate water resources are available and sustainably managed; (ii) farmers are willing and able to participate in training and apply promoted climate-resilient practices; (iii) government institutions and partners continue to support project implementation; (iv) markets and financial services remain functional and accessible; and (v) policies and plans continue to support climate adaptation and decentralised action. Key risks include: (i) severe and prolonged droughts and other extreme weather events; (ii) inadequate operation and maintenance of infrastructure and early warning systems; (iii) institutional capacity gaps and staff turnover; (iv) low community participation or elite capture; (v) market and economic shocks; (vi) changes in policies or funding priorities; and (vii) environmental and social safeguards non-compliance. These risks will be managed through climate-resilient technical design, strengthened institutional and community capacity, transparent beneficiary selection and governance arrangements, sustainable O&M mechanisms, adaptive project management, and application of the project's environmental and social safeguards and grievance redress mechanisms…

Figure 6: Theory of Change for Z-ADAPT:



Project/Programme Objectives:

49. The objective of Z-ADAPT is to reduce climate vulnerability and strengthen the adaptive capacity of smallholder farming households in drought-prone districts of Zimbabwe's semi-arid regions by increasing reliable access to climate-resilient water systems, enabling adoption of climate-smart horticulture and diversified livelihoods, and strengthening climate information services and institutional capacity for climate-risk-informed decision making.

50. Across Components 2 and 3, proposed livelihood diversification and institutional capacity-building measures are therefore framed as climate adaptation actions that directly respond to the projected increase in temperature, declining and more variable rainfall, and more frequent agricultural droughts in the project districts, rather than as business-as-usual rural development. These gender and age-differentiated constraints directly shape the project design: Component 1 prioritizes water and horticulture infrastructure that reduces women's time burden and improves safe water access; Component 2 promotes diversified, climate-resilient value chains and technologies where women and youth already play key roles; and Component 3 strengthens women's and youth's voice and leadership in local climate-risk governance.

51. The project aligns with national adaptation priorities (Vision 2030[56], NDC 2021, NAP 2023) that highlight climate-smart agriculture, irrigation and water harvesting, early warning systems, and the empowerment of women and youth[57]. At the institutional level, Z-ADAPT is fully consistent with IFAD's Country Strategic Note (CSN) for Zimbabwe (2023–2027), which identifies climate-resilient agriculture, smallholder water security, and inclusive rural livelihoods as priority strategic objectives for IFAD engagement in Zimbabwe. The project builds directly on the IFAD-financed Horticulture Enterprise Enhancement Project (HEEP) and complements the IFAD Smallholder Irrigation Revitalisation Programme (SIRP), ensuring alignment with IFAD's Programme of Loans and Grants (PoLG) and maximising the climate adaptation value of existing IFAD investments in country. It complements but not duplicates existing projects like IFAD's Development Smart Innovation through Research in Agriculture (DeSIRA) [58] and HEEP, ensuring distinct value improvement. The project is operationalized through three mutually reinforcing components: (i) climate-resilient water infrastructure and ecosystem restoration; (ii) climate-smart horticulture and diversified livelihoods; and (iii) climate information services, early warning systems and institutional capacity strengthening.

Project Components and Financing:

Table 2: Projects Components, Outcomes, Outputs and Budgets

Project Components	Expected Outcomes	Expected Concrete Outputs	Amount (US$)
Component 1. Climate-resilient water infrastructure and ecosystem restoration	**Outcome 1.1**: **Reliable and climate-resilient water access systems established for vulnerable households and community production systems, reducing exposure to drought and climate variability.**	**Output 1.1.1** **Solar-Powered Irrigation Systems (SPIS):** 200 solar-powered irrigation systems (SPIS) installed or upgraded with water storage capacity (10,000–20,000 litres each) serving approximately 12,000 households.	3,600,000
		Output 1.1.2 **Climate-resilient water storage:** 35 climate-resilient water storage structures (including sand dams, sub-surface dams or equivalent systems) constructed or rehabilitated in priority seasonal rivers.	1,600,000
		Output 1.1.3 Water Governance / O&M 200 Water User Committees established or strengthened and trained on water governance, operation and maintenance of irrigation systems (50% women and 30% youth).	380,000
	Outcome 1.2: Ecosystem services and micro-catchment functions strengthened to sustain water availability and climate-resilient infrastructure.	**Output 1.2.1 : Ecosystem-based Adaptation (EbA) for micro-catchment** 200 micro-catchment rehabilitation interventions implemented around water sources and irrigation sites (including recharge protection zones, agroforestry belts, gully stabilisation and soil conservation measures).	320,000
Total Component 1			**5,900,000**
Component 2. Climate-smart horticulture and diversified livelihoods	**Outcome 2.1:** **Adaptive capacity and livelihood resilience of vulnerable households enhanced through climate-resilient**	**Output 2.1.1: Adaptive capacity strengthened through Farmer Field Schools (FFS)** 150 Farmer Field Schools established and 7,500 farmers trained on climate-smart horticulture practices (50% women and 30% youth participation).	1,200,000

[56] Vision 2030 : https://zimembassydc.org/wp-content/uploads/2023/12/Zimbabwe-Vision-2030.pdf

[57] Zimbabwe Revised Nationally Determined Contribution (2021): https://unfccc.int/sites/default/files/NDC/2022-06/Zimbabwe%20Revised%20Nationally%20Determined%20Contribution%202021%20Final.pdf#:~:text=on%20four%20high,resilient%20and%20sustainable%20water%20resources

[58] DeSIRA: A multi-country initiative aiming to strengthen agricultural research and innovation to support the agroecological transition within food systems in Sub-Saharan Africa: Development Smart Innovation through Research in Agriculture

	horticulture practices and inclusive market linkages.		
		Output 2.1.2: Climate-resilient horticulture technologies demonstrated and adopted in at least 200 water-secure production sites linked to Component 1 investments.	1,550,000
		Output 2.1.3: Producer organisations strengthened 35 producer organisations strengthened on governance, aggregation and market engagement with facilitated linkages to buyers, finance and agricultural insurance providers.	450,000
Total Component 2			**3,200,000**
Component 3. Climate information services, early warning systems and institutional capacity strengthening.	**Outcome 3.1**: **Strengthened climate risk informed decision making**	**Output 3.1.1 Climate advisory and early warning services operational** in 4 target districts, including localized climate advisories and multi-channel dissemination mechanisms (SMS, radio and extension networks).	520,000
		Output 3.1.2 Institutional capacity strengthened to integrate climate risk information into planning and service delivery District-level coordination mechanisms and standard operating procedures for climate information services established across MSD, DATES and local authorities, with at least 120 frontline officers trained.	300,000
		Output 3.1.3 Learning and knowledge management systems established project knowledge management and learning system established, producing at least 8 knowledge products, 4 annual learning reviews, and 4 district knowledge-sharing events.	180,373
Total Component 3			**1,000,373**
Project Subtotal (Components 1–3)			**10,100,373**
Project/Programme Execution cost (8.7%)			959,535
Total Project/Programme Cost			**11,059,908**
Project Cycle Management Fee charged by the Implementing Entity (8.5%)			940,092
Amount of Financing Requested			**12,000,000**

Note: The budget allocations above are indicative at concept stage. Detailed activity-level cost estimates, including procurement cost breakdowns, technical design assumptions, and unit cost benchmarks for solar-powered irrigation systems and water storage structures, will be developed during the full proposal preparation phase, during full proposal preparation. Unit cost assumptions used at this stage are based on comparable IFAD-financed irrigation projects in Zimbabwe and southern Africa (e.g. HEEP, SIRP), adjusted for current market condition

Projected Calendar:

Table 3: Project Milestones

Milestones	Expected Dates
Start of Project/Programme Implementation	Q2 2028
Mid-term Review (if planned)	Q4 2030
Project/Programme Closing	Q4 2032
Terminal Evaluation	Q3 2033

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. 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.

Project Overview and Climate Vulnerability Context

52. The project focuses on the semi-arid regions of Natural Regions IV and V in **southern** and **western Zimbabwe**, where climate change is significantly affecting the hydrological system and impacting smallholder livelihoods. A prolonged **drying trend**, characterized by a decrease in rainfall which is projected to decrease further by mid-century, is further aggravated by a projected **rise in temperatures** of around 2.2°C by 2060, which will intensify evapotranspiration and shorten the

growing season. These rises result in increased frequencies of **droughts**, mid-season dry seasons, and flash floods, which significantly impact water supply, agricultural productivity, rangeland productivity, and ecosystem resilience.

The climate risk profile of the target districts is characterized by:

- **High Hazard (H):** increasing frequency and intensity of droughts, heatwaves above 35°C, erratic onset and cessation of rains, and localized flash floods that damage infrastructure and cause soil erosion.
- **High Exposure (E):** critical water points, irrigation schemes, and community gardens are often located in dry zones; settlements and livelihoods cluster around fragile, shallow groundwater sources and small, unlined earthen dams.
- **High Sensitivity (S):** farming systems are dominated by low-input, rain-fed maize monocropping on sandy soils with low water-holding capacity; less than 5% of cultivated land is irrigated; poverty levels are high, and households have limited savings or assets to buffer shocks.
- **Low Adaptive Capacity (AC):** rural households have poor access to irrigation, climate-resilient technologies, inputs, credit, and markets; local institutions have limited capacity to integrate climate information into planning; and women and youth face structural barriers in land tenure, decision-making, and access to services and finance.

53. **Climate change is increasing the already existing adaptation gap:** the current water and agricultural systems were built for a climate that no longer exists. Rising evaporation rates and a lot of runoffs make simple clay dams, shallow wells, and open canals not enough. In many seasons, traditional rain-fed maize systems are no longer useful. Climate risk has not yet been properly integrated into decision-making by local institutions and information systems.

The programme is structured into three components:

- **Component 1: Climate-resilient water infrastructure and ecosystem restoration**
- **Component 2: Climate-smart horticulture and diversified livelihoods**
- **Component 3: Climate information services, early warning systems and institutional capacity strengthening**

Together these components aim to reduce climate vulnerability by strengthening water availability, enabling climate-resilient agricultural production and improving access to climate information for decision-making.

Alignment with the Adaptation Fund Results Framework: Z-ADAPT is fully aligned with the Adaptation Fund Results Framework (AF-RMF). Based on the refined results structure and the updated outcomes/outputs and budgets, the project's primary contributions are to AF Outcome 4, Outcome 6 and Outcome 3, with secondary contributions to AF Outcome 5 and other outcomes as relevant.

54. Specifically, Z-ADAPT contributes at outcome level to:
    - AF Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level *(primary)* - through strengthened last-mile climate information and early warning services, user training and feedback mechanisms that convert advisories into early actions and strengthened institutional capacity for risk-informed planning and service delivery.
    - AF Outcome 4: Increased adaptive capacity within relevant sectors and development services *(primary)* - through climate-proofed water supply and irrigation assets (SPIS with storage, climate-resilient sand/sub-surface dams) and strengthened O&M/governance systems that keep services functioning under drought and heat stress.
    - AF Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas *(primary)* - through Farmer Field Schools and seasonal coaching, deployment/demonstration of climate-resilient horticulture and water-efficient technologies in water-secure sites, and strengthened producer organisations and inclusive market linkages (including facilitation to existing finance/insurance services, without establishing a project-managed revolving fund).

55. In addition, the project makes secondary contributions to:
    - AF Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses *(secondary)* - through strengthened capacities of MSD, Department of Agricultural Technical and Extension Services, Rural District Councils and local governance structures to integrate climate risk information into planning, O&M and services, including inclusive governance arrangements for water assets.
    - AF Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress*(secondary)* - through targeted Ecosystem-based Adaptation (EbA) and micro-catchment rehabilitation measures that protect priority water assets and reduce exposure of infrastructure and production systems to erosion, sedimentation and drought impacts.
    - The project will also contribute indirectly to AF Outcomes 2 and 5 through strengthened institutional and community capacity and inclusive climate-risk governance (Outcome 2), and ecosystem-based adaptation and micro-catchment rehabilitation that protect water resources and associated infrastructure (Outcome 5), consistent with Table 10.

56. Activities related to environmental and social safeguards, gender action planning and monitoring and evaluation will be implemented as part of the project management and oversight responsibilities of the Implementing Entity and Executing Entity, consistent with Adaptation Fund operational policies. In line with Adaptation Fund requirements, a costed Environmental and Social Management Plan (ESMP) will be prepared during the Full Proposal stage following detailed safeguards screening of project activities. The ESMP will address environmental and social risks associated with water infrastructure development, irrigation systems and ecosystem restoration measures.

57. **Risk of Maladaptation and Safeguards:** The proposed interventions are designed to minimise risks of maladaptation or unintended negative impacts. The project prioritises climate-resilient water infrastructure, climate-smart horticulture practices and climate information services that reduce climate vulnerability rather than increase dependence on climate-sensitive systems. Water abstraction and irrigation investments will undergo hydrological assessments, implement water monitoring systems, and establish community-based water governance mechanisms.

Hydro-geological screening and environmental and social safeguards assessments to ensure sustainable groundwater use and avoid impacts on downstream users or ecosystems. Community-based water governance, inclusive participation and transparent beneficiary targeting will reduce risks of exclusion or elite capture. Ecosystem-based adaptation measures and climate information services will further strengthen landscape resilience and support climate-informed decision-making, ensuring investments enhance long-term adaptive capacity. There is also a risk of low adoption of climate-smart practices, which will be addressed through continuous extension support and demonstration plots. The, following specific maladaptation and negative development risks have been identified, with corresponding design-embedded mitigation measures: **(i) Inequitable access and elite capture:** there is a risk that wealthier or better-connected households disproportionately capture project benefits (e.g. irrigation slots, committee positions, market linkages). **Mitigation:** criteria-based targeting with explicit representation quotas (50% women; 30% youth), open community validation of beneficiary lists, and a Grievance Redress Mechanism enabling anonymous complaints scalable to RDC and IFAD levels. **(ii) Groundwater depletion and aquifer stress:** concentrated SPIS abstraction could progressively deplete shallow aquifers, reducing water for non-project users, livestock and ecosystems. **Mitigation:** mandatory hydro-geological screening prior to any SPIS investment, site-specific abstraction limits validated against recharge estimates, groundwater monitoring by Water User Committees (Activity 1.2.1.3), and recharge-zone protection under Output 1.2.1. **(iii) Incentives and dependancy:** infrastructure provision may reduce community motivation to maintain cost-sharing and O&M post-project. **Mitigation:** avoiding direct input subsidies, requiring communities to co-invest in O&M from inception, and embedding cost-based tariff frameworks and reserve funds from Year 1 (see Part II.J). **(iv) Monoculture shift and reduced dietary diversity:** commercialisation of horticulture may shift households away from staple crop and livestock diversification. **Mitigation:** FFS curricula explicitly promote diversified production portfolios and nutrition-sensitive variety selection, with dietary diversity tracked in the M&E framework. **(v) Resource conflict affecting non-beneficiaries**: new water infrastructure may attract in-migration or challenges may be faced by existing pastoral and non-farming users. **Mitigation:** pre-investment social screening maps existing resource users and customary water-use rights, consultations include adjacent communities, and shared-access rules are documented and agreed before construction begins.

The project recognizes that poorly designed adaptation interventions can unintentionally increase vulnerability or create new climate risks. Potential maladaptation risks include: (i) groundwater depletion resulting from increased irrigation abstraction; (ii) inequitable access to project-supported infrastructure and services; (iii) dependency on project support without sustainable management arrangements; (iv) expansion of agricultural activities into environmentally sensitive areas; and (v) conflict over water allocation among users. To mitigate these risks, the project will undertake hydrogeological assessments, establish abstraction limits where necessary, implement transparent beneficiary targeting criteria, strengthen Water User Associations and community governance structures, apply environmental and social screening procedures, and ensure regular monitoring of environmental and social impacts throughout implementation.

58. **Component 1 – Climate-resilient water infrastructure and ecosystem restoration (USD 5,900,000)**
Rationale and adaptation gap: In the semi-arid southern and western regions, **water availability** and **reliability** are the primary barriers to adaptation for smallholders. Decreasing and increasingly erratic precipitation, along with high temperatures, are reducing effective surface water flows and groundwater replenishment, while increasing evapotranspiration losses. The current rural water and irrigation infrastructure, including shallow wells, unlined conveyance systems, small earthen dams, and boreholes lacking sufficient storage and management, is unsuitable for increasingly hotter and drier conditions. It is prone to rapid seasonal interruptions, significant seepage and evaporation losses, siltation, and damage from flash floods, while offering minimal resilience during extended dry periods.

59. Component 1 addresses this adaptation gap by climate-proofing rural water supply and irrigation through a streamlined "water security shield" that combines: (i) reliable solar-powered abstraction with on-site storage buffers; (ii) climate-resilient sub-surface storage in seasonal sandy rivers; and (iii) strengthened local water governance and micro-catchment rehabilitation to sustain water yields, protect assets, and ensure equitable access during droughts. Activities are

consolidated to prioritize high-impact, scalable measures and avoid dispersed pilots; site lists, final designs, and Bills of Quantities will be confirmed at Full Proposal stage based on hydrological and social screening.

60. **Outcome 1.1: Reliable and climate-resilient water access systems established for vulnerable households and community production systems, reducing exposure to drought and climate variability.**

61. **Output 1.1.1: Solar-powered irrigation systems (SPIS)** with storage installed, upgraded and operational (approximately 200 SPIS sites with 10,000-20,000 storages per site), serving 12,000 households (6000 households with domestic water supplies) and an additional 6000 households supporting year-round horticulture (USD 3,600,000).

    This output ensures reliable, low-cost water access for community gardens and smallholder production by installing/upgrading approximately **200 SPIS sites**, each integrated with **10,000- 20,000 liters** of elevated storage (for short-term buffering) to provide short term buffering and operational flexibility. The output is designed to serve around **12,000 households** (average **30 households per SPIS site accessing domestic water resources**) and additional 30 households to enable year-round horticulture in drought-prone wards where water access constraints and increasing climate variability are driving high livelihood sensitivity. SPIS sites will be prioritised in locations where horticulture potential is demonstrably viable and where solar pumping can sustainably supplement existing water resources. **Indicative irrigated area per household** supported through these shared schemes/gardens is expected to be in the range of **0.05–0.15 ha per household** *(site-specific cropping patterns, water availability and scheme design to be confirmed at Full Proposal stage).*

62. Infrastructure investments will be complemented by ecosystem-based adaptation measures, including restoration of degraded catchments, stabilization of gullies, protection of riparian zones and agroforestry interventions to improve infiltration, groundwater recharge, flow regulation and long-term water security under changing climatic conditions.

63. **Activity 1.1.1.1: Site selection and Climate-resilient SPIS design.**
    - Undertake **hydro-geological screening** at each proposed SPIS site to confirm sustainable abstraction and climate-robust yields (including dry-season performance assumptions).
    - Apply selection criteria that prioritize: (i) drought exposure and high livelihood dependence on rain-fed production; (ii) existing or planned community garden/irrigation scheme potential; (iii) inclusion potential for women/youth and vulnerable households; and (iv) feasibility of community management, O&M.
    - Prepare standard SPIS technical specifications (pump sizing, head, pipework, tank sizing, and safety measures) that are fit-for-purpose under hotter conditions and more frequent dry spells.

    The specific locations and detailed technical configurations of the Solar-Powered Irrigation Systems (SPIS) will be finalized during early implementation following hydro-geological verification and community consultations. Therefore, these investments will be treated as partially identified Unidentified Sub-Projects (USPs**)** under the Adaptation Fund framework, where the type of activity is known but the exact sites are confirmed after field verification. This approach is necessary because the sustainability and climate resilience of SPIS systems depend on site-specific hydro-geological conditions, groundwater recharge potential, and community management feasibility, which cannot be fully validated during project design. In line with Adaptation Fund guidance, each site will undergo environmental and social risk screening, hydro-geological assessment, and gender-responsive community consultations prior to final selection, applying predefined exclusion criteria for environmentally sensitive areas and integrating mitigation measures into the project Environmental and Social Management Plan (ESMP) to ensure full compliance with the Fund's Environmental and Social Policy and Gender Policy.

64. **Activity 1.1.1.2: Procurement, installation and commissioning (SPIS + storage)**
    - Procure and install **200 solar pumping systems** with **10,000–20,000** elevated storage at each site, including site works, mounting structures, basic distribution to gardens, and protection measures against damage/theft.
    - Commission systems with performance testing and handover protocols to user committees, including basic water safety arrangements where domestic access is feasible.

65. **Activity 1.1.1.3: Operation and maintenance systems and skills**
    - Train at least 400 local technicians and caretakers (minimum 40% women, 30% youth) in basic SPIS maintenance and troubleshooting.
    - Establish practical O&M arrangements (tool kits, simple maintenance schedules, spare-parts planning) and community-approved cost-sharing approaches for minor repairs.

66. **Adaptation logic (drought/heat focus):** SPIS investments reduces climate vulnerability by decoupling irrigation access from increasingly erratic rainfall and reducing exposure to fuel price volatility associated with diesel pumping. The integration of on-site storage provides immediate buffering during overcast periods and short supply disruptions and supports more stable water delivery during peak heat stress, thereby reducing the likelihood of crop failure and income

losses in drought-prone hot conditions. Overall, Output 1.1 enables a scalable and maintainable pathway to climate-resilient horticulture by combining sustainable abstraction, buffering capacity and local O&M capability in the most climate-vulnerable wards.

67. Groundwater-based interventions will be guided by hydrogeological assessments to determine sustainable abstraction levels and recharge potential. Monitoring systems will be established to track groundwater levels and abstraction rates to ensure that withdrawals remain within sustainable limits and do not negatively affect downstream users, ecosystem functions or future water availability.

68. **Output 1.1.2: Climate-resilient water storage increased through sand dams/sub-surface dams (streamlined: 35 structures total), buffering dry-season water availability for horticulture/livestock and protected abstraction where feasible (USD 1,600,000).**

This output increases reliable dry-season water availability by constructing approximately 35 climate-resilient water storage structures on priority seasonal sandy rivers (indicatively a mix of sand dams and sub-surface dams; final mix confirmed at Full Proposal stage). These structures function primarily as drought-buffering adaptation assets by enhancing shallow groundwater storage in the riverbed, alluvial sediments, reducing evaporation losses compared to open surface storage, and sustaining localized baseflow/soil moisture during prolonged dry spells. Sites will be selected through hydrological screening (sediment characteristics, river geometry, expected recharge and storage performance under projected rainfall variability) and social screening (equitable access, customary water rights, downstream users, and community willingness/capacity to manage the asset). Designs will follow climate-resilient standards and include, as required, spillways, abutment/bank protection, scour/erosion control, and safe access points to reduce failure risk under flash floods and high-flow events. Construction will be implemented through qualified contractors with community oversight and accompanied by community-validated use rules (including priority uses during drought), basic monitoring arrangements, and O&M responsibilities linked to local committees.

69. **Use of water (domestic vs productive):** The primary use is for productive water security (community horticulture and livestock watering) because this is the core adaptation pathway for stabilizing food and income in drought-prone wards. Where feasible and appropriate, designs will also incorporate protected abstraction arrangements for domestic use (e.g., lined collection points and/or handpumps) consistent with local water safety requirements and community management plans.

70. **Indicative storage capacity:** Storage varies by riverbed flow and sediments. As an indicative planning range at this stage, structures are expected to store 1,000-5,000 m³ of water per structure (combined sub-surface storage within the sand/alluvial matrix and associated accessible storage), with exact capacities to be confirmed through Full Proposal-stage hydrological assessments and engineering design. ***Cost:*** *With USD 1,600,000 for 35 structures, the indicative average is USD 45,700 per structure, inclusive of site screening/design, civil works and protection works, basic abstraction arrangements where applicable, community mobilization, and O&M set-up.*

71. **Activity 1.1.2.1: Site selection, safeguards screening, and climate resilient technical design.**

- Identify approximately 35 priority sites for construction (indicatively 25 sand dams and 10 sub-surface dams), based on: hydrology and sediment suitability, drought exposure, beneficiary demand, environmental and social sensitivity, and feasibility/cost. *A typical sand/sub-surface dam in a seasonal sandy riverbed of this scale can be expected to store approximately 1,000-5,000 m³ of water within the sand/alluvial matrix (sub-surface storage), depending on riverbed width/depth, sediment characteristics and local recharge/flow conditions. The site designs will specify an estimated storage volume (m³) for each structure, based on surveyed cross-sections and assumed effective porosity of the sand body, and will define the reliable dry season yield for planned uses (horticulture/livestock, and protected domestic abstraction where feasible).*
- Prepare concept designs and indicative storage estimates for shortlisted sites to maximise sub-surface storage (minimising evaporation/open water exposure), including protection work's needs (spillways, bank stabilisation) based on climate risk.
- Undertake inclusive community consultations during site confirmation through local authorities and representative groups (ensuring women/youth participation) to validate needs and governance arrangements.

The proposed sand dams and sub-surface dams will be treated as partially identified **Unidentified Sub-Projects (USPs)** under the Adaptation Fund framework, as the intervention type is defined but the exact locations will be confirmed during implementation following hydrological surveys and community consultations. This approach is necessary because the feasibility and performance of these water harvesting structures depend on site-specific riverbed geomorphology, sediment characteristics, groundwater recharge potential, and local water use patterns that cannot be fully verified during design. In line with Adaptation Fund guidance, each site will undergo environmental and social safeguards screening, hydrological and geomorphological assessment, and inclusive community consultations prior to final selection, applying exclusion criteria for environmentally sensitive areas and integrating any required mitigation measures into the project Environmental and Social Management Plan (ESMP) to ensure full compliance with the Fund's Environmental and Social Policy and Gender Policy.

72. **Activity 1.1.2.2: Construction and community participation.**
- Procure qualified contractors to construct sand/sub-surface dams using reinforced masonry/concrete and agreed technical standards, with engineer supervision and quality assurance (materials testing, compaction, spillway/overflow design, and safety).
- Target at least 3–5 structures per micro-catchment, benefiting 8,000–10,000 people downstream.

73. **Activity 1.1.2.3: Operation, water safety, equitable access and monitoring arrangements.**
- Establish or strengthen site-level governance arrangements (Water User/Water Point Committees or sub-committees) with 50% women and 30% youth, including simple water allocation rules for drought periods and grievance/feedback mechanisms.
- Introduce basic water safety and public health measures where abstraction is planned (protected collection points where relevant; hygiene messaging), and agree protocols to avoid contamination while preserving natural filtration benefits.
- Implement simple monitoring indicators (e.g., sand level/structure integrity, groundwater response in adjacent wells, water availability logs) and integrate reporting into local systems (Department of Agricultural Technical and Extension Services, RDC) and the broader climate information service strengthened under Component 3.

74. **Output 1.1.3: Water Governance and O&M: 200 water user, water point committees established, strengthened (aligned to SPIS schemes + water storage sites), with 50% women and 30% youth, including O&M systems and basic asset management**

This output ensures that the water infrastructure financed under Component 1 (SPIS with storage and sand and sub-surface storage structures) remains functional, safe and equitably managed over time by strengthening local governance and operations and maintenance (O&M) systems. The project will establish and strengthen approximately 200 Water User and Water Point Committees linked to SPIS sites and water storage structures, meeting inclusion targets (at least 50% women and 30% youth) and applying transparent, accountable management arrangements. Committees will be supported to operationalise clear governance routines (roles and responsibilities, meeting schedules, record-keeping and transparent decision-making), and practical asset management systems that reduce downtime and protect investments under climate extremes. This includes preventive maintenance schedules, minor repair planning and cost-sharing mechanisms, procedures to manage theft and vandalism risks, and basic water safety/hygiene practices where domestic abstraction is feasible. Committees will also adopt equitable water allocation rules for drought periods (including explicit provisions for the most vulnerable users), maintain coordination with agencies and advisories for drought and heat-risk management, and link to the project's GRM for complaints, feedback and conflict resolution reducing the likelihood of exclusion and water-related disputes during scarcity.

75. **Activity 1.1.3.1: Establishment/strengthening of inclusive water governance structures:** Establish or strengthen site-level governance arrangements (Water User/Water Point Committees or sub-committees) with 50% women and 30% youth, including simple water allocation rules for drought periods and grievance/feedback mechanisms.
- Identify committee coverage and confirm the appropriate management unit for each asset (SPIS site and water storage structure), including use of sub-committees/clustered committees where multiple nearby assets share the same user group.
- Establish and/or strengthen approximately 200 committees, ensuring minimum inclusion targets (50% women; 30% youth) and representation of vulnerable households, with transparent selection/rotation arrangements and leadership opportunities for women and youth.
- Provide governance coaching and simple management tools (committee by-laws/charters, meeting templates, record-keeping and transparency practices) aligned with local authorities and relevant line agencies.

76. **Activity 1.1.3.2: Practical O&M systems, skills and minor repair readiness:**
- Develop and roll out site-level preventive maintenance schedules and functionality checklists for SPIS and storage assets, including routines for cleaning, inspection, and basic troubleshooting.
- Train committee members and caretakers/technicians in basic O&M and asset protection (including safe operating procedures) and establish practical arrangements for minor repairs (toolkits where relevant, spare-parts planning and access pathways, and community-approved cost-sharing for minor maintenance).
- Put in place procedures to reduce downtime and climate-related degradation (e.g., rapid response steps after extreme rainfall/flash floods, inspection protocols for erosion/scour, and protection measures against vandalism/theft where required).

77. **Activity 1.1.3.3: Equitable allocation, water safety, monitoring, and accountability (incl. GRM linkages)**
- Facilitate development of equitable water allocation rules for dry-season and drought periods (priority uses, rationing triggers, conflict resolution steps), explicitly reflecting the needs of women, youth and vulnerable households.
- Where domestic abstraction is feasible, apply basic water safety arrangements (protected access points where relevant, hygiene messaging, contamination prevention practices) consistent with community management plans.
- Establish simple monitoring and reporting routines (asset functionality logs; seasonal water availability notes; rapid reporting of breakdowns and risks), with linkages to systems and the climate information service (Component 3) where relevant.

- Operationalise accountability through the project GRM and feedback mechanisms (complaints intake, response timelines, escalation pathways), ensuring that exclusion/elite capture and GBV/SEA/SH concerns can be safely reported and addressed.

78. **Adaptation logic (sustained service delivery under drought/heat):** Strengthened local governance and O&M reduce climate vulnerability by improving the reliability and uptime of water assets during drought and heat stress, preventing rapid degradation and ensuring that scarce water resources are managed transparently and equitably. By institutionalising allocation rules, maintenance routines and accountability mechanisms, the project reduces conflict and exclusion during scarcity and safeguards the long-term adaptation benefits of Component 1 investments.

79. **Outcome 1.2: Ecosystem services and micro-catchment functions strengthened to sustain water availability and climate-resilient infrastructure**

Outcome 1.2: Ensures that the "grey" assets financed under Outcome 1.1 (SPIS sites and sand/sub-surface storage structures) are sustained by targeted "green" and governance measures that reduce climate risks that typically undermine water infrastructure in semi-arid settings- namely declining recharge, erosion and sedimentation, and inequitable access during drought. All measures under this outcome are adaptation actions (drought buffering, recharge-zone protection, reduced erosion/siltation and protection of water assets).

80. **Output 1.2.1: Ecosystem-based Adaptation (EbA) for micro-catchment**

This output focuses on **micro-catchment protection and local governance** around the priority water assets, to improve dry-season reliability and protect investments from climate extremes (prolonged droughts and episodic intense rainfall events). This output safeguards water yields and protects infrastructure by implementing EbA-based micro-catchment rehabilitation measures linked to SPIS sites and sub-surface storage structures, targeting at least 5,000 ha across priority micro-catchments. Interventions will be selected through participatory micro-catchment planning and will include, as appropriate: recharge zone protection, gully stabilisation and erosion control using vetiver/native species, agroforestry belts and windbreaks, vegetative buffer strips, and complementary soil and water conservation measures to reduce runoff velocity and sediment transport. Maintenance responsibilities will be agreed with local institutions and committees, and simple monitoring (e.g., visible erosion, vegetative cover, functionality checks) will be embedded in routine O&M to sustain performance.

81. **Activity 1.2.1.1: Targeted micro-catchment rehabilitation (EbA) to protect recharge and reduce asset exposure**

- Implement EbA measures on at least 5,000 ha of priority micro-catchments, directly linked to SPIS and sand/sub-surface storage sites including:
- Gully stabilisation using vetiver and native grasses to reduce erosion and sediment loads.
- Protection and re-vegetation of riparian buffers and recharge zones, including fencing/controlled access where needed) to safeguard infiltration and reduce contamination.
- Agroforestry belts and windbreaks around community gardens and reservoirs, to reduce heat/wind stress and protect infrastructure from erosion/sand deposition.
- Prioritize EbA interventions where catchment degradation is measurably increasing drought sensitivity (rapid runoff, declining infiltration, sedimentation of structures, and damage risks under intense rainfall).

82. **Activity 1.2.1.2: Strengthening local water governance structures aligned to the scale of assets**

- **Align committee coverage to the infrastructure footprint** financed under Component 1 by strengthening/establishing governance arrangements for:
- 200 site-level Water User/Water Point Committees aligned to the 200 SPIS sites (where committees exist, they will be formally strengthened; where absent, they will be established at FP stage once sites/beneficiaries are confirmed); and
- Governance arrangements for 35 sand/sub-surface dam sites, either as site-level sub-committees under the nearest SPIS/community water committee or as clustered committees where 2-3 nearby assets share the same user group and management structure

- Facilitate development of simple water allocation rules, drought contingency plans and equitable access arrangements, reflecting the needs of women, youth and vulnerable households.

83. **Activity 1.2.1.3: Community-based groundwater/water availability monitoring and reporting into CIS.**

- Equip committees with simple tools (e.g. dip meters, logbooks) to monitor groundwater levels in 50-70 priority boreholes and track functionality of SPIS and dams. Basic water availability indicators at SPIS and storage sites (functionality and seasonal performance).
- Establish a simple reporting workflow so that core indicators (groundwater level trends, water availability constraints, and asset functionality) are periodically shared with Department of Agricultural Technical and Extension Services /RDCs and fed into the climate information service / CIS supported under Component 3.

84. **Adaptation logic (drought/heat focus):** Under drier and hotter conditions, maintaining shallow groundwater, baseflows and dry-season water availability depends on protecting recharge zones and reducing erosion/sedimentation that damages and degrades water infrastructure. Targeted EbA interventions strengthen drought buffering by improving infiltration and reducing siltation, while inclusive governance and basic monitoring ensure scarce water is managed equitably during drought periods and that AF-financed assets remain functional, maintained and climate-resilient over time.

85. **Component 2 – Climate-smart horticulture and diversified livelihoods (USD 3,200,000)**
Rationale and adaptation gap: In the target districts of Natural Regions IV and V, farming systems are highly **sensitive to drought, heat and rainfall variability**. Rain-fed maize monocropping dominates, yet maize is particularly vulnerable to heat stress above 32–35°C and to mid-season dry spells that frequently occur during flowering and grain filling. Sandy soils with low organic matter exacerbate water stress by holding little moisture, while limited access to water-efficient irrigation practices, protected horticulture, and climate-smart agronomy constrains households' ability to translate water access into stable production and income. Even where water becomes available (through Component 1), farmers often lack the skills and practical technologies needed to maximise "crop per drop" and manage heat and dry-spell risks across the production cycle. Livelihoods also remain concentrated in a few climate-exposed activities, leaving households with limited buffers when droughts occur.

86. Component 2 addresses this adaptation gap by pairing the climate-resilient water investments under Component 1 with field-level adoption of climate-smart horticulture practices and technologies, and with inclusive producer organisation strengthening and market linkages that enable scaling and sustained uptake. The component facilitates access to existing finance, savings and micro-insurance options through partnerships and financial literacy, reducing fiduciary and policy risks while maintaining adaptation impact.

87. **Outcome 2.1: Adaptive capacity and livelihood resilience of vulnerable households enhanced through climate-resilient horticulture practices and inclusive market linkages.**

This output establishes a structured learning and advisory platform to ensure households adopt drought- and heat-resilient practices and can use climate information in farm decisions. Training is organised through approximately 150 FFS, reaching about 7,500 individual farmers (with targets of 50% women and 30% youth) across the target wards.

88. **Output 2.1.1: Adaptive capacity strengthened through Farmer Field Schools (FFS) and seasonal coaching (150 FFS; 7,500 individual farmers trained; 50% women; 30% youth) (USD 1,200,000)**
Description: This output strengthens adaptive capacity and accelerates adoption of climate-resilient practices through approximately 150 Farmer Field Schools (FFS) reaching 7,500 farmers (minimum 50% women; 30% youth) in the target districts. FFS curricula will be aligned to the production calendar and climate risks and will deliver hands-on learning on: climate-resilient horticulture and crop diversification; water-efficient irrigation scheduling linked to SPIS availability; soil moisture conservation and soil health (mulching, composting, organic matter improvement); heat and drought risk management (variety selection, planting windows, protective agronomy); integrated pest management and safe agrochemical use; and post-harvest handling and quality. The approach will prioritise demonstration and peer learning and will integrate climate advisories (Output 3.1) to support risk-informed decisions.

89. **Activity 2.1.1.1: Design and rollout of drought/heat focused FFS curricula**
- Develop and apply FFS modules covering water productivity and irrigation scheduling, heat stress management, soil moisture conservation, climate-risk-informed cropping calendars, pest/disease management under warmer conditions, and post-harvest loss reduction.
- Integrate practical sessions linked to Component 1 sites (schemes/gardens) to ensure learning is action oriented.

90. **Activity 2.1.1.2: Training on irrigation scheduling and maintenance under drought. Delivery training/ coaching and farmer-to-farmer learning**
- Facilitate FFS sessions across seasons, including demonstration-based learning and farmer exchange visits within/across districts.
- Provide structured coaching for women and youth groups to support leadership and adoption.

91. **Activity 2.1.1.3: Climate information uptake at farmer level (linked to Component 3)**
- Train FFS participants to interpret local advisories (e.g., dry-spell alerts, heat advisories) and apply them to planting, irrigation, and marketing decisions.
- Establish feedback loops so farmer experiences inform advisory refinement.

Adaptation logic: Knowledge and decision-support reduce vulnerability by improving timing and practices under erratic rainfall, and by enabling households to translate climate-resilient water access into stable yields and incomes.

92. **Output 2.1.2: Climate-resilient horticulture technologies deployed and demonstrated in water-secure sites linked to Component 1 (micro-irrigation efficiency packages; shade-net/low tunnels; demonstration plots) (USD 1,550,000)**

Description: This output demonstrates climate-resilient production technologies in water-secure sites linked to Component 1, including installation of micro-irrigation efficiency packages and establishment of protective cultivation structures (e.g., shade nets/low tunnels; indicative 40-60 ha) to reduce heat stress and water losses, supported by approximately 50 demonstration and learning plots that bundle the technologies with improved agronomic practices. Technology selection will be site-appropriate and guided by water availability, crop choice and affordability, and will include training on correct installation, use, and maintenance to ensure performance and reduce failure rates. Demonstrations will be used to validate yield and water-saving benefits under local conditions and accelerate replication through FFS and producer organisations.

93. **Activity 2.1.2.1: Micro-irrigation efficiency packages for targeted households**
- Provide and install micro-irrigation efficiency packages for approximately 1,000-1,500 households linked to Component 1 schemes
- Prioritize women-headed households and youth groups to reduce labour and time burdens while improving water productivity.

94. **Activity 2.1.2.2: Protected horticulture for heat and wind stress reduction**
- Support installation of approximately **100-150** shade-net and/or low-tunnel structures (indicatively **40-60 ha** total), focused on the most heat- and drought-prone sites with reliable water access.
- Train users on micro-climate management (ventilation/shading), water scheduling under high heat, and integrated pest management.

95. **Activity 2.1.2.3: Demonstration plots and performance tracking**
- Establish around **50 demonstration plots** to compare water-saving practices and protected vs open-field performance during hot/dry periods.
- Track simple indicators (water use, yield stability, quality) to support replication through extension and producer organisations. Adaptation logic: Strong farmer organizations and FFS are essential to embed climate-smart practices in local systems, ensure collective learning on dealing with drought and heat stress, and improve bargaining power and market access for climate-resilient products. Micro-irrigation and protected horticulture directly reduce sensitivity to drought and heat by lowering evapotranspiration losses, stabilizing crop growth and fruit set during heatwaves, and improving “crop per drop” in water-scarce conditions.

96. **Output 2.1.3: Producer organisations strengthened (USD 450,000)**
Description: This output strengthens the organisational and market systems needed for scaling climate-resilient horticulture beyond isolated beneficiaries. In line with AF guidelines on financial additionality and avoiding dependency, the project will facilitate beneficiary access to existing financial services and risk management options rather than establishing new standalone financial institutions, ensuring sustainability and alignment with the national financial inclusion ecosystem.

97. **Activity 2.1.3.1: Strengthen producer organisation governance and service delivery**
- Strengthen 30-40 **producer organisations** on governance, record-keeping, group procurement, quality standards, and aggregation/marketing.
- Ensure women and youth leadership representation in organisational structures and decision-making.

98. **Activity 2.1.3.2: Market linkages and off-taker engagement (scalable pathways)**
- Facilitate structured engagement with off-takers and value chain partners (e.g., 4P-style arrangements where applicable) to improve market access and price stability for climate-resilient horticulture.

99. **Activity 2.1.3.3: Financial literacy and facilitated linkages to existing finance/insurance**
- Deliver targeted financial literacy modules (costing, savings, risk management, basic business planning) and facilitate matchmaking/linkages to existing savings groups, micro-insurance and financial institutions (where available and appropriate), without establishing any AF-funded credit facility. In areas where formal financial institutions or insurance services are not available, the project will prioritize strengthening community-based savings groups and producer organizations as entry points for savings mobilisation, and risk-sharing mechanisms while progressively linking them to formal services where these become accessible.
- Where community-based savings groups are the primary financial inclusion mechanism, the project will strengthen them through: (i) structured training, using a six-module curriculum covering household budgeting, savings discipline, loan management, basic business planning and climate-risk-informed seasonal planning, delivered in local languages by

trained facilitators over two production seasons; (ii) governance arrangements, including written constitutions, clear membership rules, elected officers, transparent record-keeping, regular meetings and community-managed conflict resolution; (iii) risk management measures, including group emergency reserves, management of over-indebtedness, alignment of loan cycles with crop calendars, and use of seasonal climate advisories from Component 3 to inform financial planning; and (iv) monitoring, through the project M&E system, of active groups, membership by sex and age, seasonal savings, loan repayment rates and members reporting improved financial resilience.

Adaptation logic: Strong producer organisations and stable market linkages reduce vulnerability by improving incomes, reducing post-harvest losses, and enabling sustained adoption of climate-resilient technologies and practices without dependence on short-lived grant inputs.

100. **Component 3 – Climate information services, early warning systems and institutional capacity strengthening. (USD 1,000,373)**
Rationale and adaptation gap: Component 3 strengthens climate risk governance by improving access to climate information services and early warning systems. Even with climate-resilient water infrastructure (Component 1) and climate-smart livelihoods and practices (Component 2), households and local institutions will remain highly exposed to drought, heatwaves and rainfall variability if they lack: (i) **timely, locally actionable climate** and **early warning information**; (ii) **reliable last-mile dissemination pathways** that reach women, youth and vulnerable groups; and (iii) **institutional capacity** and procedures to translate warnings into risk-informed planning, prioritisation and response at ward and district levels.

101. Zimbabwe has an established national hydro-meteorological and early warning architecture led by the Meteorological Services Department (MSD) under the Ministry responsible for Environment/Climate. While national climate monitoring and forecasting capacity exists, important constraints remain in semi-arid districts. These include limited localisation of forecasts into ward-level advisories, uneven dissemination channels reaching rural communities, limited capacity of frontline extension services to translate forecasts into agricultural decisions, and weak feedback mechanisms between users and service providers.

102. Component 3 therefore **strengthens and operationalises existing national systems** rather than creating a parallel early warning structure. The component focuses on improving: (a) risk knowledge and thresholds relevant to drought/heat impacts; (b) observation, forecasting and advisory "packaging"; (c) dissemination and inclusive access; (d) community/user capacity to act; and (e) institutional SOPs, coordination and learning so that early warnings consistently translate into early actions in the project area.

103. **Outcome 3.1 Strengthened climate risk informed decision making Output 3.1.1: Climate advisory and early warning services operational**
The project will support a structured approach led by the MSD in coordination with district and ward authorities and frontline service providers. First, climate advisories will be **co-produced and tailored** to user needs by translating technical forecasts (seasonal outlooks, short- and medium-range forecasts, drought/heat indicators and heavy rainfall alerts) into actionable messages aligned to horticulture and water management decisions (e.g., planting windows and crop/variety choice, irrigation scheduling, water rationing triggers, soil moisture conservation practices, and protective measures for infrastructure and crops). Second, dissemination will use **multiple communication channels** to maximise reach and inclusion building on community platforms and local service delivery structures (including ward committees, producer organisations and district communication mechanisms) and, where feasible, radio and mobile/SMS/WhatsApp pathways so that messages reach women, youth and remote households. Third, the project will strengthen **user capacity to interpret and apply advisories** through short, practical trainings and scenario-based planning at community level, linking advisories to early action checklists and to committee decisions under Component 1 (water allocation and O&M). Finally, community feedback loops will be established to enable users to provide inputs on the relevance and usability of advisories. Feedback will be collected through designated focal points and simple reporting mechanisms, enabling continuous improvement of climate information services.

104. **Activity 3.1.1.1: Early warning and climate advisory services strengthened for last-mile delivery in targeted wards (locally relevant advisories, dissemination pathways, user training and community feedback loops) (USD 520,000)**
Description: This output finances the minimum operational package required for a functioning last-mile drought/heat EWS in the project area, centred on five key building blocks:
1. Risk information & thresholds (drought/heat triggers relevant for crops, livestock and water availability).
2. Monitoring & advisory generation (MSD forecasting products translated into local agro-advisories with Department of Agricultural Technical and Extension Services).
3. Dissemination systems (multi-channel, accessible formats, agreed schedules and responsibility).
4. Preparedness and response actions (simple early action checklists, community drills, and linkage to district contingency mechanisms); and
5. Feedback and continuous improvement mechanisms enabling regular user validation of advisory products.

105. **Key institutional roles include:**
- MSD: technical lead for hazard monitoring/forecasting products and alert protocols.

- Department of Agricultural Technical and Extension Services: translates forecasts into locally actionable agro-advisories and supports extension delivery.
- Rural District Councils (RDCs): convene ward-level dissemination/coordination, link advisories to local planning and response.
- Ministry responsible for Environment/Climate (and relevant national DRM coordination structures): national oversight and alignment with Zimbabwe's climate information and disaster risk management architecture.

106. **Output 3.1.2: Institutional capacity strengthened to integrate climate risk information into planning and service delivery (USD 300,000)**

Description: This output strengthens institutional capacity across MSD, Department of Agricultural Technical and Extension Services, RDCs and relevant environment/climate agencies to mainstream climate risk management into local planning and service delivery. Activities will support coordination protocols for early warnings and climate advisories, integration of climate information into extension packages and seasonal planning, and targeted training and coaching for staff and frontline officers to deliver inclusive services. Capacity-building activities will also promote inclusive communication approaches to ensure that climate information services effectively reach women, youth and vulnerable households.

Activity 3.1.2.1: Strengthening institutional coordination and operational procedures for climate information services. This activity will support the development of coordination mechanisms and standard operating procedures to ensure that national climate information is effectively integrated into district planning and extension services. Collaboration with relevant national agencies will facilitate regular exchange and use of climate advisories. Standard procedures will guide dissemination and application of early warning information at district and ward levels, while climate forecasts will be integrated into agricultural planning, contingency planning and seasonal advisory meetings, enabling local institutions and farming communities to translate climate information into practical decisions.

107. **Activity 3.1.2.2: Capacity building for extension officers and local government institutions.** This activity will strengthen the capacity of frontline service providers and local government institutions to interpret and apply climate information for risk-informed decision-making. Extension officers and district planners will be trained to analyse seasonal forecasts, drought indicators and climate advisories and translate them into practical guidance for agriculture and water management. District-level planning workshops will support integration of climate risk considerations into extension services, seasonal planning and local development processes, with priority given to officers working directly with smallholder farmers in drought-prone districts.

108. **Activity 3.1.2.3: Strengthening inclusive communication and outreach mechanisms:** This activity will strengthen communication mechanisms to ensure that climate information services reach vulnerable households, including women and youth. It will support development of communication tools and guidance for extension officers to disseminate climate advisories in accessible formats and local languages. Community-level information sessions through farmer groups, producer organisations and water user committees will improve outreach and ensure climate information is accessible and usable for rural communities. Climate information services will be linked directly to adaptation decision-making processes, including crop selection, planting dates, irrigation scheduling, livestock management, drought preparedness planning and water resource management decisions.

109. **Activity 3.1.2.4: Institutional learning and knowledge exchange:** This activity will support institutional learning and knowledge exchange among national agencies, district authorities and project stakeholders to strengthen the sustainability of climate information services. It will document lessons from project implementation, facilitate learning exchanges between MSD, extension services and local authorities, and share good practices with national stakeholders to support scaling in other drought-prone districts

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110. **Adaptation logic:** Strengthening institutional capacity ensures that climate information services translate into risk-informed planning and decision-making. By improving coordination between national forecasting institutions and local service providers, the project enables farmers and local authorities to anticipate climate risks and take timely actions that reduce drought-related losses and enhance resilience of agricultural and water systems.

111. **Output 3.1.3: Learning and knowledge management systems established**

112. This output will strengthen learning and knowledge management systems to support evidence-based adaptation and scaling of successful practices. It will focus on monitoring, documenting and sharing lessons from the implementation of climate-resilient water management, climate-smart horticulture and climate information services. Knowledge products and learning exchanges will be developed to support replication of effective approaches through national institutions and development partners, enabling wider adoption of climate adaptation practices in drought-prone regions.

113. Environmental and social safeguards and gender-related instruments required under the Adaptation Fund will be prepared during the Full Proposal stage. These include a costed Environmental and Social Management Plan (ESMP), including provisions for potential unidentified subprojects (USPs), a full Gender Assessment and Gender Action Plan (GAP), and a project-level grievance redress mechanism (GRM). These instruments will be developed through the Project Formulation Grant (PFG) and

incorporated into the full proposal in accordance with Adaptation Fund Environmental and Social Policy and Gender Policy requirements.

B. 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.

114. **Targeting and Selections Criteria:** Project intervention areas and beneficiaries will be selected through an evidence-based targeting approach aligned with Adaptation Fund principles of equity and vulnerability-based targeting and the IPCC climate risk framework. Districts and wards are prioritised based on high exposure to climate variability particularly recurrent droughts, erratic rainfall and dry spells, combined with strong dependence on rain-fed agriculture, limited irrigation access and high rural poverty. Beneficiary households will be identified through participatory consultations with local authorities, extension services and community organisations using transparent criteria prioritising smallholder farmers with high climate risk exposure, limited water access and reliance on climate-sensitive agriculture. The project will ensure inclusive participation targets of at least 50% women and 30% youth, with attention to women-headed households and other vulnerable groups, ensuring that investments reach communities with the highest climate risk and lowest adaptive capacity. The project will directly benefit approximately 60,000 smallholder farmers and indirectly benefit around 125,000 people. At least 50% of beneficiaries will be women and 30% youth, with a focus on vulnerable groups including female-headed households and resource-constrained farmers.
115. Targeting will be based on climate vulnerability (drought frequency, rainfall variability), poverty levels, and agro-ecological conditions (Natural Regions IV and V), with transparent community-based selection processes.Table 4 below summarises indicative quantitative estimates based on comparable smallholder irrigation interventions and national agricultural productivity data.

Table 4: Estimated Economic, Social and Environmental Benefits of Project Interventions

Category	Indicator	Estimated Value
Economic	Households benefiting from SPIS	12,000
	Annual household income increase	USD 250–600
	Total potential incremental income	USD 1,250,000–3,000,000 per year
Social	Direct beneficiaries	60,000 people
	Women participation	50%
	Youth participation	30%
	Households benefiting from domestic water resources	6000 households
Environment	Solar-powered irrigation systems	200
	Estimated CO_2 avoided	80–120 tCO_2/year
	Climate-resilient horticulture area	250–750 ha

116. **Environmental benefits:** The project focuses on the semi-arid regions of Chiredzi, Mwenezi, Masvingo, and Matobo within Natural Regions IV and V, characterized by annual rainfall generally below 450-600 mm, a failure rate of one in three seasons, and over 70% of cultivable land comprising sandy soil with limited water and nutrient retention capabilities. Recurrent droughts, intensifying heat and degraded micro-catchments have reduced harvests, increased sedimentation in small reservoirs and accelerated runoff, placing already vulnerable ecosystems under growing stress.

117. Component 1 delivers environmental (adaptation) benefits by climate-proofing water and horticultural infrastructure and protecting micro-catchments. Specifically, the project will support: (i) installation/upgrading of approximately **200 solar-powered irrigation systems** (SPIS) **with storage** to reduce reliance on rainfall and stabilise dry-season water access; (ii) construction of approximately **35 engineered sand dams/sub-surface water storage** structures in seasonal sandy rivers to increase sub-surface storage and reduce evaporation losses; and (iii) **ecosystem-based micro-catchment** rehabilitation of at least **5,000 ha** to improve infiltration/recharge, reduce gullying and sediment loads, and regenerate vegetation cover in priority recharge and erosion hotspots. Together, these measures are expected to improve soil stability and moisture retention, strengthen local drought buffering and water regulation under hotter, drier conditions, and reduce climate-driven degradation around water assets and productive areas.

118. **Social benefits:** Social benefits focus on the most vulnerable rural households, especially women and youth, in some of Zimbabwe's poorest and most food-insecure districts. In these areas, over 76% of rural households live below the poverty line, about 35% are female-headed, youth make up roughly 68% of the population yet face unemployment rates above 80%, and 2.7 million rural people (26% of the rural population) were food insecure during the 2021/22 lean season. By improving reliable access to water for domestic use and nutrition-sensitive horticulture close to homesteads, the project will support approximately **6,000 households** through climate resilient horticulture and 6,000 households through access to water for domestic use and will strengthen inclusive governance arrangements through approximately 200 water user and water point committees (with a target of 50% women and 30% youth). In addition, capacity building under the project will reach approximately **7,500 farmers** through **150 Farmer Field Schools**, and at least 400 local technicians/caretakers will be trained to support basic O&M and

functionality of water assets. To avoid social harm and exclusion, there is no planned physical resettlement, and targeting will be transparent and criteria-based, including quotas/targets for women-headed households, youth groups and other vulnerable households. Stakeholder engagement will be continuous and inclusive, and a functional GRM will be established and communicated locally to address complaints related to access, committee decisions, labour practices, or potential conflict around water allocation, consistent with the AF ESP requirement to prevent harm and ensure accountability.

119. **Economic benefits:** Z-ADAPT seeks to mitigate the cycle in which droughts and rainfall variations increase poverty, asset depletion, and humanitarian reliance in Zimbabwe's semi-arid southern and western regions. A significant number of households in the target regions depend on climate-sensitive rainfed agricultural systems, that have insufficient irrigation infrastructure and considerable vulnerability to mid-season droughts and heatwaves.

120. The project will enhance dependable water access and support a transition to higher-value, water-efficient horticulture and diversified livelihood options. Through approximately **200 SPIS sites** serving **6,000 households**, the project will enable more reliable dry-season production; based on indicative command areas **of 0.05-0.15 ha per household**, this corresponds to roughly **250-750 ha** of smallholder horticulture supported through shared schemes/community gardens (final design and command areas confirmed at Full Proposal stage). Productivity and climate resilience will be further improved through training and adoption support for **7,500 farmers** (via 150 FFS) and deployment of water-saving and heat-risk management practices and technologies (e.g., irrigation efficiency and protective production solutions), which are expected to increase returns per unit of land and water, stabilise production across seasons and reduce climate-related crop losses. Strengthening of **30-40 producer organisations** and market linkages will improve aggregation, quality management and access to buyers, supporting more stable incomes and reinvestment in adaptive practices.

121. Potential negative economic impacts such as elite capture of assets, exclusion of poorer households from higher-value opportunities, or unsustainable groundwater use will be mitigated through transparent targeting, inclusive governance of infrastructure, and clear, locally agreed water-use and O&M arrangements. The project will also apply AF ESP-aligned safeguards measures (site screening, monitoring, and grievance mechanisms) to ensure equitable access and sustainable resource use. This approach supports “do no harm” principles while delivering concrete, measurable resilience and economic benefits for vulnerable households. The project is expected to reduce climate-induced crop losses by approximately 20–30% during drought years. Water-use efficiency is expected to increase by at least 25%, while household incomes are projected to stabilize and increase by 15–20% due to reduced climate variability impacts

122. Beneficiaries **and Distribution of Benefits**: The project will directly benefit approximately **12,000 smallholder households (around 60,000 individuals)** in drought-prone districts of Masvingo, Matabeleland South and Midlands provinces. Beneficiaries include **smallholder horticulture farmers, women-headed households, youth groups and other climate-vulnerable rural households** with limited access to irrigation, climate information and financial services. In line with Adaptation Fund inclusion principles, the project will ensure **at least 50% participation of women and 30% youth** across irrigation schemes, farmer training, producer organisations and climate information services. Indirect benefits are expected to reach **125,000 households** through improved water availability, strengthened climate information services and increased horticulture production in surrounding communities. Transparent targeting criteria and community institutions will ensure equitable access to project benefits.

123. Women will benefit through improved access to climate-resilient technologies, climate information services, productive assets, financial services and participation in community-level adaptation decision-making processes, thereby strengthening their adaptive capacity to climate change.

124. Youth engagement will support long-term adaptation sustainability through development of technical skills in climate-smart agriculture, climate information dissemination, water management and ecosystem restoration activities.

125. By restoring catchment functions, improving water availability, and strengthening climate-resilient production systems, the project is expected to reduce climate-induced crop losses by approximately 30–40% among participating households and improve water availability for productive and domestic use during drought periods.

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

126. **Overall approach.** Z-ADAPT is designed to maximize adaptation impact per dollar by (i) concentrating investments in the most drought- and heat-exposed, food-insecure districts in Natural Regions IV–V; (ii) prioritizing decentralized, low-lifecycle-cost measures that communities and local institutions can operate and maintain; and (iii) leveraging IFAD/GoZ baseline delivery systems (HEEP/ Department of Agricultural Technical and Extension Services / RDC structures) so AF resources fill the incremental climate-resilience gap rather than financing generic rural development.

127. The project demonstrates cost-effectiveness through both direct benefits and avoided climate-related losses. Based on indicative estimates:

- The cost per direct beneficiary is estimated at approximately USD [200–300], which is consistent with comparable Adaptation Fund interventions in the region;
- Climate-resilient water and agricultural investments are expected to reduce crop losses by approximately 30–50% in drought years;
- Livelihood diversification and improved water access are expected to reduce livestock mortality by approximately 20–30%;
- Water availability and irrigation reliability are expected to increase by at least 40% in targeted schemes.

These benefits demonstrate that the project generates significant adaptation returns by reducing climate vulnerability and avoiding future economic losses.

128. **Cost-effectiveness and sustainability:** The project maximises cost-effectiveness by targeting investments in highly drought-prone districts and prioritising **low lifecycle-cost adaptation measures** that can be operated and maintained by communities and local institutions. Solar-powered irrigation systems reduce operating costs compared to diesel alternatives, while sand and sub-surface dams provide durable, low-maintenance water storage that minimises evaporation losses and supports long-term water availability. Climate-smart horticulture training and climate information services further enhance productivity and risk management without requiring major capital investments. From a sustainability perspective, the project builds on **existing national institutions and IFAD-supported systems**, including the Department of Agricultural Technical and Extension Services, Meteorological Services Department and Rural District Councils, thereby avoiding parallel structures and reducing long-term operational costs. These investments generate durable adaptation benefits while ensuring that community institutions and government services can sustain project outcomes beyond the project period.

129. **Comparison with alternatives ("business as usual").** In the absence of Z-ADAPT, the most likely path is a continuation of **reactive, humanitarian responses** to recurrent droughts in the south-west, including food aid, emergency borehole drilling and water trucking, coupled with conventional, non-climate-informed credit schemes. A single national drought response can cost the Government and partners tens of millions of dollars while creating no durable assets and leaving households trapped in a cycle of crisis borrowing and asset sales. By contrast, Z-ADAPT invests **USD 10,100,373 in Components 1–3 (excluding IE and EE fees), (USD 12,000,000 including execution and IE costs)** in permanent, climate-resilient water and horticulture systems, diversified livelihoods and climate-resilient finance that reduce the need for repeated relief operations and protect livelihoods year after year. Even modest reductions in drought-related crop and livestock losses in the four target districts would already offset a substantial share of programme costs over its lifetime. Global evidence indicates that every US$1 invested in climate-resilient infrastructure and adaptation can generate multiple dollars in avoided losses and wider economic benefits, underlining the strong economic case for a proactive programme such as Z-ADAPT.[59].

130. **Cost-effectiveness by component.** Table 5 below summarises the cost-effectiveness logic of each component, highlighting the indicative scale of beneficiaries, the types of losses averted or benefits generated, and the main alternatives that were considered and found less cost-effective. Beneficiary numbers are indicative and partly overlapping across components (e.g. a household benefiting from water infrastructure may also receive climate-resilient finance and CIS advisories). The project demonstrates strong cost-effectiveness, with an estimated cost of approximately USD 400 per direct beneficiary. The cost per hectare under climate-resilient management is estimated at USD 250–300. Community-managed systems are expected to reduce long-term operation and maintenance costs by approximately 30%.

131. The project focuses on financing the incremental costs of adaptation that would not be covered under existing development investments. Adaptation Fund resources will finance climate-proofing measures, climate information systems, ecosystem restoration activities, climate-resilient water infrastructure and adaptation-specific capacity building required to address projected climate risks.

Table 5: Project cost-effectiveness by Component

Benefits generated – losses averted	Alternative to project
Component 1. Climate-resilient water infrastructure and ecosystem restoration	
• **200 SPIS** sites installed/upgraded with 10,000-20,000 storage per site, serving 12,000 households (60 HH/site), enabling year-round horticulture for 30HH and priority domestic water for additional 30HH where feasible. *USD 720 per household gaining climate-resilient irrigation access for 6000HH.* • **35 climate-resilient storage** structures (indicatively 25 sand dams +10 sub-surface dams; final mix at FP stage) constructed on seasonal sandy rivers to buffer dry-season availability for horticulture/livestock, with protected abstraction for domestic use where feasible. *USD 400 per household benefiting from improved dry-season water access.*	**Business-as-usual water investments remain conventional and fragmented:** Water access would continue to rely on scattered borehole rehabilitation, small earthen dams and ad hoc repairs, often **without storage, recharge protection, or climate-risk-informed design**. This results in higher failure rates during prolonged dry spells (wells run dry; pumps fail; canals silt up) and repeated rehabilitation costs. **Reactive drought response dominates:** Local authorities and households would continue coping through emergency measures (water trucking,

[59] https://www.worldbank.org/en/news/press-release/2019/06/19/42-trillion-can-be-saved-by-investing-in-more-resilient-infrastructure-new-world-bank-report-finds

• Governance and O&M aligned to the asset base: **200 site-level committees** for SPIS + governance arrangements for 35 storage sites (site-level sub-committees or clustered committees where assets share user groups), meeting inclusion targets (50% women; 30% youth). • Water availability monitoring established at **50-70 priority boreholes**/wells and/or asset clusters feeding simple reporting into the climate information service (CIS). • EbA micro-catchment protection targeted to protect climate-resilient assets: recharge-zone protection, gully stabilisation and vegetative buffers implemented in priority erosion/recharge hotspots directly linked to SPIS/storage sites (final footprint confirmed at FP stage).	temporary water points, relief distributions), which are **recurrent-cost, short-lived and do not build durable resilience assets**. **Higher lifecycle costs and exposure to energy constraints:** Where irrigation is possible, diesel pumping or non-optimised systems remain common, creating exposure to fuel price volatility and supply disruptions and increasing O&M burdens, reducing reliability precisely when drought/heat risks peak. **Catchment degradation undermines infrastructure:** Without targeted EbA and governance measures, erosion, gullying and sedimentation continue to reduce storage capacity and damage water works, meaning even funded infrastructure delivers diminishing returns over time.
Component 2 – Climate-smart horticulture and diversified livelihoods	
• **150 Farmer Field Schools (FFS)** operational, reaching **7,500 farmers** (50% women; 30% youth) with drought/heat modules (irrigation scheduling, soil moisture management, protected production, climate-risk-informed decisions). *USD 160 per farmer trained in climate-resilient practices.* • **1,000-1,500 households** supported with micro-irrigation efficiency packages linked to Component 1 water-secure sites (final numbers/typology confirmed at FP stage), improving "crop per drop" during dry spells/heatwaves. • **100-150 shade-net/low tunnel structures** installed (indicatively 40-60 ha total), reducing heat/wind stress and stabilising yields in the most drought/heat-prone water-secure sites. • **50 demonstration plots** established (micro-irrigation vs conventional; protected vs open field), with simple performance tracking (water use, yield stability) to support replication via extension/producer systems. • **30-40 producer organisations** strengthened on governance/aggregation/marketing: structured engagement with off takers/market partners to reduce price volatility and post-harvest losses. • **Financial literacy** and facilitated linkages to existing savings/micro-insurance/finance services (reduces AF policy risk while supporting adoption).	**Rainfed dependence persists and yields remain highly climate-sensitive:** Households remain concentrated in climate-exposed rainfed systems with limited water-efficient practices; drought/heat years trigger sharp production losses, forcing distress coping (selling livestock, reducing meals, migrating). **Water investments do not translate into resilience:** Even where Component 1-like water infrastructure is partially provided through baseline programmes, **lack of training and on-farm technology packages** means water is often used inefficiently (high losses, suboptimal scheduling), reducing "crop-per-drop" and limiting returns from water assets. **Scattered pilots or input handouts remain unsustainable:** Stand-alone demonstrations or one-off input support are typically small, dispersed and not anchored in producer organisations/extension systems, resulting in low adoption after project support ends. **High-risk financing approaches:** Introducing project-managed credit/revolving funds would be administratively heavy, prone to elite capture and repayment challenges after drought shocks, and often considered problematic under AF—making it a less feasible alternative than facilitated links to existing finance/savings/insurance mechanisms.
Component 3. Climate information services, early warning systems and institutional capacity strengthening	
• 15,000 farmers/households reached with locally actionable drought/heat advisories through bundled last-mile channels (extension/community meetings + radio + mobile channels where feasible). *USD 40 per beneficiary accessing improved climate information services.* • End-to-end "functioning EWS" package operationalised: co-produced advisories (MSD+ Department of Agricultural Technical and Extension Services dissemination SOPs, intermediary/user training for early action, and seasonal feedback loops to improve trust/actionability over time. • 200-250 institutional actors (MSD/ Department of Agricultural Technical and Extension Services /RDCs and Ministry responsible for Environment/Climate + ward focal points) trained/supported to integrate climate risk information into planning, service delivery and response coordination (final numbers confirmed at FP stage). • AF ESP compliance strengthened: FP-stage safeguards screening and ESMP preparation (and other instruments as needed), plus functional GRM and monitoring of mitigation measures. • AF Gender Policy alignment delivered: FP-stage Gender Assessment and budgeted Gender Action Plan, with sex-/age-disaggregated monitoring across components; learning/M&E system established, and annual learning reviews conducted.	**EWS remains "forecasting without last-mile action":** National forecasts and occasional alerts continue, but without funded last-mile strengthening (local advisory translation, dissemination bundles, user training and feedback loops), warnings **do not consistently trigger early actions** at community level. **Weak institutional integration into planning and service delivery:** MSD/ Department of Agricultural Technical and Extension Services /RDC coordination remains ad hoc; climate risk information is not systematically embedded into seasonal planning, asset O&M prioritisation or drought response decision-making, limiting the effectiveness and sustainability of Components 1 and 2. **Higher safeguards and inclusion risk:** Without dedicated resources for AF ESP screening/FP-stage ESMP preparation, GRM strengthening, Gender Assessment and a budgeted GAP, there is greater risk of implementation delays, inconsistent mitigation of site-specific risks, exclusion of women/youth from benefits, and weaker accountability. **Learning and replication remain limited:** Results and lessons are not captured in a structured way, reducing the ability to replicate and scale successful approaches through HEEP/national systems.

D. 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.

132. **Consistency with national development strategies (Vision 2030, NDS1):** Z-ADAPT is fully consistent with Zimbabwe's overarching development agenda. Vision 2030 and the National Development Strategy 1 (NDS1, 2021–2025) prioritise climate-resilient, inclusive growth, with a focus on food and nutrition security, resilient agricultural value chains, expanded irrigation and

reliable rural water supply, and strengthened disaster risk management systems[60]. By investing in climate-resilient water and horticulture infrastructure (Component 1), climate-smart production systems and diversified livelihoods (Component 2), and climate information and institutional capacity (Component 3) in some of the most drought-prone districts of Natural Regions IV–V, Z-ADAPT directly supports NDS1 pillars on "Food Security and Nutrition, Agriculture Productivity and Climate Resilience" and "Environmental Protection, Climate Resilience and Natural Resources Management."

133. **Alignment with climate policy, NDC and NAP processes**: The project is directly aligned with Zimbabwe's Revised Nationally Determined Contribution (2021), which prioritises: (i) scaling up climate-smart agriculture and resilient agricultural value chains; (ii) strengthening early warning and climate-related disaster risk reduction systems, including information management; (iii) ensuring climate-resilient infrastructure; and (iv) developing and promoting resilient and sustainable water resources management, with gender and youth mainstreamed across all adaptation measures[61]. Z-ADAPT operationalises these priorities in drought-prone districts by investing in climate-resilient irrigation and water storage, water-efficient irrigation technologies and conservation agriculture, climate-adapted crop varieties and diversification, and post-harvest and value-chain support with a focus on women and youth. The project is consistent with the *National Climate Policy* (2017) and the *National Climate Change Response Strategy* (NCCRS), which together provide the overarching framework for mainstreaming climate change into water, agriculture, disaster risk management and other climate-sensitive sectors, and call for multi-stakeholder, community-based adaptation and integration of climate risk management in development planning.

134. Z-ADAPT also contributes to implementation of Zimbabwe's National Adaptation Plan (NAP) process including the NAP Roadmap and the 2024–2030 NAP[62], which prioritize adaptation in agriculture, water resources, disaster risk management and vulnerable groups and are costed at approximately US$10.3 billion to 2030 by piloting district-level climate risk assessments, Local Adaptation Plans and climate-risk-informed by-laws in the target districts. Finally, the project advances the priorities set out in Zimbabwe's 2022 *Initial Adaptation Communication*, which highlights transformative adaptation anchored in weather and climate services, solar water provision, climate-smart agriculture and post-harvest processing, by combining solar water infrastructure, participatory climate information services and climate-resilient livelihood support at community level.

135. **Alignment with agriculture and food security strategies**: Z-ADAPT is closely aligned with the National Agriculture Policy Framework (2018–2030)[63] and the Agriculture and Food Systems Transformation Strategy (2020–2025)[64], which emphasize climate-smart agriculture, irrigation expansion, sustainable land and water management, and resilient horticulture and livestock value chains. By supporting climate-resilient community gardens, micro-irrigation, conservation agriculture, integrated soil fertility management, protected agriculture, and climate-smart extension services, the project provides practical means to implement these strategies in semi-arid districts. It also directly supports the Horticulture Recovery and Growth Plan under both the Conventional pillar (strengthening commercial horticulture partnerships) and the Presidential pillar (community gardens for food and nutrition security.

136. **Alignment with water, drought risk and disaster management frameworks**: The project is consistent with the National Water Policy, which promotes integrated water resources management, protection of catchments and aquifers, and improved rural water supply as key responses to increasing climate variability and drought[65]. Z-ADAPT's package of solar water supply systems, sand and sub-surface dams, managed aquifer recharge and ecosystem-based catchment rehabilitation provides cost-effective options to operationalize this policy in drought-prone catchments. The project also contributes to the National Drought Risk Management Strategy and related early warning frameworks by strengthening climate and hydrological information services, community-based early warning and response, and diversified drought-resilient livelihoods in the most exposed districts[66].

137. **Alignment with gender, youth and financial inclusion policies**: Z-ADAPT's focus on women's and youth's leadership, access to resources and climate-resilient finance is aligned with the National Gender Policy (2017)[67], the National Youth Policy (2020-2025)[68] and the National Financial Inclusion Strategy (2022-2026)[69], which call for expanding tailored financial services, skills and livelihood opportunities for rural women, youth and smallholder farmers. Through gender-transformative methodologies (such as GALS), targeted support to women- and youth-led enterprises, and the design of strengthened community savings groups and financial literacy, the project translates these policy commitments into concrete, on-the-ground adaptation actions.

[60] Assessment of the Impact of Zimbabwe's Financial Sector Reforms on the Growth of the Agriculture Credit Market: https://rsisinternational.org/journals/ijriss/articles/assessment-of-the-impact-of-zimbabwes-financial-sector-reforms-on-the-growth-of-the-agriculture-credit-market
[61] NDC: https://unfccc.int/sites/default/files/NDC/2022-06/Zimbabwe%20Revised%20Nationally%20Determined%20Contribution%202021%20Final.pdf
[62] NAP: https://unfccc.int/sites/default/files/resource/NAP-Zimbabwe-2024.pdf
[63] https://climate-laws.org/document/national-agriculture-policy-framework-2018-2030_9ffb
[64] https://www.agric.gov.zw/wordpress/wp-content/uploads/2020/07/AFSRTS-2-FINAL-SIGNED.pdf
[65] National Water Policy 2012: https://wsaz.wordpress.com/wp-content/uploads/2019/02/zimbabwe-national-water-policy_2012.pdf
[66] World Bank: Zimbabwe's new National Water Policy: https://documents.worldbank.org/en/publication/documents-reports/documentdetail/620391467996737275
[67] National Gender Policy 2017: https://catalogue.safaids.net/sites/default/files/publications/2013%20national%20gender%20policy%20-%20final%20april%2020th.pdf
[68] National Youth Policy (2020-2025): https://zgc.co.zw/wp-content/uploads/2022/10/NATIONAL-YOUTH-POLICY-2020-2025.pdf
[69] National Financial Inclusion Strategy (2022-2026): https://www.afi-global.org/wp-content/uploads/2024/10/Zimbabwe_National_Financial_Inclusion_Strategy_II_2022-2026.pdf

138. **Consistency with sub-national planning processes**: Finally, the project is fully consistent with ongoing efforts to integrate climate change into provincial and district development planning, including under the NAP process and pilots on climate-proofed local development plans[66]. By supporting the preparation of Local Adaptation Plans and climate-risk-informed by-laws in the four target districts, and by working through Rural District Councils, ward structures and producer organisations, Z-ADAPT ensures that its investments are embedded in sub-national development plans, owned by local institutions and scalable through government system.

E. 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.

139. **Overall approach and screening framework**: The project follows Zimbabwe's legal and regulatory framework and with the Environmental and Social Policy (ESP) and Gender Policy of the Adaptation Fund. The Implementing Entity (IFAD), through its SECAP/ESMS system, will ensure that all activities are screened at an early stage, that environmental and social risks are assessed proportionate to their significance, and that appropriate mitigation and monitoring measures are integrated into an Environmental and Social Management Plan (ESMP), in line with the Adaptation Fund ESP guidance on risk screening, categorization and ESMP development.

140. Given the nature and scale of proposed activities (small-scale water infrastructure, on-farm climate-smart practices, community-level services), the project is a **Category B (medium risk)** intervention under IFAD SECAP and the AF ESP, with site-specific, reversible risks that can be managed through standard good practice measures and robust stakeholder engagement. A full E&S screening against all 15 AF ESP principles (compliance with the law, access and equity, marginalized groups, human rights, gender equality, core labour rights, indigenous peoples, involuntary resettlement, natural habitats, biodiversity, climate change, pollution prevention, public health, physical and cultural heritage, lands and soil conservation) is presented in the checklist in Part II (H) and will be updated when exact coordinates / site specific location is confirmed.

141. **Environmental assessment and permitting**: All physical investments (e.g., community water supply schemes, small sand and sub-surface dams, irrigation rehabilitation, storage works) will comply with the **Environmental Management Act** [70]and the **Environmental Management (Environmental Impact Assessment and Ecosystems Protection) Regulations, SI 7 of 2007**[71], which govern EIA requirements and licensing for projects with potential environmental impacts. The Project Management Unit (PMU), in coordination with the Ministry of Environment and Wildlife and Environmental Management Agency will: (i) screen subprojects to determine whether a full EIA, prospectus or exemption applies; (ii) prepare and submit the required documentation for review and approval; and (iii) implement all conditions attached to environmental certificates through contractor obligations and the project ESMP. No construction or rehabilitation works will commence before obtaining the relevant EMA clearances.

142. **Water resources, groundwater and dam safety standards**: Water abstraction, use and discharge under Components 1 and 2 will be fully consistent with the **Water Act** [72]and regulations administered by the Zimbabwe National Water Authority, including requirements for water permits, groundwater abstraction, protection of water sources and allocation within catchments. Designs of sand and sub-surface dams, storage tanks and associated works will respect Zimbabwe National Water Authority technical guidance on small dam safety, spillway sizing and flood routing; site selection will avoid structures on major rivers or in locations where failure would pose significant downstream risk. Routine inspection and maintenance procedures will be integrated into Water Point Committees' O&M plans and supervised by relevant catchment and sub-catchment councils.

143. **Public health, drinking water quality and sanitation**: Community water supply, storage and sanitation measures will comply with the **Public Health Act** [73]and applicable Ministry of Health and Child Care guidelines on drinking water quality, hygiene and prevention of water-borne diseases. This includes protection of wellheads and boreholes against contamination, safe siting of sanitation facilities relative to water points, and promotion of safe water handling and hygiene practices through extension and Farmer Field Schools. Any pesticide use under climate-smart agriculture demonstrations will follow national integrated pest management (IPM) guidance to minimize risks to public health and ecosystems.

144. **Construction standards, occupational health and safety**: Civil works will adhere to Zimbabwe's standards for occupational health and safety under the **Factories and Works Act**[74] and related regulations, including the Factories and Works (Building) and (Construction) Regulations, which set requirements for safe workplaces, protective equipment and accident prevention on construction sites. Contractors will be required, through bidding documents and contracts, to implement site-specific Health, Safety and Environment (HSE) plans covering use of personal protective equipment (PPE), safe excavation, traffic and machinery management, emergency procedures, and training of workers. Where applicable, local building standards and council

[70] Environment Act: 2002: https://faolex.fao.org/docs/pdf/zim83837.pdf
[71] Environment Management Act (EIA & Ecosystem Protection: 2007:
[72] Water Act: 2005: https://faolex.fao.org/docs/pdf/zim26168.pdf
[73] Public Health Act 2007: https://zimlii.org/akn/zw/act/2018/11/eng@2018-08-31/source.pdf
[74] Factories and Works Act: https://www.law.co.zw/download/factories-and-works-act-chapter-1408/

by-laws will be followed for small structures (pump houses, storage facilities, shade houses), with appropriate supervision by qualified engineers.

145. **Land use, local planning and rural district standards**: Implementation will be consistent with the **Rural District Councils Act** [75], which assigns RDCs responsibilities for local development, land use and service provision, as well as with planning instruments under the **Regional, Town and Country Planning Act**[76] for any activities requiring development approval. Under Component 3, the project will strengthen the capacity of district authorities and relevant institutions to integrate climate-risk information into existing district and local development planning and service-delivery processes, consistent with national adaptation priorities. Any minor land acquisition or voluntary land use agreements for micro-infrastructure will follow IFAD and AF requirements for avoiding involuntary resettlement and ensuring transparent, documented community consent.

146. **Waste management, pollution prevention and resource efficiency**[77]: Construction waste, spoil and packaging materials will be handled in line with EMA guidelines and local authority by-laws, with an emphasis on minimizing waste generation, re-using materials where safe and feasible, and disposing of residual waste in approved sites. The project's focus on solar pumping, efficient micro-irrigation and integrated soil fertility management directly supports the AF ESP principles on climate change, pollution prevention and resource efficiency, while the EbA measures under Component 1 (micro-catchment rehabilitation, agroforestry, gully stabilization) promote conservation of biodiversity, natural habitats and productive soils.

147. **Adaptation Fund ESP and Gender Policy compliance**: In line with the Adaptation Fund ESP and its Guidance for Implementing Entities, the project will: (i) document the applicable national legal and regulatory requirements (permits, licenses, approvals) for each type of subproject; (ii) integrate ES risk screening against all 15 AF principles into the project cycle; (iii) prepare and update an ESMP with proportionate mitigation measures; (iv) ensure meaningful, inclusive consultation of women, youth and vulnerable groups; and (v) establish a project-level grievance redress mechanism linked to IFAD's existing systems.

148. The Gender Action Plan and targeting approach (see Sections II.B and II.H) will operationalize the AF Gender Policy by ensuring that women and youth have equitable access to project benefits, participate in decision-making bodies and are not exposed to disproportionate risks.

Table 6: National Technical Standards

Activity	Applicable National Standards	Compliance Requirement	Responsible Agency
Installation/upgrading of solar-powered irrigation systems (SPIS) with storage and associated conveyance (Component 1 / Output 1.1)	• Environmental Management Act • Environmental Management (Environmental Impact Assessment and Ecosystems Protection) Regulations, SI 7 of 2007 • Water Act • Public Health Act (current consolidated Act)	• EMA screening of each scheme and, where required, preparation and approval of an EIA/prospectus and environmental management plan before works start. • Water abstraction/use permits obtained from /catchment councils for all new boreholes and irrigation schemes. • Protection of water points and distribution systems to meet public health and drinking water standards. **Steps to ensure Compliance:** Environmental screening of proposed sites; preparation of environmental management measures where required; monitoring during construction and operation	• Environmental Management Agency (EMA) • Zimbabwe National Water Authority and Catchment/Sub-catchment Councils • Ministry of Health and Child Care (Environmental Health Units) • Rural District Councils (RDCs)
Construction/rehabilitation of sand dams and sub-surface dams (Component 1 / Output 1.2)	• Environmental Management Act and EIA Regulations SI 7/2007 • Water Act • Relevant Zimbabwe National Water Authority small-dam and hydraulic design guidelines	• Environmental screening and, where required, EIA/EMP and environmental licence by EMA prior to construction. • Technical design and siting consistent with dam safety and catchment protection requirements; registration of works where applicable. • Operation procedures agreed with catchment councils to avoid over-abstraction and downstream conflicts. **Steps to ensure Compliance:** Hydrological screening of sites; verification of sustainable abstraction levels; approval by relevant water authorities prior to construction	• EMA • Zimbabwe National Water Authority and Catchment/Sub-catchment Councils • Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (water infrastructure units) Ministry of Environment and Wildlife • RDCs
Ecosystem-based Adaptation (EbA) and micro-catchment rehabilitation linked to water assets (Component 1 / Output 1.2.1)	• Environmental Management Act (ecosystems, land degradation, restoration) \n• Water Act (catchment protection) \n• Rural District Councils Act \n• Forestry/trees-related rules and local by-laws (where relevant)	• Site screening to avoid sensitive habitats and ensure voluntary community participation • Implementation of gully control, revegetation, recharge-zone protection and agroforestry/windbreak measures consistent with land/catchment protection requirements • Use of appropriate/local/native species; avoidance of invasive species • Integration of simple monitoring/reporting arrangements linked to CIS (where feasible) **Steps to ensure Compliance:** Environmental screening of EbA activities; application of erosion control and vegetation restoration measures	• Ministry of Environment and Wildlife; EMA (screening/oversight as applicable) • RDCs and traditional leadership (local approvals/coordination) • Department of Agricultural Technical and Extension Services /Ministry of Lands, Agriculture, Fisheries, Water and Rural Development

[75] Rural District Council Act 2002: https://faolex.fao.org/docs/pdf/zim83837.pdf
[76] Regional, Town and Country Planning Act 1988: https://ucaz.org.zw/wp-content/uploads/2019/08/REGIONAL_TOWN_AND_COUNTRY_PLANNING_ACT_29_12.pdf
[77] EMA 2004: https://www.law.co.zw/download/environmental-management-actchapter-2027/

			(extension/land conservation services) • Catchment/Sub-catchment Councils (where relevant)
Strengthening water governance and O&M systems aligned to financed assets (Component 1 / Output 1.1.3 and Output 1.2.1 governance elements)	• Rural District Councils Act • Water Act and catchment council rules • National/Local DRR and water governance arrangements (where applicable)	• Formalization/strengthening of water user/point committees aligned to assets (SPIS sites and storage structures) • Adoption of basic O&M, water allocation rules and drought-period prioritisation; grievance/feedback arrangements • Inclusion targets met (50% women; 30% youth) and documented • Basic groundwater/asset monitoring and reporting arrangements established (as applicable) **Steps to ensure Compliance:** Formation or strengthening of Water User Committees.; Development of O&M procedures and water allocation rules; Monitoring of inclusion targets (50% women, 30% youth).	• RDCs • Zimbabwe National Water Authority /Catchment/Sub-catchment Councils • Department of Agricultural Technical and Extension Services (community facilitation/extension) • Project Management Unit (PMU)
Deployment/demonstration of climate-resilient horticulture technologies in water-secure sites (micro-irrigation efficiency packages, shade-net/low-tunnels, demo plots) (Component 2 / Output 2.1.2	• Environmental Management Act (pollution, hazardous substances) • Public Health Act • Agricultural input and pesticide regulations \n• RDC/local planning by-laws (small structures) • Factories and Works Act (OSH, where applicable during installation)	• Environmental Management Act (pollution, hazardous substances) • Public Health Act • Agricultural input and pesticide regulations • RDC/local planning by-laws (small structures) • Factories and Works Act (OSH, where applicable during installation) **Steps to ensure Compliance:** Training farmers on safe input use and environmental management; Screening of demonstration sites; Compliance with occupational safety requirements during installation of structures.	• Department of Agricultural Technical and Extension Services (technical lead) • EMA • MoHCC Environmental Health Units • RDCs/local authorities • Producer groups/FFS networks under PMU oversight
Strengthening producer organizations and facilitating inclusive market and finance/insurance linkages (Component 2 / Output 2.1.3))	• Cooperative/association rules (as applicable) • Consumer protection and relevant commercial frameworks • National financial sector rules (where applicable to partner products)	• Transparent membership/beneficiary selection and benefit-sharing (avoid elite capture) • Financial literacy and matchmaking to existing finance/insurance products • Grievance redress and inclusion monitoring **Steps to ensure Compliance:** Transparent beneficiary selection processes; Financial literacy training and facilitated links to existing financial services; Monitoring inclusion and grievance procedures.	• PMU • Department of Agricultural Technical and Extension Services • RDCs • Partner off takers/financial/insurance service providers (as applicable)
Climate Information Services, early warning and digital surveillance systems (Component 3, Output 3.1.1)	National climate and meteorological regulations and guidelines • National ICT and data-protection frameworks • Relevant disaster risk management policies/strategies	• Delivery of climate information services and early-warning messages through existing MSD, extension, radio, SMS/USSD and community channels. • Integration of climate advisories and early-warning messages with national DRM and sectoral systems; protection of personal data in digital reporting tools. **Steps to ensure Compliance**: Use existing MSD standards and approved communication protocols; integrate advisories with national EWS systems; apply data-protection and responsible-information-dissemination requirement.	• Ministry of Environment and Wildlife MSD • Department of Civil Protection / line ministries responsible for DRM • Ministry of ICT, Postal and Courier Services (for digital platforms) • RDCs and local disaster committees
Institutional capacity strengthening for risk-informed planning/services (MSD, Department of Agricultural Technical and Extension Services, RDCs, Ministry of Environment and Wildlife) (Component 3 / Output 3.1.2)	• National planning and DRM frameworks • Sectoral guidelines (agriculture/water/climate) • Relevant public service and training rules	• Training/technical support to integrate climate-risk information into plans, service delivery, and O&M systems • Documentation of planning tools/guidance and institutional adoption • Inclusion/participation measures tracked **Steps to ensure Compliance:** Training and technical support for government institutions; Development of guidance and planning tools; Monitoring institutional adoption.	• MSD • Department of Agricultural Technical and Extension Services • RDCs • Ministry responsible for Environment/Climate • PMU
Project-wide environmental and social safeguards compliance	• Environmental Management Act and EIA Regulations (as applicable) • AF Environmental and Social Policy requirements; IFAD SECAP alignment • AF Gender Policy / Gender Guidance • National gender frameworks (where applicable)	Compliance with national environmental regulations and Adaptation Fund safeguards requirements across all project activities. **Steps to ensure Compliance:** Environmental and social screening of project activities where required; Preparation and implementation of ESMP at Full Proposal stage; Implementation of grievance redress mechanisms and gender inclusion measures during project implementation.	• PMU/Implementing Entity • EMA (where applicable) • Relevant line ministries and RDCs • Contractors (contractual compliance)

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

149. Zimbabwe already hosts several climate-resilient agriculture and water projects financed by the Adaptation Fund, GCF, IFAD, AfDB, the EU and UN agencies. Z-ADAPT is designed as **incremental**, not duplicative, by: (i) focusing on a limited set of drought-prone districts in Natural Regions IV–V with a strong horticulture and water–finance focus; (ii) using HEEP as its main baseline platform instead of creating parallel structures; and (iii) filling clearly identified gaps in climate-resilient water infrastructure for horticulture, climate-resilient finance and integrated climate information services that are only partially addressed by existing projects.

150. With respect to other **Adaptation Fund and GCF projects**, Z-ADAPT does not operate in the UNESCO AF groundwater project districts (Binga and Buhera) and instead applies compatible groundwater/MAR approaches in other semi-arid districts while sharing lessons nationally. It is fully consistent with the GCF project "Building Climate Resilience of Vulnerable Agricultural Livelihoods in Southern Zimbabwe (FP127)", but is more geographically focused and horticulture specific. In any districts where FP127 is also active, Z-ADAPT will target different irrigation schemes and horticultural clusters, align extension and climate information with Department of Agricultural Technical and Extension Services /MSD, and concentrate on climate-resilient finance and horticulture technologies that FP127 covers only at pilot scale, avoiding double-financing.

151. **HEEP** and legacy programmes (notably SIRP) provide the core baseline for Z-ADAPT. HEEP's existing producer organisations and the existing infrastructure pipeline (with pre-identified schemes/garden sites and implementation arrangements) will be leveraged for targeting and delivery; however, Z-ADAPT does not rely on other projects for completion or financing, and all activities and outputs in this concept are funded through Adaptation Fund resources. Adaptation Fund resources will finance climate-proofed water and horticulture investments and associated capacity support (e.g., solarisation, MAR, shade nets and CSA packages). For former SIRP schemes, the project will build on existing completed infrastructure (where relevant) to climate-proof and extend benefits in consultation with government, rather than revisiting basic rehabilitation already completed.

152. Finally, Z-ADAPT will coordinate closely with **AfDB, EU/DeSIRA and UN-supported programmes**. AfDB's AVCLEP project and EU's RAIZ/DeSIRA initiative inform the design of CSA packages and value-chain support, while Z-ADAPT focuses its investments on horticulture water–energy–finance packages and scaling of proven CSA options in wards not already covered. WFP and similar partners provide short-term safety nets and community assets; Z-ADAPT complements these efforts by building long-term water security, climate-smart production systems and climate-resilient finance, ensuring synergy rather than overlap.

Table 7: On-going Projects and Synergies

Other Projects / Partners	Lessons Learned	Geographic Overlap	Identified Synergies
1. Regional Projects: SADC Climate Services Centre (CSC) and SARCOF Programme (1989 - Present) and **Southern Africa Regional Climate Outlook Forum** (SARCOF) **Timeline:** Ongoing (SARCOF est. 1997; SADC CSC est. 2011; ongoing regional programme) **Location:** SADC region including Zimbabwe **SADC Climate Services Centre / SADC Secretariat**	**Lessons:** Regional climate forecasts only create impact when translated into localized agricultural advisories. Strong institutional coordination between meteorological services and extension systems is essential. **Application in Z-ADAPT** Component 3 supports last-mile dissemination of climate information through extension services and community systems.	Regional climate information systems overlap with Z ADAPT climate information's services	**Synergy:** Z-ADAPT uses regional forecasts produced by SADC CSC and MSD. **Non-duplication:** Z-ADAPT finances local advisory delivery and user uptake, not regional forecasting systems.
2.Adaptation at Scale in Semi-Arid Regions (ASSAR) Timeline: 2014–2018 (research programme) **Location: Southern Africa including Zimbabwe** **International research consortium (IDRC, DFID partners)**	**Lessons** Adaptation strategies must address institutional barriers, governance gaps and climate information access. Community-level participation is critical for scaling adaptation. **Application in Z-ADAPT** Integration of community-based water governance, ecosystem-based adaptation and climate information services.	Thematic focus on semi-arid climate resilience.	**Non-duplication:** Z-ADAPT finances implementation of adaptation investments, not research activities. ASSAR aimed to improve adaptation planning and understanding of climate risks in semi-arid regions through research and stakeholder engagement
3. Strengthening Local Communities' Adaptive Capacity and Resilience to Climate Change through Sustainable Groundwater Utilisation in Zimbabwe (2023–2027). Implemented in **Binga**	**Lesson:** climate-resilient groundwater management requires improved monitoring systems, catchment-level planning and community engagement. Z-ADAPT reflects this lesson by strengthening local water governance, integrating hydrological assessments	No direct geographic overlap focuses on Binga (Matabeleland North) and Buhera (Manicaland), outside the proposed Z-ADAPT districts.	**Synergies:** Z-ADAPT will apply compatible groundwater monitoring and water governance approaches and share technical knowledge through national institutions such as MSD, EMA and catchment councils. **Non-duplication:** AF resources under Z-ADAPT will not finance activities in UNESCO project

District (Matabeleland North) and Buhera District (Manicaland) within the **Lower Gwayi and Upper Save sub-catchments**. **UNESCO (Adaptation Fund project)**	and promoting climate-resilient water management approaches for irrigation and ecosystem restoration.		sites or replicate groundwater assessments already funded under the UNESCO project.
4. Building Climate Resilience of Vulnerable Agricultural Livelihoods in Southern Zimbabwe (GCF FP127), 2020–2027. Operates in **15 districts**, including **Masvingo, Chiredzi, Mwenezi, Matobo, Gwanda and Mangwe**. **UNDP / GCF / GoZ**	**Lesson:** resilience gains are stronger when irrigation, climate information and livelihood support are integrated. Reflected in Z-ADAPT through the combined design of climate-proofed water systems, climate-smart horticulture and last-mile climate advisory services.	Operates across several southern provinces (including Masvingo and Matabeleland South). Potential partial overlap with Z-ADAPT provinces, but not necessarily the same irrigation schemes or horticulture clusters.	**Synergies:** Z-ADAPT will coordinate with FP127 through Department of Agricultural Technical and Extension Services /MSD to harmonise extension packages, rainfall/seasonal forecast products and farmer training. **Non-duplication:** Z-ADAPT will focus on distinct wards/sites and incremental adaptation gaps, especially SPIS, sand/sub-surface dams, horticulture water-use efficiency and local CIS use rather than re-financing irrigation rehabilitation or wider livelihood packages already covered under FP127..
5. Horticulture Enterprise Enhancement Project (HEEP), 2022–2032. Zimbabwe; village horticulture garden activities in **20 districts** across **Matabeleland South, Manicaland, Masvingo and Midlands** **IFAD and GoZ**	**Lesson:** horticulture investments are more sustainable when linked to organized producer groups, extension support and market access. Reflected in Z-ADAPT through producer-organization strengthening, farmer field schools and alignment with existing horticulture value-chain systems.	Strong overlap in overall focus on horticulture and in some target districts; HEEP is the core baseline for Z-ADAPT.	**Synergies:** Z-ADAPT will use HEEP producer organisations as its main delivery platform. **Non-duplication:** Z-ADAPT finances **incremental climate adaptation** climate-proofed water systems, CIS/EWS and EbA not horticulture commercialization or marketing activities already financed by HEEP.
6. Smallholder Irrigation Revitalisation Programme (SIRP), 2016–2023. Zimbabwe; arid and semi-arid irrigation schemes, including parts of **Masvingo and Matabeleland South**. **IFAD and GoZ**	**Lesson:** rehabilitation alone is insufficient without sustained O&M, governance and climate-proofing. Reflected in Z-ADAPT through stronger asset governance, SPIS-based energy efficiency, water monitoring and climate-risk-informed O&M systems.	Historical geographic overlap in some irrigation schemes in Matabeleland South and Masvingo, but SIRP has closed and most works are completed.	**Synergies:** Z-ADAPT may build on SIRP legacy infrastructure (e.g. adding solar pumps, MAR or CSA packages) where appropriate, in consultation with authorities. **Non-duplication:** no AF financing of basic rehabilitation works already financed under SIRP; focus is on incremental climate-proofing and O&M capacities.
7. Zimbabwe Agricultural Value Chain and Livelihoods Enhancement Project (AVCLEP), approved 2025; implementation in drought-prone rural areas including **Masvingo / Chivi / Chiredzi** **AfDB and GoZ**	Four-year project to enhance sustainable crop and livestock production, strengthen value chains and build climate resilience in drought-prone rural regions, benefiting about 7,000 livestock farmers and 42,000 crop farmers.	Works in selected drought-prone districts; some broad regional overlap with Z-ADAPT but focus is on mixed crop–livestock value chains rather than horticulture clusters.	**Synergies:** coordination through government platforms to align CSA packages and market support, and explore joint use of infrastructure where feasible. **Non-duplication:** Z-ADAPT will prioritise horticulture-specific water/finance interventions and wards not targeted by AVCLEP; it will not fund the same value-chain infrastructure.
8. DeSIRA RAIZ – Resilience Building through Agroecological Intensification in Zimbabwe, 2022–2026. Research and pilot sites in **Zimbabwe**, including **Mutoko** and stakeholder engagement on climate information in **Murehwa and Mutoko**. **University of Zimbabwe, CIRAD and CIMMYT / DeSIRA.**	**Lesson:** validated agroecological and climate-information approaches should be scaled through extension and farmer learning platforms. Reflected in Z-ADAPT through FFS-based scaling of climate-smart horticulture technologies and national learning events.	Limited geographic overlap: mainly research sites in specific districts outside the main Z-ADAPT focus area.	**Synergies:** Z-ADAPT will use RAIZ evidence to inform its CSA technology packages and policy dialogue, and may invite RAIZ partners to national learning events. **Non-duplication:** AF resources will not fund research trials already financed by RAIZ; Z-ADAPT will support operational scaling in drought-prone horticulture systems.
9. **Zimbabwe Resilience Building Fund (ZRBF), 2015–2022.** Multi-district programme supporting **18 districts** in Zimbabwe, including climate-vulnerable rural areas. **GoZ / UNDP with donor partners.**	**Lesson:** resilience interventions are stronger when community systems, evidence generation and coordinated platforms are combined. Reflected in Z-ADAPT through community-based water governance, learning systems and alignment with district coordination fora	Possible overlap at ward/district level in broader southern Zimbabwe, but with different instruments and timeframes.	**Synergies:** Z-ADAPT will coordinate targeting with these programmes through district coordination fora, and may use their community structures as entry points. **Non-duplication:** Z-ADAPT will not finance short-term food assistance, public works or broad resilience packages already delivered under ZRBF-type mechanisms; it focuses on targeted climate adaptation investments in water, horticulture and CIS.

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

153. The project will implement a structured **Learning and Knowledge Management system** to capture and disseminate lessons on climate-resilient water management, climate-smart horticulture and climate information services. Consistent with Adaptation Fund guidance, learning will function as a **cross-cutting process embedded within project implementation and monitoring**, rather than as stand-alone activities. Learning will be integrated into existing delivery mechanisms such as **Farmer Field Schools, Water User Committees, local adaptation planning processes and partner reflection sessions**, involving key institutions including the Department of Agricultural Technical and Extension Services (DATES), Meteorological Services Department (MSD), Environmental Management Agency (EMA), Rural District Councils (RDCs), producer organisations and financial service providers.

154. Learning processes will be integrated into the **monitoring and evaluation framework** to systematically capture and analyse project experiences. This will include periodic learning reviews, outcome monitoring and participatory reflection sessions assessing key interventions such as **solar-powered irrigation systems, ecosystem-based adaptation measures and climate information services**. Evidence generated will help identify effective adaptation practices under semi-arid conditions and inform improvements in project implementation.

155. Knowledge products will include technical briefs, operational guidance notes, policy summaries and community-level case studies, with particular attention to gender and youth perspectives. Gender-sensitive tools such as seasonal learning logs and outcome stories will capture changes in workloads, incomes, climate risks and decision-making roles among women and youth. Lessons generated will be shared through national and district-level learning events, extension platforms and regional knowledge networks.

156. To ensure long-term sustainability of knowledge generated, project outputs will be integrated into existing institutional systems. Training materials and technical guidance will be embedded within the national agricultural extension system (DATES) and climate information services managed by MSD, while knowledge products will be archived within the information systems of the Ministry of Lands, Agriculture, Fisheries, Water and Rural Development and relevant partner institutions. This approach will allow learning generated by the project to continue informing climate adaptation practices beyond the project lifetime.
157. Finally, feedback mechanisms will be established to ensure that training materials and capacity-building approaches are continuously improved. Participant feedback from Farmer Field Schools, extension trainings and institutional capacity-building sessions will be collected and analysed periodically, allowing training modules and advisory services to be refined to better respond to farmers' needs and evolving climate risks.The project will establish annual learning reviews to assess effectiveness and adapt implementation approaches. A digital knowledge platform hosted by MLAFWRD will store and disseminate lessons learned. Feedback mechanisms will include farmer surveys and stakeholder workshops to continuously refine training and interventions.

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

158. **Overall approach:** The Z-ADAPT design has been informed by a systematic, multi-tiered consultative approach that leverages HEEP targeting and stakeholder interaction frameworks. Consultations were conducted to: (i) validate the climate risk assessment for semi-arid horticulture value chains; (ii) identify priority adaptation strategies for water, agriculture, finance, and information services; and (iii) ensure that women, youth, and other marginalized groups were able to articulate their specific challenges and preferences. The approach combines national-level policy dialogue, province and district-level workshops, community-level discussions and dedicated gender and youth consultations, in line with the Adaptation Fund Environmental and Social Policy (ESP) and Gender Policy.

159. The consultation process ensured participation of national and local government institutions, technical agencies, civil society organisations, producer organisations, women's groups and youth representatives in the targeted districts. Attention was given to engaging stakeholders working directly with women farmers, youth and climate-vulnerable rural households, including organisations supporting women's economic empowerment and farmer cooperatives. Across the provincial and district consultations, more than 118 participants were engaged, with participation broadly gender-balanced and reflecting representation from smallholder communities in drought-prone districts. The consultations validated the proposed geographic targeting and highlighted key adaptation priorities including reliable water access, climate-resilient irrigation technologies, improved climate information dissemination and stronger financial literacy and market linkages for horticulture producers.

160. Stakeholder consultations directly informed the project design. Farmers and local authorities emphasised the need to improve water reliability for community gardens and irrigation schemes, which shaped investments in solar-powered irrigation systems and climate-resilient water storage under Component 1. Women farmer groups highlighted barriers to accessing finance, climate

information and decision-making platforms, informing the inclusion of financial literacy, producer organisation strengthening under Component 2 and gender-responsive dissemination of climate advisories under Component 3. Youth groups emphasised the need for skills development and opportunities in climate-resilient horticulture value chains, which informed the design of training and Farmer Field School activities. A summary of consultations is provided in Annex 2, including participating institutions, gender-disaggregated participation and key issues raised. Consultation findings also informed the gender analysis in Annex 4, which identifies women's specific needs related to access to climate-resilient technologies, water infrastructure, climate information and financial services.

161. **Provincial and district-level consultations:** A provincial stakeholder engagement was conducted throughout four districts: Masvingo, Midlands, Matabeleland South, and Manicaland, adopting a structured KoboToolbox[78] survey and led workshops. More than 118 respondents participated, representing members from smallholder farmer groups, producer organizations, Department of Agricultural Technical and Extension Services, EMA, Zimbabwe National Water Authority, ARDA, RIDA, municipal authorities, and civil society organizations.

162. Participants concurred that droughts, heatwaves and prolonged dry spells are the principal hazards affecting horticulture, reducing yields, constraining irrigation and degrading soil health. They prioritised climate-smart irrigation, water harvesting, integrated soil and water conservation and climate-resilient livelihood strategies. These priorities informed the final Z-ADAPT design: climate-resilient water infrastructure and ecosystem restoration (Component 1), climate-smart horticulture and diversified livelihoods with financial literacy and facilitated linkages to existing financial services (Component 2), and climate information services, early warning and institutional capacity strengthening (Component 3). No project-managed revolving fund is proposed.

Validation of project components and geographic targeting: District consultations considered a range of adaptation options, including solar water systems, sand and sub-surface dams, micro-catchment rehabilitation and recharge-zone protection, micro-irrigation, protected agriculture and revolving-finance approaches. Following technical, safeguards and budget screening, the final concept retains the interventions reflected in the approved component structure and budget: SPIS, sand/sub-surface storage, micro-catchment rehabilitation, climate-smart horticulture technologies, producer organisation strengthening, financial literacy and facilitated linkages to existing finance/insurance services, and strengthened climate information and early-warning delivery. The consultations also helped refine ward/scheme targeting, community contributions and preferred climate-information channels (SMS/USSD, community radio, Farmer Field Schools and extension services

163. **Gender-responsive and youth-focused consultations:** A consultation with focused women and youth civic organizations was held to ensure compliance to the AF Gender Policy and IFAD's SECAP standards. The meeting convened representatives from the Ministry of Women Affairs, Community, Small and Medium Enterprise Development; the Ministry of Youth Empowerment, Development and Vocational Training; the MLAFWRD Gender Mainstreaming, Inclusivity and Wellness Department; the Community Technology Development Organisation (CTDO); UNDP's Smallholder Agricultural Climate Programme (SACP); and the HEEP Project Management Unit. The objectives were to: (i) assess the feasibility and relevance of proposed climate-resilient interventions responsive to women and youth; (ii) find synergies with existing programs; and (iii) assure conformity with national gender and youth priorities.

164. **Key findings from gender and youth consultations:** Stakeholders identified significant knowledge gaps regarding gender-responsive climate-smart technologies in rural regions; inadequate partnerships and coordination concerning women- and youth-oriented climate technologies; limited participatory and inclusive planning; and low adoption of suggested technologies due to insufficient research, trials, and customized financing. Recommendations included: (i) conducting inclusive needs assessments applying participatory and gender-sensitive methodologies such as GALS; (ii) implementing targeted capacity-building initiatives for women and youth focused on climate-smart agriculture, water stewardship, and community-based water monitoring; (iii) creating climate-adaptive microfinance products and "gender-smart accelerator" funds for agribusinesses led by women and youth; (iv) enhancing mapping and collaboration among stakeholders advocating for gender-climate initiatives; and (v) implementing gender- and age-disaggregated indicators systematically in monitoring and evaluation processes.

165. **Integration into project design:** The findings from consultations with women and youth organisations have been incorporated into the final Z-ADAPT design in ways consistent with the approved component structure and budget. Component 2 provides climate-smart horticulture and livelihood support, financial literacy, strengthened savings groups, and facilitated linkages to existing financial and insurance services; it does not establish a project-managed revolving fund or credit facility. Component 3 strengthens inclusive climate information services, early warning dissemination, institutional and community capacity for climate-risk-informed planning and response, and gender- and age-disaggregated monitoring. These measures support women and youth as active participants in adaptation planning, implementation and governance

166. The consultation findings, together with the **gender analysis presented in Annex 4**, informed the identification of women's specific needs related to access to irrigation technologies, climate information, financial services and decision-making platforms, which are reflected in the project's gender-responsive design and participation targets.

[78] IFAD HEEP Design Report:

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

167. The financing reflects the incremental cost of adaptation required to address climate risks in Zimbabwe's semi-arid regions. Component 1 reduces exposure to drought and water scarcity through climate-resilient water infrastructure and ecosystem measures that protect water resources, enabling reliable irrigation despite increasing rainfall variability and higher temperatures. Component 2 strengthens household adaptive capacity by promoting climate-smart horticulture practices, improved technologies and stronger producer organisations, helping farmers diversify incomes and reduce sensitivity to climate shocks. Component 3 improves climate risk governance by strengthening climate information services and institutional capacity, enabling farmers and local institutions to anticipate climate hazards and take timely adaptation actions. Together, these interventions shift rural production systems from climate-sensitive coping strategies to climate-resilient livelihood systems, going beyond business-as-usual rural development by integrating drought-resilient infrastructure, climate-smart practices and climate information services designed to address rising temperatures, declining rainfall and recurrent droughts.

168. The project does not rely on external co-financing to deliver its core adaptation outcomes. Adaptation Fund resources will finance the essential adaptation investments and capacity-building activities required to achieve the project's objective. Existing programmes in the country (including IFAD-supported HEEP and other development initiatives) provide an enabling baseline and institutional context but do not finance the specific adaptation measures proposed under Z-ADAPT. The project is therefore able to deliver its outputs and outcomes independently, while coordination with ongoing programmes ensures complementarity and avoids duplication. **Table 8 presents the incremental adaptation reasoning,** comparing business-as-usual development pathways with the additional climate-resilient investments financed by the Adaptation Fund. Under a business-as-usual scenario, investments would focus on general agricultural productivity without addressing climate risks. Adaptation Fund financing will support climate-resilient irrigation systems, climate-smart practices, and climate information services that directly reduce vulnerability to drought, representing the incremental cost of adaptation

Table 8. Adaptation Fund additionality

Business as usual scenario **Climate change risks and challenges (baseline scenario)**	**Adaptation Fund additionality**
Component 1. Climate-resilient water infrastructure and ecosystem restoration	
Recurrent and **longer droughts**, **higher temperatures** and **increased evapotranspiration** are reducing surface water flows and groundwater recharge, making dry-season water access unreliable for horticulture and priority domestic use. Increasing rainfall variability and occasional intense storms raise runoff, erosion and sedimentation risks, damaging small reservoirs and water points and reducing effective storage. Under the baseline, rural water and irrigation investments may continue, but **assets remain partly conventional and climate-sensitive** (limited storage buffers; high evaporation and conveyance losses; weak drought-period governance/O&M), leading to seasonal interruptions and repeated rehabilitation.	• Climate-resilient water security package (drought buffering + reduced losses + governance): • 200 SPIS sites installed/upgraded with 10,000-20,000 L storage per site, serving 12,000 households (60 HH/site) with 30HH for year-round horticulture and 30 HH accessing domestic water use where feasible. • 35 sand/sub-surface storage structures (indicatively 25 sand dams + 10 sub-surface dams; final mix at FP stage) on seasonal rivers to buffer dry-season water for horticulture/livestock and protected abstraction where feasible. • Governance and O&M coverage aligned to assets: 200 site-level water user committees for SPIS and governance arrangements for 35 storage sites (site committees/sub-committees or clustered committees), meeting inclusion targets (50% women; 30% youth). • Micro-catchment protection (EbA) linked to assets (recharge-zone protection, gully stabilisation, vegetative buffers/windbreaks) and basic groundwater/asset monitoring/reporting into CIS (final footprint and site list confirmed at FP stage). **Adaptation pathway:** Climate-resilient water infrastructure and watershed protection increase reliability of water resources under hotter and drier conditions, enabling sustained horticulture production and reducing climate exposure of farming systems. **Adaptation outcome:** Reliable water access reduces drought exposure, stabilises smallholder production and strengthens resilience of water and horticulture systems in semi-arid districts.
Component 2 – Climate-smart horticulture and diversified livelihoods	
Hotter and drier seasons, more frequent mid-season **dry spells** and **heat waves** shorten growing periods and increase crop water demand, raising the risk of crop failure and quality losses. **Water scarcity constrains** smallholder horticulture and pushes households to rely on low-return, rain-fed systems and coping strategies that can undermine long-term resilience. Under the baseline, households remain **highly dependent** on **rain-fed**, heat-sensitive production with limited access to efficient irrigation application, protective production, soil moisture conservation and diversified income options; standalone pilots and input support may occur, but with weak uptake and limited	• CSA adoption at scale linked to water-secure sites (quality over scattered pilots): • 150 Farmer Field Schools (FFS) operational, reaching 7,500 farmers trained (50% women; 30% youth) on drought/heat-responsive practices and seasonal decision-making. • Water-efficient horticulture packages for households linked to Component 1 water assets, including micro-irrigation adoption and scheduling support (final unit numbers confirmed at FP stage, aligned with water-secure sites). • 100-150 protected production structures (shade-nets/low tunnels) installed in the most drought/heat-prone water-secure sites (to be confirmed at FP stage). • 50 demonstration plots (micro-irrigation vs conventional; protected vs open field) with performance tracking to support replication via extension systems.

scalability, and finance/revolving schemes remain vulnerable to drought shocks.	• Producer organisation strengthening (indicatively 30-40 groups) for aggregation/marketing and facilitated linkages to existing finance/savings/insurance services **Adaptation pathway:** Adoption of climate-resilient production practices, improved water-use efficiency and diversified livelihood strategies reduces sensitivity of smallholder production systems to drought and climate variability. **Adaptation outcome:** Increased adaptive capacity and livelihood resilience of vulnerable households through climate-resilient horticulture systems and diversified income opportunities.
Component 3. Climate information services, early warning systems and institutional capacity strengthening	
Increasing drought frequency, heat stress and erratic rainfall require timely, **localised early warning** and **climate advisory services** to enable anticipatory actions (e.g., planting and irrigation scheduling, water allocation decisions, and protection of water assets) and to reduce losses from extremes. However, last-mile dissemination, user decision-support and feedback loops remain limited in vulnerable rural areas, and information is not systematically linked to community planning, water governance and early action protocols. Under the baseline, **hydro-meteorological services** and dissemination pathways **exist**, but are **insufficiently resourced** to deliver tailored advisories at scale in the targeted districts; institutional capacity for early action planning, and for safeguards, gender mainstreaming and learning/M&E remains constrained-raising risks of delayed response, exclusion and unmitigated E&S impacts.	• Operational last-mile EWS/CIS + enabling capacity and compliance: • Output 3.1 (USD 520,000): locally actionable advisories strengthened for last-mile delivery (co-produced advisories, dissemination bundles, user training/early action uptake, feedback loops), reaching ~15,000 farmers/households through combined channels (final reach confirmed at FP stage). • - Output 3.2 (USD 300,000): institutional capacity strengthened across MSD, Department of Agricultural Technical and Extension Services, RDCs and Ministry responsible for Environment/Climate to integrate climate risk information into planning and services (inclusive access for women/youth/vulnerable groups). • Output 3.3 (USD 180,373): AF compliance and learning delivered: ESP screening and FP-stage ESMP preparation, functional GRM support, Gender Assessment and budgeted Gender Action Plan (GAP), results monitoring and learning/knowledge capture - **Adaptation pathway:** Improved access to localized climate information and strengthened institutional coordination enable farmers and local authorities to anticipate climate hazards and take timely risk-reducing actions. **Adaptation outcome:** Climate-risk-informed decision-making and strengthened institutional capacity improve preparedness and resilience to climate variability and extreme events.

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

169. **Overall sustainability approach:** Z-ADAPT is designed to sustain the benefits of climate-resilient water systems, climate-smart horticulture and climate information services beyond the project lifetime in Masvingo and Matabeleland South. Sustainability is addressed through five complementary dimensions: (i) institutional and policy continuity; (ii) financial sustainability and O&M; (iii) technical resilience; (iv) environmental sustainability; and (v) social, gender and youth inclusion. Financial and O&M sustainability are addressed through a single integrated approach based on community O&M plans, cost-based and periodically reviewed user contributions, dedicated maintenance/reserve accounts, transparent financial management, affordability measures and technical oversight by responsible district authorities.

170. **Institutional and policy sustainability:** The project will be implemented using existing national frameworks to ensure continuity after project completion. The Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (MLAFWRD), will provide overall coordination and technical oversight for irrigation development and climate-smart agriculture interventions. The Meteorological Services Department (MSD) will maintain and operate climate information and advisory services developed under the project. Rural District Councils (RDCs) will support governance of community water infrastructure and ensure alignment with district development plans. Community-level Water User Committees and irrigation management groups established or strengthened under the project will take responsibility for local management of irrigation assets. These arrangements are aligned with Zimbabwe's National Adaptation Plan (NAP), Vision 2030, and national irrigation development policies, ensuring that project systems are embedded in long-term institutional structures.

171. **Financial and economic sustainability**: Financial sustainability of infrastructure investments will be secured through community-managed O&M arrangements that combine locally agreed, cost-based water-use tariffs or user contributions with dedicated maintenance accounts. From Year 1, each SPIS site will calculate contributions against estimated annual O&M costs, review tariffs annually against actual expenditure, and maintain a minimum three-month reserve for emergency repairs. Affordability will be assessed and, where necessary, tiered or cross-subsidy arrangements will protect the poorest households. Water User Committees will be trained in financial management, tariff setting, record-keeping and maintenance planning, with

Rural District Councils providing technical oversight. Committee constitutions, O&M by-laws and dedicated bank accounts will be formalised within the first six months and before commissioning of SPIS assets, drawing on HEEP O&M models in overlapping districts. Financial viability will also be reinforced through strengthened producer organisations and market linkages that increase returns from climate-resilient horticulture and create incentives for continued asset maintenance

172. **Technical and operational sustainability:** Project investments prioritise **climate-resilient and low-maintenance technologies** that can be operated and maintained locally. Solar-powered irrigation systems reduce dependence on diesel fuel and are widely used in Zimbabwe's smallholder irrigation schemes. Sand dams and sub-surface dams have proven durability in semi-arid environments and require minimal maintenance. The project will train **local technicians, extension officers, and community Water User Committees** on routine maintenance and basic repair of irrigation equipment and water infrastructure. This approach ensures that technical capacity remains within district institutions and local communities after project completion.

173. **Environmental and social sustainability (including gender and youth):** Environmental sustainability will be supported through **ecosystem-based adaptation measures** including micro-catchment restoration, vegetative buffers, gully rehabilitation and soil-moisture conservation practices that protect water sources and reduce erosion. These interventions enhance long-term water availability and protect irrigation infrastructure from climate-related degradation. Social sustainability will be strengthened through inclusive governance arrangements promoting participation of women, youth and vulnerable groups in Water User Committees, producer organisations and Farmer Field Schools, supported by targeted capacity-building. Sustainability of project outcomes will also be reinforced through alignment with government programmes and national strategies prioritising irrigation expansion, climate-smart agriculture and climate information services. Successful approaches demonstrated through Z-ADAPT including solar-powered irrigation systems, sand-dam water storage and farmer-centred climate advisory services can therefore be integrated into national extension programmes and district development plans, enabling government and development partners to scale these models in other drought-prone areas of Zimbabwe.

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

174. **Overall categorisation and safeguards approach:** Z-ADAPT is classified as Category B under the Adaptation Fund Environmental and Social Policy (ESP), as the anticipated adverse impacts are site-specific, reversible and manageable through standard mitigation measures, and as Substantial environmental and social risk under IFAD SECAP. At Full Proposal stage, the screening will be confirmed and updated and the required safeguards instruments will be prepared or updated, disclosed and implemented in accordance with AF and IFAD requirements, including the Environmental, Climate and Social Management Framework (ESCMF), project/site-specific Environmental and Social Management Plans (ESMPs), Stakeholder Engagement Plan (SEP), Gender Action Plan (GAP), Pesticide/Agrochemical Management Plan and project-level Grievance Redress Mechanism (GRM). These instruments will incorporate proportionate mitigation, monitoring and management measures before commencement of relevant civil works.

175. **Consistency between AF ESP and IFAD SECAP:** Screening has been undertaken using both IFAD's SECAP tools and the Adaptation Fund's checklist against the ESP's 15 environmental and social principles. The SECAP screening tool has been reviewed and revised to reflect the specific Z-ADAPT activities. While IFAD's system provides granular, sector-specific questions (e.g. on invasive species, labour influx, agrochemicals, land tenure, GBV), the AF ESP focuses on higher-level principles such as compliance with the law, access and equity, marginalized groups, natural habitats, pollution prevention and resource efficiency. The Z-ADAPT risk screening therefore:
    - Maps "Substantial" SECAP risks to the AF framework,
    - Confirms that all relevant AF principles are triggered at least at a low or moderate level, and
    - Identifies a limited set of priority risks requiring focused mitigation, as summarised below.

    At full proposal stage, an updated ESMP, Stakeholder Engagement Plan (SEP), Gender Action Plan and project-specific GRM procedures will be prepared or updated to ensure full compliance with both IFAD SECAP and AF ESP requirements, following the guidance for Category B projects.

176. **Key environmental risks:** The main environmental risks consistent with an overall **Substantial** E&S risk categorisation under IFAD SECAP and **Category B** under the Adaptation Fund ESP include:
    - **Water resources and aquifers (Natural habitats, Biodiversity, Climate change, Pollution prevention and resource efficiency).**
    - **Soil erosion, land degradation and vegetation loss (Conservation of biological diversity, Lands and soil conservation).**
    - **Agrochemicals and pollution (Pollution prevention and resource efficiency, public health).**
    - **Construction-related impacts and waste.**

177. **Key social risks:** Social risks are largely linked to access, equity and inclusion, assessed as moderate but manageable through the project's strong social inclusion and gender approaches and complementarity with HEEP's ESCMF.
    - **Access**, **equity and conflict over land and water.**
    - **Marginalized and vulnerable groups (Gender equity, marginalized groups, human rights).**
    - **Labour**, **OHS and child labour (Core labour rights, public health).**
    - **Gender-based violence (GBV), SEA/SH and elite capture.**

178. **Risk management and next steps:** Given these characteristics, Z-ADAPT's overall E&S risk profile is Substantial under IFAD SECAP and Category B under the Adaptation Fund ESP, with impacts that are site-specific, reversible and manageable through standard mitigation measures. At full proposal stage, the following instruments will be prepared or updated and disclosed in line with AF and IFAD requirements:
    - Updated Environmental, Climate and Social Management Framework (ESCMF).
    - Detailed Stakeholder Engagement Plan and Gender Action Plan.
    - Strengthened Pesticide/Agrochemical Management Plan.
    - Project-specific GRM aligned with both IFAD and national systems.
    - Targeted Adaptation Assessment to refine and prioritise climate risk management measures, consistent with the Substantial climate risk screening results.

    A detailed Environmental and Social Management Plan (ESMP) will be prepared during Full Proposal development. The ESMP will include the procedures, screening tools, exclusion criteria, mitigation measures, monitoring requirements and institutional responsibilities needed to manage Category B environmental and social risks, including those associated with site-specific Component 1 investments whose exact locations will be confirmed later..

179. **Unidentified Sub-Projects** Component 1 investments, including Solar-Powered Irrigation Systems (SPIS) and sand/sub-surface dams, will be treated as partially identified USPs because the intervention types are known but exact sites will be confirmed during implementation following hydro-geological or hydrological assessments and community consultations. Before approval and implementation, each USP will be screened under the project safeguards framework against environmental sensitivity, biodiversity, water availability, land tenure, social inclusion and gender impacts, cumulative impacts and climate resilience. The process will apply site eligibility and exclusion criteria, stakeholder consultation and gender inclusion, and site-specific risk assessment, with required mitigation measures integrated into the relevant ESMP. Activities involving involuntary resettlement, significant habitat conversion or irreversible environmental impacts will be excluded from financing. Screening outcomes will determine the level of assessment, mitigation, monitoring and reporting required in accordance with the Adaptation Fund ESP and Gender Policy and IFAD SECAP.

180. The **Initial Gender Assessment (Annex 4)** highlights both opportunities and risks for women and men in the project areas. Women play a central role in horticulture production and household water management but face constraints in accessing irrigation assets, finance, agricultural inputs and market opportunities. Climate variability increases women's workload due to longer distances for water collection and greater responsibility for household food security. At the same time, the expansion of climate-resilient irrigation and horticulture value chains presents opportunities for women's economic empowerment through improved access to productive assets, farmer training and market participation. The project will therefore promote inclusive participation of women in Water User Committees, producer organisations and farmer field schools, while addressing potential risks such as unequal access to irrigation assets, increased labour burdens or exclusion from decision-making processes.

181. The environmental and social screening conducted for this Concept Note considers **direct, indirect, cumulative and transboundary risks** that may arise from the project's water infrastructure investments, ecosystem restoration activities, agricultural intensification and institutional capacity-building interventions. Potential risks and impacts have been identified against each of the Adaptation Fund Environmental and Social Policy (ESP) principles and corresponding mitigation measures will be further refined during preparation of the full Environmental and Social Management Plan (ESMP) at Full Proposal stage.

Table 9: Overview of ESP Risk Assessment (Adaptation Fund Category B; IFAD SECAP Substantial)

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
ESP 1: Compliance with the Law		There is a **low risk** that project activities may not fully comply with national environmental, water, labour or land legislation during infrastructure development. **To mitigate this risk**, the project will ensure compliance with Zimbabwe's Environmental Management Act, Water Act, Public Health Act and Labour regulations, as well as IFAD SECAP and Adaptation Fund ESP requirements. Environmental screening at Full Proposal stage will confirm permits and embed compliance measures in the ESMP and contractor clauses.
ESP 2: Access and Equity		There is a **moderate risk** that poorer households, women, youth or vulnerable groups could face barriers in accessing irrigation infrastructure, climate services or market opportunities supported by the project. To mitigate this risk, the project will apply transparent beneficiary targeting criteria, promote gender and youth participation quotas, and implement a grievance redress mechanism to avoid exclusion or elite capture.

ESP 3: Marginalized and Vulnerable Groups		There is a **moderate risk** that marginalised households or persons with disabilities may not fully benefit from project interventions due to social or institutional barriers. **To mitigate this risk**, the project will ensure inclusive consultations, targeted capacity building and representation of vulnerable groups in Water User Committees and producer organisations.
ESP 4: Human Rights		There is a **low risk** that unequal participation in project decision-making could affect equitable access to project benefits. **To mitigate this risk**, the project will ensure inclusive consultation processes, transparent decision-making and accessible grievance mechanisms to protect civil and socio-economic rights.
ESP 5: Gender Equality and Women's Empowerment		There is a **moderate risk** that expansion of horticulture and irrigation may increase women's labour burden or expose them to gender-based violence risks in agricultural value chains. **To mitigate this risk**, the project will implement a Gender Action Plan, promote women's participation in Water User Committees and farmer field schools, and integrate GBV/SEA prevention and response measures in the ESMP.
ESP 6: Core Labour Rights		There is a **moderate risk** that construction and agricultural activities may pose occupational health and safety risks or labour rights violations. **To mitigate this risk**, contractors will comply with Zimbabwe's Labour Act and project labour standards, including prohibition of child and forced labour, occupational safety training and supervision under the ESMP.
ESP 7: Indigenous Peoples		No Indigenous Peoples meeting the definition under the Adaptation Fund ESP are formally recognised in the project districts. However, there is a **low risk** that culturally distinct communities may not fully benefit if engagement is not inclusive. **To mitigate this risk**, the project will apply culturally appropriate consultations and inclusive targeting where relevant. However, some communities self-identify as Indigenous although not formally recognised by the Government [79] Where identified, the project will apply culturally appropriate engagement, inclusive targeting and documented consultations. If differentiated impacts are possible, Free, Prior and Informed Consultation will be applied and FPIC will be sought where required by the AF ESP. Implementation will be monitored through the GRM, beneficiary feedback and disaggregated participation tracking.
ESP 8: Involuntary Resettlement		There is a **moderate risk** that small areas of land may be required for infrastructure such as pipes, tanks or recharge structures and that water-use rules may affect existing access. **To mitigate this risk**, infrastructure will prioritise existing schemes and communal land. A Land Access Framework and site agreements will ensure voluntary land contributions or fair compensation and avoid physical or economic displacement.
ESP 9: Protection of Natural Habitats		There is a **moderate risk** that construction of sand dams, boreholes or irrigation infrastructure near rivers or wetlands could disturb natural habitats or alter water flows. **To mitigate this risk**, environmental screening will guide site selection, critical habitats will be avoided and ESMP measures such as buffer zones, abstraction limits and ecosystem-based restoration will be applied.
ESP 10: Conservation of Biological Diversity		There is a **moderate risk** that vegetation clearance and intensified agriculture could effect on-farm biodiversity or increase human–wildlife interactions. **To mitigate this risk**, the project will promote agroforestry, crop diversification and integrated pest management while avoiding invasive species and supporting biodiversity-friendly land management
ESP 11: Climate Change		There is a **low risk** that future climate variability could affect water availability and irrigation performance. However, the project is expected to generate positive climate adaptation benefits. **To mitigate this risk**, the project integrates climate-resilient infrastructure design, diversified water storage systems and climate advisory services.
ESP 12: Pollution Prevention and Resource Efficiency		There is a **moderate risk** that expanded horticulture production may increase fertiliser and pesticide use or place pressure on water resources. **To mitigate this risk**, the project will promote efficient irrigation technologies, integrated soil fertility management and integrated pest management, while ensuring safe handling and disposal of agrochemicals.
ESP 13: Public Health		There is a **moderate risk** that irrigation systems and water storage could increase exposure to water-borne diseases or agrochemical hazards. **To mitigate this risk**, the project will integrate water management practices, WASH awareness activities, safe agrochemical protocols and GBV/SEA mitigation measures in the ESMP and grievance redress mechanism.
ESP 14: Physical and Cultural Heritage		There is a **low risk** that construction activities could unintentionally affect unknown cultural heritage sites. **To mitigate this risk**, chance-find procedures will be included in ESMPs and contractor contracts.
ESP 15: Lands and Soil Conservation		There is a **low risk** that intensified irrigation and agricultural production could contribute to soil degradation if not properly managed. **To mitigate this risk**, the project will promote conservation agriculture practices including mulching, contouring, agroforestry and soil moisture conservation measures.

Note on Column 2 of Table 9 (ESP Screening Checklist): Column 2 ("No further assessment required for compliance") has been intentionally left blank for all 15 AF ESP principles. This is consistent with the project's Category B classification under the AF Environmental and Social Policy. At concept stage, the exact locations of civil works infrastructure (SPIS, sand and sub-surface dams, EbA measures) are not confirmed, as sites will be finalised during early implementation following hydro-geological assessments, social screening and community consultations. Given that the project involves physical infrastructure, community engagement, ecosystem interventions and Unidentified Sub-Projects (USPs), it is not possible at this stage to confirm "no further assessment required" for any principle. AF ESP guidance for Category B projects requires a full ESMP with site-specific assessment at Full Proposal stage. Check marks in Column 2 will be inserted at the Full Proposal stage, once site-specific ESMP assessments confirm which principles have been fully addressed and require no further action. This approach is consistent with the AF ESP Guidance for Implementing Entities for Category B projects.

PART III: IMPLEMENTATION ARRANGEMENTS

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

182. The project contributes directly to **AF Outcomes 3, 4,** and **6**, and secondarily to Outcome 2 and 5. The table below summarizes the alignment between Z-ADAPT outcomes and the Adaptation Fund Results Framework.

[79] https://iwgia.org/en/zimbabwe.html

Table 10 : Alignment with AF Results Framework

Project Objective(s)	Project Objective Indicator(s)	Adaptation Fund Outcome	Adaptation Fund Outcome Indicator	Grant Amount (USD)
Objective: Reduce climate vulnerability and strengthen the adaptive capacity of smallholder farming households in drought-prone districts of Zimbabwe's semi-arid regions by increasing reliable access to climate-resilient water systems, enabling adoption of climate-smart horticulture and diversified livelihoods, and strengthening climate information services and institutional capacity for climate-risk-informed decision making.	• Number of households benefiting from climate-resilient water access and climate-resilient horticulture production systems.	**Outcome 4:** Increased adaptive capacity within relevant development sector services and infrastructure assets	**4.2** Physical infrastructure improved to withstand climate change and variability-induced stress	5,200,000
	• Area under ecosystem-based adaptation and micro-catchment rehabilitation protecting water infrastructure	**Outcome 5:** Increased ecosystem resilience in response to climate change and variability-induced stress	**5** Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress	320,000
	• Number of staff and institutions with increased capacity to respond to climate-related risks	**Outcome 2:** Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and **environmental losses**	**2.1** Capacity of staff and institutions to respond to climate-related risks increased	680,000
	• Number of farmers adopting climate-smart horticulture practices and technologies.	**Outcome 6:** Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	**6.1** Percentage of households and communities having more secure access to livelihood assets	3,200,000
	• Number of people receiving climate advisories and covered by early warning systems in the four target districts. (Target: TBC at full proposal stage.)	Outcome 1: Reduced exposure to climate-related hazards and threats	1.2 Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis	520,000
	• Percentage of targeted population aware of predicted adverse impacts of climate change and of appropriate responses. (Baseline and target: TBC at full proposal stage.)	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1 Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	180,373
Total outcome level grant amount				**10,100,373**
Project Outcome(s)	**Project Outcome Indicator(s)**	**Adaptation Fund Output**	**Adaptation Fund Output Indicator**	**Grant Amount (USD)**
Outcome 1.1 Reliable and climate-resilient water access systems established for vulnerable households and community production systems, reducing exposure to drought and climate variability	• 200 solar-powered irrigation systems (SPIS) installed/upgraded with storage.	**Output 4:** Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	**4.1.2** No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	**3,600,000**
	• 35 climate-resilient water storage structures constructed or rehabilitated (sand dams, sub-surface dams or equivalent systems).	**Output 4:** Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	**4.1.2** No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	**1,600,000**
	• 200 Water User Committees established/strengthened (50% women, 30% youth participation) — Output 1.1.3.	Output 2.1: Strengthened capacity of national and sub-national centres and networks to respond rapidly to extreme weather events	2.1.2 No. of targeted institutions with increased capacity to minimize exposure to climate variability risks (by type, sector and scale)	380,000
Outcome 1.2: Ecosystem services and micro-catchment functions strengthened to sustain water availability and climate-resilient infrastructure.	• Area under ecosystem-based adaptation and micro-catchment rehabilitation (5,000 ha).	**Output 5:** Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability	**5.1** No. of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type and scale)	**320,000**
Outcome 2.1: Adaptive capacity and livelihood resilience of vulnerable households enhanced through climate-resilient horticulture practices and inclusive market linkages.	• 7,500 farmers trained through Farmer Field Schools (50% women, 30% youth).	**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	**1,200,000**
	• Climate-resilient horticulture technologies deployed and demonstrated in at least 200 production sites.	**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	**1,550,000**

			of individual or community livelihood strategies	
	• 35 producer organisations strengthened with improved aggregation and market linkages.	**Output 6:** Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	**6.2.1** Type of income sources for households generated under climate change scenario	**450,000**
Outcome 3.1: Strengthened climate-risk-informed decision making.	• Climate advisory and early warning services operational in 4 target districts; number of people receiving advisories.	**Output 1.2:** Targeted population groups covered by adequate risk reduction systems	**1.2.1** Percentage of target population covered by adequate risk-reduction systems	**520,000**
	• Number of institutions integrating climate risk information into planning and service delivery.	**Output 2.1:** Strengthened capacity of national and sub-national centres and networks to respond rapidly to extreme weather events	**2.1.2** No. of targeted institutions with increased capacity to minimize exposure to climate variability risks (by type, sector and scale)	**300,000**
	• Knowledge products and learning systems developed and disseminated (minimum 8 products, learning reviews, district events).	**Output 3.1:** Targeted population groups participating in adaptation and risk reduction awareness activities	**3.1** No. of news outlets in the local press and media that have covered the topic	**180,373**
Total output level grant amount (sum of Components 1, 2 and 3)				**10,100,373**

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

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

Mr Washington Zhakata Chief Director Climate Change and Wildlife, Ministry of Environment, Climate, and Wildlife, Zimbabwe	Date: December 18, 2025

B. Implementing Entity certification

[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.

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 Zimbabwe 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 Pierre Yves Guedez,
Lead, Multilateral Climate and Environmental Funds ECP Division, IFAD
Email: p.guedez@ifad.org



Director
Juan Carlos Mendoza Casadiegos
Environment, Climate, Peoples Division

Date: 02/06/2026	Tel. and email: ecpmailbox@ifad.org

Project Contact Person:
Mr Claus Reiner
Regional Climate and Environment Specialist
East and Southern Africa, ECP Division, IFAD, Tel : +254 793 484 367, Email : c.reiner@ifad.org

Country Director
Francesco Rispoli, Country Director for Zimbabwe, ESA, IFAD, Email r.rispoli@ifad.org

Annex 1 Endorsement Letter

All communications should be addressed, "The Secretary for Environment, Climate and Wildlife"

P Bag 7753 Causeway,
Zimbabwe
Telephone: 701681/3
Fax: 252673

Your Ref.:
Our Ref:

ZIMBABWE

MINISTRY OF ENVIRONMENT,
CLIMATE AND WILDLIFE
11th Floor, Kaguvi Building
Cnr 4th Street/Central Avenue
Harare

18 December 2025

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

Subject: Endorsement for Zimbabwe Adaptation for Drought and Agro-Production Transformation in Semi-arid Regions (Z-ADAPT)

In my capacity as the Designated Authority for the Adaptation Fund in Zimbabwe, 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 Zimbabwe.

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 Ministry of Lands, Agriculture, Fisheries, Water and Rural Development in collaboration with Ministry of Environment, Climate and Wildlife.

Sincerely,

Mr Washington Zhakata
Chief Director - Environment, Climate and Wildlife & Adaptation Fund Designated Authority
Ministry of Environment, Climate and Wildlife, Zimbabwe

All communications should be addressed, "The Secretary for Environment, Climate and Wildlife"

P Bag 7753 Causeway,
Zimbabwe
Telephone: 701681/3
Fax: 252673

Your Ref.:
Our Ref:

ZIMBABWE

MINISTRY OF ENVIRONMENT,
CLIMATE AND WILDLIFE
11th Floor, Kaguvi Building
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Sincerely,

Mr Washington Zhakata
Chief Director - Environment, Climate and Wildlife & Adaptation Fund Designated Authority
Ministry of Environment, Climate and Wildlife, Zimbabwe

Please expand the description of each of the PFG activities in the "budget note" column of the PFG form, providing details and justifications for funding required.

Revised PFG Submission Form[1]

Project Formulation Grant (PFG)

Submission Date:

Adaptation Fund Project ID:
Country/ies: Angola
Title of Project: Zimbabwe Adaptation for Drought and Agro-Production Transformation in Semi-arid Regions (Z-ADAPT)
Country: Zimbabwe
Type of IE (NIE/RIE/MIE): MIE
Implementing Entity: International Fund for Agricultural Development (IFAD)
Executing Entity/ies: IFAD for the PFG and Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (MLAFWRD); in collaboration with Ministry of Environment and Wildlife for the project

A. Project Preparation Timeframe

Start date of PFG	Upon Concept Note approval date
Completion date of PFG	(10 months) after Concept Note approval date

B. Proposed Project Preparation Activities ($)

List of Proposed Project Preparation Activities	Output of the PFG Activities	US$ Amount	Budget note[2]
Stakeholder consultations and participatory design	Stakeholder consultation reports; validated problem analysis; gender-responsive and youth-inclusive inputs integrated into project design.	18 000	Ensures national and local ownership through a structured and inclusive stakeholder consultation process at national, provincial, district and community levels in the targeted Natural Regions IV and V. The activity will finance inception and validation workshops, focus group discussions, and key informant interviews with government counterparts (MLAFWRD and Ministry of Environment and Wildlife), local authorities, farmer

[1] As presented in AFB/PPRC.33/40 Annex 1.
[2] The proposal should include a detailed budget with budget notes indicating the break- down of costs at the activity level. It should also include a budget on the Implementing Entity management fee use.

			organizations, women and youth groups, and private sector actors. The budget will cover workshop logistics, stakeholder travel and per diems, facilitation, and documentation. Particular emphasis will be placed on ensuring gender-responsive and youth-inclusive participation in line with the Adaptation Fund Environmental and Social Policy (ESP) and Gender Policy. This will validate climate risks and adaptation priorities, integrate indigenous knowledge, and strengthen the project design and sustainability.
Technical, climate risk and feasibility assessments	Climate risk and vulnerability assessment; technical feasibility studies for SPIS, sand/sub-surface dams, EbA interventions, and CIS/EWS strengthening	30 000	Provides evidence-based justification for adaptation investments; through detailed technical, climate risk and feasibility assessments. This includes (i) climate risk and vulnerability assessments using historical and projected climate data; (ii) hydrological and agro-ecological assessments for water-related investments such as solar-powered irrigation systems (SPIS), sand and subsurface dams; (iii) feasibility studies for ecosystem-based adaptation (EbA) interventions; and (iv) assessments of climate information services (CIS) and early warning systems (EWS). The budget will cover specialized technical consultants, field assessments, data collection, modelling tools, and reporting, including site verification missions. This will ensure a robust climate rationale, confirm site suitability, and enhance cost-effectiveness while reducing implementation risks.
Environmental and social safeguards studies	Updated ESP screening; draft ESMP and related safeguard instruments (as required at FP stage).	15 000	Ensures compliance with AF Environmental and Social Policy;) through the preparation and updating of safeguards instruments. This includes (i) updated environmental and social screening; (ii) preparation of a draft Environmental and Social Management Plan (ESMP); and (iii) development of related instruments as required at Full Proposal stage, such as a Stakeholder Engagement Plan (SEP), Gender Action Plan, and Grievance Redress Mechanism (GRM). The budget will cover safeguards specialists, field verification where required, stakeholder consultations, and preparation of documentation in line with AF requirements. This will ensure early identification and mitigation of environmental

			and social risks and strengthen overall project quality and readiness.
Multi-disciplinary project formulation team	Full Funding Proposal; refined results framework and logframe; detailed budget; implementation arrangements; integration of stakeholder and technical inputs	74 250	Covers consultancy fees, technical writing, design workshops, travel and coordination required to meet Adaptation Fund Full Proposal standards. This activity will finance a multidisciplinary team comprising a lead writer/team leader, climate and adaptation specialist, agriculture/irrigation engineer, natural resources management/EbA specialist, environmental and social safeguards expert, gender and social inclusion specialist, financial/economic analyst, and monitoring and evaluation specialist. The budget will support drafting and revision processes, coordination meetings, in-country missions, and stakeholder validation workshops, as well as preparation of all required annexes including the results framework, detailed budget, and implementation arrangements. This ensures integration of stakeholder, technical and safeguards inputs into a coherent and high-quality proposal aligned with Adaptation Fund requirements.
Project formulation grant for concept note		137 250	Total PFG allocation for project formulation, for concept covering stakeholder consultations, technical assessments, safeguards studies, and preparation of the Adaptation Fund Full Proposal. The allocation is commensurate with the scope and complexity of the project and ensures adequate resources to develop a robust, evidence-based and fully compliant proposal.
Implementing Entity (IE) Fee (8.5%)		12 750	Total PFG allocation for concept preparation in accordance with Adaptation Fund guidelines. The fee will cover IFAD's costs related to project formulation oversight, including internal technical review, quality assurance, safeguards compliance checks, fiduciary oversight, and coordination with national counterparts, as well as administrative processes required for submission.
Project Formulation Grant + IE fee		150 000	Total PFG budget inclusive of IE fee, providing the full financing required to complete the project formulation process in accordance with Adaptation Fund standards and submission requirements.

Please describe below each of the PFG activities and provide justifications for their need and for the amount of funding required:

C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation. The PFG will be executed by the IE. The EE will be responsible for execution of the project once approved.

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Mr Pierre Yves Guedez, Lead, Multilateral Climate and Environmental Funds, ECG Division, IFAD		06/18/2026	Mr Claus Reiner, Regional Climate and Environment Specialist, IFAD	+254 11 5492302	E - mail: p.guedez@ifad.org E - mail: c.reiner@ifad.org

Annex 2: Summary of stakeholder consultations for Z-ADAPT

Consulted entity / stakeholder group	Type of organisation	Location	Participants (Male)	Participants (Female)	Total participants	Key issues raised	How issues informed project design	Representation of vulnerable groups
Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (MLAFWRD)	Government	Harare	17	12	29	Need for drought-resilient irrigation, climate-smart horticulture and extension support	Informed **Component 1 irrigation investments and Component 2 horticulture support**	Government agencies responsible for supporting smallholder farmers
Department of Agricultural Rural Development and Advisory Service (ARDAS	Government	Harare / Provinces	24	17	41	Need for stronger extension services and farmer training	Integration of **Farmer Field Schools and climate-resilient advisory services under Component 2**	Extension services working with smallholder farmers
Meteorological Services Department (MSD)	Government	Harare	2	1	3	Need for improved climate information dissemination and early warning	Development of **climate information services and early warning dissemination under Component 3**	Supports farmers vulnerable to climate variability
Women farmer associations / women producer groups	Civil society	Masvingo / Matabeleland South	2	1	3	Barriers to access to finance, irrigation technologies and market opportunities	Inclusion of **financial literacy, climate-resilient finance linkages and gender-responsive training under Component 2**	Women smallholder farmers and women-headed households
Youth farmer groups / producer organisations	Community groups	Target districts	1	1	2	Youth employment opportunities in horticulture and irrigation management	Integration of **youth-inclusive training and producer organisation strengthening under Component 2**	Youth farmers and rural youth groups
Rural District Councils (RDCs)	Local government	Target districts	7	3	10	Need for coordinated water resource governance and climate adaptation planning	Inclusion of **Local Adaptation Plans and water governance systems under Component 3**	Local authorities representing vulnerable rural communities

**Note: Screenshots of Participants (photos) are not attached in this version.*

Annex 3: Consultation register

Province	District	Organization	Position
Bulawayo	Bulawayo	Agritex	Aeo
Manicaland	Buhera	Ministry of Women's Affairs Community, Small and Medium Enterprise development	BCDO
Manicaland	Chimanimani	Department of Agricultural engineering	Engineer
Manicaland	Chimanimani	Ministry of lands agriculture water fisheries and rural development	Agriculture extension supervisor
Manicaland	Chimanimani	Ministry of lands	Supervisor
Manicaland	Chimanimani	Agritex	AES
Manicaland	Chimanimani	Na	Aes
Manicaland	Makoni	AGRITEX	DAEO
Manicaland	Makoni	Agritex	ABAO
Manicaland	Mutare	MLAFWRD	Director
Manicaland	Mutare	EMA	Officer
Manicaland	Mutare	ARDAS	Livestock officer
Manicaland	Mutare	AGRICULTURE	HR
Manicaland	Mutare	ARDAS	Horticulture Specialist
Manicaland	Mutare	MLAFWRD	ABAO/PROTOCOL
Manicaland	Mutare	Agritex	Provincial Agronomist
Manicaland	Mutare	Agritex	Meat Grader
Manicaland	Mutare	AGRITEX	Agribusiness and Training Specialist
Manicaland	Nyanga	Min of Lands, Agriculture...	Supervisor
Manicaland	Nyanga	Public service	Agricultural Extension Supervisor
Manicaland	Nyanga	Agritex	ABAS
Manicaland	Nyanga	Ministry of Agriculture	Supervisor
Manicaland	Nyanga	Agriculture	Supervisor
Manicaland	Nyanga	Ministry of lands agriculture	Agriculture business advisory supervisor
Manicaland	Nyanga	Ministry of agriculture	ABAS
Manicaland	Nyanga	ARDAS	ABAOS
Manicaland	Nyanga	Ministry of Agriculture	Supervisor
Masvingo	Chiredzi	DR and SS	Principal Research officer
Masvingo	Chiredzi	ARDAS	DAO
Masvingo	Chiredzi	Chiredzi RDC	Officer
Masvingo	Chivi	Agritex	AES
Masvingo	Chivi	Agritex	ABAO

Masvingo	Gutu	Gutu RDC	Projects officer
Masvingo	Gutu	Ardas	DAO
Masvingo	Masvingo	Makoholi Research	Agriculture Supervisor
Masvingo	Masvingo	Zimbabwe Farmers Union	Fine and Admin officer
Masvingo	Masvingo	Agritex	Student
Masvingo	Masvingo	Department of Irrigation	Engineer
Masvingo	Masvingo	Agritex	Student
Masvingo	Masvingo	Land Development and Administration	D.L. O
Masvingo	Masvingo	Ministry of Agriculture	Seed analyst
Masvingo	Masvingo	Local Government	Admin Officer
Masvingo	Masvingo	PLANT QUARANTINE SERVICES INSTITUTE	Provincial coordinator
Masvingo	Masvingo	Zimbabwe Super Seeds	Operations and Marketing manager
Masvingo	Masvingo	MHTEISTD	Lecturer
Masvingo	Masvingo	GARIKAI FRUIT AND VEGETABLE MARKET	Advisor
Masvingo	Masvingo	RURAL INFRASTRUCTURE DEVELOPMENT AGENCY	Acting Provincial Director
Masvingo	Masvingo	MLAFWRD	Crop Specialist
Masvingo	Masvingo	Agricultural Engineering, Mechanization and Farm Infrastructure Development	Engineer
Masvingo	Masvingo	Civil Service	Conservation specialist
Masvingo	Masvingo	MOHCC	PFO
Masvingo	Masvingo	MLAFWRD	Administration
Masvingo	Masvingo	Local GVT	A / DDC
Masvingo	Masvingo	Forestry Commission	PFEM
Masvingo	Masvingo	ZINWA	OE
Masvingo	Masvingo	MPSCSW	M&E
Masvingo	Masvingo	ARDA	Provincial Manager
Masvingo	Masvingo	Department of Irrigation Development	Irrigation Engineer
Masvingo	Masvingo	Hevoi FM (AB Communications)	Manager
Masvingo	Masvingo	Hevoi FM	Intern
Masvingo	Masvingo	GZU	Manager
Masvingo	Masvingo	Great Zimbabwe University	Marketing Officer
Masvingo	Masvingo	MINISTRY OF AGRICULTURE	Engineer
Masvingo	Masvingo	Masvingo Rural districts Council	Environment and Agriculture officer
Masvingo	Masvingo	Chemistry and Soil Research institute	P.R. O
Masvingo	Masvingo	Agritex	ABAO
Masvingo	Masvingo	Agritex	Driver
Masvingo	Masvingo	Agritex	A/Provincial livestock specialist
Masvingo	Mwenezi	Agritex	DAO
Masvingo	Mwenezi	MWENEZI RDC	CEO
Masvingo	Mwenezi	Local Government	DDC
Masvingo	Zaka	Ardas	DAO
Masvingo	Zaka	ZAKA RDC	GIS technician
Matabeleland South	Gwanda	Agriculture	ABAs
Matabeleland South	Insiza	Min of Agriculture	ABAO
Matabeleland South	Insiza	Min of lands Agriculture Water, Fisheries and rural development	Agriculture Business Advisor Officer (ABAO)
Matabeleland South	Insiza	Agritex	ABAO
Matabeleland South	Mangwe	ARDAS	DABAO
Matabeleland South	Mangwe	Ministry of Agriculture	AES
Matabeleland South	Matobo	Ministry of Land, Agriculture, Fisheries, Water and Rural Development	ABAO
Matabeleland South	Matobo	Agriculture	ABAO
Matabeleland South	Matobo	MINISTRY Of AGRICULTURE	AGRICULTURAL Extension Officer
Matabeleland South	Matobo	AGRITEX	ABAO
Matabeleland South	Matobo	MINISTRY OF Agriculture	ABAO
Matabeleland South	Matobo	Ministry of Lands Agriculture Fisheries Water and Rural Development	ABAO
Matabeleland South	Matobo	AGRITEX	AEO/ABAO
Matabeleland South	Matobo	MLAFWRD	ABAO
Matabeleland South	Matobo	Agriculture	ABAO
Matabeleland South	Matobo	Agritex	ABAO

Matabeleland South	Matobo	Ministry of Lands Agriculture Fisheries Water and Rural Development	ABAO
Matabeleland South	Matobo	MLFWARD	ABAO
Matabeleland South	Matobo	Gvt	District livestock officer
Matabeleland South	Matobo	LAFWARD	ABAO
Matabeleland South	Matobo	MLWFARD	ABAO
Matabeleland South	Matobo	Agritex	ABAO
Matabeleland South	Matobo	MLAFWARD	ABAO
Matabeleland South	Matobo	Agriculture	ABAO
Matabeleland South	Matobo	Agriculture	ABAO
Matabeleland South	Matobo	MLAFWRD	Agricultural Business Advisory Officer
Matabeleland South	Matobo	Min of Agriculture	AEO
Matabeleland South	Matobo	Agritex	ABAO
Matabeleland South	Matobo	LAFWF	ABAOS
Matabeleland South	Matobo	Government	Agricultural Businesses Advisory Officer
Matabeleland South	Matobo	MLAWFD	ABAO
Matabeleland South	Matobo	MLAFWRD	ABAO
Matabeleland South	Matobo	Ministry of Agriculture	ABAO
Matabeleland South	Matobo	Ministry of Agriculture	ABAO
Midlands	Gokwe South	COTTCO	Business ACC
Midlands	Gweru	Midlands State University	Acting Chairperson
Midlands	Gweru	GMB	Supply chain manager
Midlands	Gweru	Agritex	Agronomist
Midlands	Gweru	Midlands State University	Acting Chairperson
Midlands	Gweru	ZINWA	Technical
Midlands	Gweru	MLAFWRD	Engineer
Midlands	Gweru	Department of Irrigation	Provincial Irrigation Engineer
Midlands	Gweru	MLAFWRD	Engineer
Midlands	Gweru	MLAFWRD	Training Officer
Midlands	Gweru	ARDA	Agronomist
Midlands	Gweru	Ministry of National Housing and Social Amenities	Provincial
Midlands	Gweru	MLAFWRD	Provincial Coordinator
Midlands	Gweru	MLAFWRD	M&E
Midlands	Gweru	OPC MIDLANDS	Economist
Midlands	Gweru	MINISTRY OF LANDS, AGRICULTURE	Provincial land surveyor
Midlands	Gweru	MLG&PW	PAO
Midlands	Gweru	CTDO	Project Coordinator
Midlands	Gweru	Mining Promotions Company (MoMMD)	Metallurgist
Midlands	Gweru	Forestry Commission	Provincial manager
Midlands	Gweru	Seedco Vegetables	Sales Agronomist
Midlands	Gweru	Agritex	DAEO
Midlands	Gweru	ZRP	Operative
Midlands	Gweru	HEEP	CSA
Midlands	Gweru	Agritex	Horticulture and Agribusiness
Midlands	Gweru	ARDA	PRDO
Midlands	Gweru	Valley Farm Secrets	Manager
Midlands	Gweru	METEOROLOGICAL SERVICES DEPT	Provincial Head
Midlands	Kwekwe	Mlezu Agricultural College	A/Principal
Midlands	Mberengwa	Agritex	DAEO
Midlands	Shurugwi	Agritex	DAEO
Midlands	Zvishavane	RUNDE RURAL DISTRICT COUNCIL	CEO
Midlands	Zvishavane	Local Government	Economist
Midlands	Zvishavane	Agritex	DAEO
Harare	Harare	CTDO	MEAL officer
Harare	Harare	HEEP	CSA & ES Specialist
Harare	Harare	HEEP	Agribusiness Advisor
Harae	Harare	HEEP	4P Advisor

Annex 4: Gender Analysis

This Gender Analysis is prepared in line with the Adaptation Fund Gender Policy and Gender Guidance and demonstrates how Z-ADAPT integrates gender equality and women's empowerment across all components. It identifies gender-differentiated climate vulnerabilities, key barriers to equitable participation, and concrete gender-responsive design measures, indicators, and safeguards (Adaptation Fund, 2016; 2022).

2. Gender Context in the Project Area

Z-ADAPT targets Chiredzi, Masvingo, Mwenezi and Matobo districts in Natural Regions IV and V, characterised by recurrent droughts, erratic rainfall, high poverty, and reliance on climate-sensitive livelihoods (World Bank, 2024).

Women comprise about 52% of Zimbabwe's population, with 80% living in rural areas. Women provide an estimated 60–70% of subsistence agricultural labour, especially in food crops and horticulture, yet face persistent constraints in access to land, water, finance, extension services, and climate information (ZIMSTAT, 2022; FAO, 2022). Approximately 35% of rural households are female headed, with higher poverty and food insecurity, particularly during drought years (ZIMSTAT, 2022). Youth represent 68% of the population but face very high unemployment and limited access to land and capital, constraining engagement in climate-resilient livelihoods (UNICEF, 2023).

Climate change intensifies these inequalities by increasing water scarcity, heat stress, and crop failure, disproportionately affecting women and youth with lower adaptive capacity (IPCC, 2022; World Bank, 2024).

3. Gender-Differentiated Climate Vulnerability

Women face heightened vulnerability due to:

- Water scarcity and time poverty: Only about 5.5% of rural households have piped (safe) water, increasing time burdens for women and girls during droughts (UNDP, 2023; ZIMSTAT, 2022).
- Dependence on climate-sensitive livelihoods, including rain-fed crops, nutrition gardens, and small livestock (FAO, 2022).
- Limited control over productive assets: Only ~20% of women hold land rights, constraining investment in climate-resilient technologies (FAO, 2022).
- Lower access to finance, inputs, insurance and climate information, reducing adaptive capacity (World Bank, 2024).
- Increased care burdens during climate shocks (UN Women, 2023).

Youth vulnerability is driven by limited land access, weak decision-making power, high unemployment, and low access to skills and capital for climate-resilient enterprises (UNICEF, 2023).

4. Intersectional Vulnerability

The project recognizes intersecting vulnerabilities related to disability, old age, chronic illness, and child-headed households, which further constrain access to water, climate information, and participation. Inclusive targeting and accessible design standards will ensure these groups benefit (UN Women, 2023).

5. Gender Gaps Relevant to Z-ADAPT

Key gaps affecting adaptation outcomes include table unequal access to reliable water and women's time burden; insecure land tenure for women and youth; lower access to finance and extension; under-representation in water and land governance; and social risks, including gender-based violence (GBV) that may intensify during climate stress (FAO, 2022; UNDP, 2023; World Bank, 2024).

6. Gender Integration in Project Design

Component 1 - Climate-resilient water infrastructure and ecosystem restoration: Solar-powered irrigation, sand and sub-surface dams, micro-catchment rehabilitation and climate-proofed conveyance will reduce women's time burden and improve reliable access to water for domestic use and horticulture. Water Point and Water User Committees will ensure at least 50% women and 30% youth representation, with women supported to hold decision-making roles. Women and youth will also be trained in appropriate local operation and maintenance functions. **Component 2 -** Climate-smart horticulture and diversified livelihoods. Women- and youth-headed households will be prioritised for micro-irrigation, protected agriculture, drought-tolerant crops and soil fertility management. Farmer Field Schools will ensure 50% women and 30% youth participation.

Component 3 - Climate information services, early warning systems and institutional capacity strengthening: Climate Information Services will be delivered via SMS/USSD, community radio and extension, using accessible formats and local languages. Gender Action Learning System (GALS) methodologies will strengthen women's agency and leadership in climate decision-making. Youth will be trained as climate information intermediaries and adaptation service providers.

7. Gender-Responsive Targets and Indicators

- 50% of direct beneficiaries are women.
- 30% of beneficiaries are youth.
- 50% women and 30% youth representation in all project-supported committees and Farmer Field Schools.
- 40% of trained local technicians are women and 30% youth.
- 30% reduction in average time spent by women and girls collecting water by project end.

All indicators will be sex- and age-disaggregated (Adaptation Fund, 2022).

8. Monitoring, Budgeting and Accountability

Gender-disaggregated baselines (water access, time use, governance participation, technology adoption) will be established within the first six months. Monitoring will use household and time-use surveys, training records, committee registers and CIS subscription data. Dedicated budget allocations are embedded across components for gender-responsive actions, including GALS facilitation, women's leadership training and gender-sensitive M&E (Adaptation Fund, 2022). A Gender Focal Point within the PMU will oversee implementation and compliance.

9. Safeguards and "Do No Harm"

While the project is not expected to exacerbate GBV risks, increased activity around water points may elevate tensions during droughts. Mitigation measures include codes of conduct, safe participation spaces, confidential grievance mechanisms, and referral pathways to local support services, integrated into the ESMP and project GRM (Adaptation Fund, 2016; World Bank, 2024).

References

Adaptation Fund (2016). Gender Policy and Action Plan.
Adaptation Fund (2022). Gender Guidance for Project and Programme Proponents.
FAO (2022). Gender and Land Rights in Zimbabwe.
IPCC (2022). AR6 – Impacts, Adaptation and Vulnerability.
UNDP (2023). Zimbabwe Climate Change Gender Action Plan.
UNICEF (2023). Youth and Employment in Zimbabwe.

UN Women (2023). Gender Equality Profile: Zimbabwe.
World Bank (2024). Zimbabwe Country Climate and Development Report.
ZIMSTAT (2022). Population and Housing Census

1. **Overall approach:** The Z-ADAPT design has been informed by a systematic, multi-tiered consultative approach that leverages HEEP targeting and stakeholder interaction frameworks. Consultations were conducted to: (i) validate the climate risk assessment for semi-arid horticulture value chains; (ii) identify priority adaptation strategies for water, agriculture, finance, and information services; and (iii) ensure that women, youth, and other marginalized groups were able to articulate their specific challenges and preferences. The approach combines national-level policy dialogue, province and district-level workshops, community-level discussions and dedicated gender and youth consultations, in line with the Adaptation Fund Environmental and Social Policy (ESP) and Gender Policy.

2. The consultation process ensured participation of national and local government institutions, technical agencies, civil society organisations, producer organisations, women's groups and youth representatives in the targeted districts. Attention was given to engaging stakeholders working directly with women farmers, youth and climate-vulnerable rural households, including organisations supporting women's economic empowerment and farmer cooperatives. Across the provincial and district consultations, more than 118 participants were engaged, with participation broadly gender-balanced and reflecting representation from smallholder communities in drought-prone districts. The consultations validated the proposed geographic targeting and highlighted key adaptation priorities including reliable water access, climate-resilient irrigation technologies, improved climate information dissemination and stronger financial literacy and market linkages for horticulture producers.

3. Stakeholder consultations directly informed the project design. Farmers and local authorities emphasised the need to improve water reliability for community gardens and irrigation schemes, which shaped investments in solar-powered irrigation systems and climate-resilient water storage under Component 1. Women farmer groups highlighted barriers to accessing finance, climate information and decision-making platforms, informing the inclusion of financial literacy, producer organisation strengthening under Component 2 and gender-responsive dissemination of climate advisories under Component 3. Youth groups emphasised the need for skills development and opportunities in climate-resilient horticulture value chains, which informed the design of training and Farmer Field School activities. A summary of consultations is provided in Annex 2, including participating institutions, gender-disaggregated participation and key issues raised. Consultation findings also informed the gender analysis in Annex 4, which identifies women's specific needs related to access to climate-resilient technologies, water infrastructure, climate information and financial services.

4. **Provincial and district-level consultations:** A provincial stakeholder engagement was conducted throughout four districts: Masvingo, Midlands, Matabeleland South, and Manicaland, adopting a structured KoboToolbox[1] survey and led workshops. More than 118 respondents participated, representing members from smallholder farmer groups, producer organizations, Department of Agricultural Technical and Extension Services, EMA, Zimbabwe National Water Authority, ARDA, RIDA, municipal authorities, and civil society organizations.

5. Participants concurred that droughts, heatwaves, and prolonged dry spells are the key hazards impacting horticulture, causing lower yields, constrained irrigation systems, and declining soil health. They prioritized climate-smart irrigation, water harvesting, integrated soil and water conservation, and climate-resilient livelihood strategies as the most essential interventions. The previously mentioned priorities directly determined the three components of Z-ADAPT: climate-resilient water and horticulture infrastructure (Component 1), climate-smart agriculture and climate-resilient financing (Component 2), and integrated climate information and institutional capacity (Component 3).

6. **Validation of project components and geographic targeting:** Subsequent district meetings in potential districts, including Masvingo and Midlands, carried out with farmers' groups, local authorities, and technical agencies, with attendance records duly documented. The sessions confirmed the emphasis on community solar boreholes, sand and sub-surface dams, managed aquifer recharge, micro-irrigation kits, protected agriculture, and climate-resilient revolving finances. Stakeholders assisted in enhancing geographic targeting (ward/scheme clusters), validated community preparedness to provide labor and in-kind resources, and determined preferred channels for climate information (SMS/USSD, community radio, Farmer Field Schools, and extension services). The outcomes are directly represented in Components 1–3.

7. **Gender-responsive and youth-focused consultations:** A consultation with focused women and youth civic organizations was held to ensure compliance to the AF Gender Policy and IFAD's

[1] IFAD HEEP Design Report:

SECAP standards. The meeting convened representatives from the Ministry of Women Affairs, Community, Small and Medium Enterprise Development; the Ministry of Youth Empowerment, Development and Vocational Training; the MLAFWRD Gender Mainstreaming, Inclusivity and Wellness Department; the Community Technology Development Organisation (CTDO); UNDP's Smallholder Agricultural Climate Programme (SACP); and the HEEP Project Management Unit. The objectives were to: (i) assess the feasibility and relevance of proposed climate-resilient interventions responsive to women and youth; (ii) find synergies with existing programs; and (iii) assure conformity with national gender and youth priorities.

8. **Key findings from gender and youth consultations:** Stakeholders identified significant knowledge gaps regarding gender-responsive climate-smart technologies in rural regions; inadequate partnerships and coordination concerning women- and youth-oriented climate technologies; limited participatory and inclusive planning; and low adoption of suggested technologies due to insufficient research, trials, and customized financing. Recommendations included: (i) conducting inclusive needs assessments applying participatory and gender-sensitive methodologies such as GALS; (ii) implementing targeted capacity-building initiatives for women and youth focused on climate-smart agriculture, water stewardship, and community-based water monitoring; (iii) creating climate-adaptive microfinance products and "gender-smart accelerator" funds for agribusinesses led by women and youth; (iv) enhancing mapping and collaboration among stakeholders advocating for gender-climate initiatives; and (v) implementing gender- and age-disaggregated indicators systematically in monitoring and evaluation processes.

9. **Integration into project design:** The findings from the consultation with women and youth civic organizations have been fully incorporated into the Z-ADAPT design. Component 2 includes climate-resilient financial instruments, value-chain training, and business development services aimed at women and youth, whereas Component 3 facilitates inclusive Local Adaptation Plans, gender-sensitive community-based water and climate information systems, and a gender- and age-disaggregated monitoring and evaluation framework. This guarantees that women and youth are not merely recipients but also proactive participants in the formulation, execution, and governance of adaptation strategies, according with the AF ESP principles regarding access and equity, marginalized and vulnerable populations, gender equality, and women's empowerment.

10. The consultation findings, together with the **gender analysis presented in Annex 4**, informed the identification of women's specific needs related to access to irrigation technologies, climate information, financial services and decision-making platforms, which are reflected in the project's gender-responsive design and participation targets.

Annex 2: Summary of stakeholder consultations for Z-ADAPT

Consulted entity / stakeholder group	Type of organisation	Location	Participants (Male)	Participants (Female)	Total participants	Key issues raised	How issues informed project design	Representation of vulnerable groups
Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (MLAFWRD)	Government	Harare	17	12	29	Need for drought-resilient irrigation, climate-smart horticulture and extension support	Informed **Component 1 irrigation investments and Component 2 horticulture support**	Government agencies responsible for supporting smallholder farmers
Department of Agricultural Rural Development and Advisory Service (ARDAS	Government	Harare / Provinces	24	17	41	Need for stronger extension services and farmer training	Integration of **Farmer Field Schools and climate-resilient advisory services under Component 2**	Extension services working with smallholder farmers
Meteorological Services Department (MSD)	Government	Harare	2	1	3	Need for improved climate information dissemination and early warning	Development of **climate information services and early warning dissemination under Component 3**	Supports farmers vulnerable to climate variability
Women farmer associations / women producer groups	Civil society	Masvingo / Matabeleland South	2	1	3	Barriers to access to finance, irrigation technologies and market opportunities	Inclusion of **financial literacy, climate-resilient finance linkages and gender-responsive training under Component 2**	Women smallholder farmers and women-headed households
Youth farmer groups / producer organisations	Community groups	Target districts	1	1	2	Youth employment opportunities in horticulture and irrigation management	Integration of **youth-inclusive training and producer organisation strengthening under Component 2**	Youth farmers and rural youth groups
Rural District Councils (RDCs)	Local government	Target districts	7	3	10	Need for coordinated water resource governance and climate adaptation planning	Inclusion of **Local Adaptation Plans and water governance systems under Component 3**	Local authorities representing vulnerable rural communities

Annex 3: Consultation register

Province	District	Organization	Position
Bulawayo	Bulawayo	Agritex	Aeo
Manicaland	Buhera	Ministry of Women's Affairs Community, Small and Medium Ent dvpt	BCDO
Manicaland	Chimanimani	Department of Agricultural engineering	Engineer
Manicaland	Chimanimani	Ministry of lands agriculture water fisheries and rural development	Agriculture extension supervisor
Manicaland	Chimanimani	Ministry of lands	Supervisor
Manicaland	Chimanimani	Agritex	AES
Manicaland	Chimanimani	Na	Aes
Manicaland	Makoni	AGRITEX	DAEO
Manicaland	Makoni	Agritex	ABAO
Manicaland	Mutare	MLAFWRD	Director
Manicaland	Mutare	EMA	Officer
Manicaland	Mutare	ARDAS	Livestock officer
Manicaland	Mutare	AGRICULTURE	HR
Manicaland	Mutare	ARDAS	Horticulture Specialist
Manicaland	Mutare	MLAFWRD	ABAO/PROTOCOL
Manicaland	Mutare	Agritex	Provincial Agronomist
Manicaland	Mutare	Agritex	Meat Grader
Manicaland	Mutare	AGRITEX	Agribusiness and Training Specialist
Manicaland	Nyanga	Min of Lands, Agriculture...	Supervisor
Manicaland	Nyanga	Public service	Agricultural Extension Supervisor
Manicaland	Nyanga	Agritex	ABAS
Manicaland	Nyanga	Ministry of Agriculture	Supervisor
Manicaland	Nyanga	Agriculture	Supervisor
Manicaland	Nyanga	Ministry of lands agric	Agriculture business advisory supervisor
Manicaland	Nyanga	Ministry of agriculture	ABAS
Manicaland	Nyanga	ARDAS	ABAOS
Manicaland	Nyanga	Ministry of Agriculture	Supervisor
Masvingo	Chiredzi	DR and SS	Principal Research officer
Masvingo	Chiredzi	ARDAS	DAO
Masvingo	Chiredzi	Chiredzi RDC	Officer
Masvingo	Chivi	Agritex	AES
Masvingo	Chivi	Agritex	ABAO
Masvingo	Gutu	Gutu RDC	Projects officer
Masvingo	Gutu	Ardas	DAO
Masvingo	Masvingo	Makoholi Research	Agriculture Supervisor
Masvingo	Masvingo	Zimbabwe Farmers Union	Fine and Admin officer
Masvingo	Masvingo	Agritex	Student
Masvingo	Masvingo	Department of Irrigation	Engineer
Masvingo	Masvingo	Agritex	Student

Masvingo	Masvingo	Land Development and Administration	D.L. O
Masvingo	Masvingo	Ministry of Agriculture	Seed analyst
Masvingo	Masvingo	Local Government	Admin Officer
Masvingo	Masvingo	PLANT QUARANTINE SERVICES INSTITUTE	Provincial coordinator
Masvingo	Masvingo	Zimbabwe Super Seeds	Operations and Marketing manager
Masvingo	Masvingo	MHTEISTD	Lecturer
Masvingo	Masvingo	GARIKAI FRUIT AND VEGETABLE MARKET	Advisor
Masvingo	Masvingo	RURAL INFRASTRUCTURE DEVELOPMENT AGENCY	Acting Provincial Director
Masvingo	Masvingo	MLAFWRD	Crop Specialist
Masvingo	Masvingo	Agricultural Engineering, Mechanization and Farm Infrastructure Development	Engineer
Masvingo	Masvingo	Civil Service	Conservation specialist
Masvingo	Masvingo	MOHCC	PFO
Masvingo	Masvingo	MLAFWRD	Administration
Masvingo	Masvingo	Local GVT	A / DDC
Masvingo	Masvingo	Forestry Commission	PFEM
Masvingo	Masvingo	ZINWA	OE
Masvingo	Masvingo	MPSCSW	M&E
Masvingo	Masvingo	ARDA	Provincial Manager
Masvingo	Masvingo	Department of Irrigation Development	Irrigation Engineer
Masvingo	Masvingo	Hevoi FM (AB Communications)	Manager
Masvingo	Masvingo	Hevoi FM	Intern
Masvingo	Masvingo	GZU	Manager
Masvingo	Masvingo	Great Zimbabwe University	Marketing Officer
Masvingo	Masvingo	MINISTRY OF AGRICULTURE	Engineer
Masvingo	Masvingo	Masvingo Rural districts Council	Environment and Agriculture officer
Masvingo	Masvingo	Chemistry and Soil Research institute	P.R. O
Masvingo	Masvingo	Agritex	ABAO
Masvingo	Masvingo	Agritex	Driver
Masvingo	Masvingo	Agritex	A/Provincial livestock specialist
Masvingo	Mwenezi	Agritex	DAO
Masvingo	Mwenezi	MWENEZI RDC	CEO
Masvingo	Mwenezi	Local Government	DDC
Masvingo	Zaka	Ardas	DAO
Masvingo	Zaka	ZAKA RDC	GIS technician
Matabeleland South	Gwanda	Agriculture	ABAs
Matabeleland South	Insiza	Min of Agriculture	ABAO
Matabeleland South	Insiza	Min of lands Agriculture Water, Fisheries and rural development	Agriculture Business Advisor Officer (ABAO)
Matabeleland South	Insiza	Agritex	ABAO
Matabeleland South	Mangwe	ARDAS	DABAO
Matabeleland South	Mangwe	Ministry of Agriculture	AES
Matabeleland South	Matobo	Ministry of Land, Agriculture, Fisheries, Water and Rural Development	ABAO

Matabeleland South	Matobo	Agriculture	ABAO
Matabeleland South	Matobo	MINISTRY Of AGRICULTURE	AGRICULTURAL Extension Officer
Matabeleland South	Matobo	AGRITEX	ABAO
Matabeleland South	Matobo	MINISTRY OF Agriculture	ABAO
Matabeleland South	Matobo	Ministry of Lands Agriculture Fisheries Water and Rural Development	ABAO
Matabeleland South	Matobo	AGRITEX	AEO/ABAO
Matabeleland South	Matobo	MLAFWRD	ABAO
Matabeleland South	Matobo	Agriculture	ABAO
Matabeleland South	Matobo	Agritex	ABAO
Matabeleland South	Matobo	Ministry of Lands Agriculture Fisheries Water and Rural Development	ABAO
Matabeleland South	Matobo	MLFWARD	ABAO
Matabeleland South	Matobo	Gvt	District livestock officer
Matabeleland South	Matobo	LAFWARD	ABAO
Matabeleland South	Matobo	MLWFARD	ABAO
Matabeleland South	Matobo	Agritex	ABAO
Matabeleland South	Matobo	MLAFWARD	ABAO
Matabeleland South	Matobo	Agriculture	ABAO
Matabeleland South	Matobo	Agriculture	ABAO
Matabeleland South	Matobo	MLAFWRD	Agricultural Business Advisory Officer
Matabeleland South	Matobo	Min of Agriculture	AEO
Matabeleland South	Matobo	Agritex	ABAO
Matabeleland South	Matobo	LAFWF	ABAOS
Matabeleland South	Matobo	Government	Agricultural Businesses Advisory Officer
Matabeleland South	Matobo	MLAWFD	ABAO
Matabeleland South	Matobo	MLAFWRD	ABAO
Matabeleland South	Matobo	Ministry of Agriculture	ABAO
Matabeleland South	Matobo	Ministry of Agriculture	ABAO
Midlands	Gokwe South	COTTCO	Business ACC
Midlands	Gweru	Midlands State University	Acting Chairperson
Midlands	Gweru	GMB	Supply chain manager
Midlands	Gweru	Agritex	Agronomist
Midlands	Gweru	Midlands State University	Acting Chairperson
Midlands	Gweru	ZINWA	Technical
Midlands	Gweru	MLAFWRD	Engineer
Midlands	Gweru	Department of Irrigation	Provincial Irrigation Engineer
Midlands	Gweru	MLAFWRD	Engineer
Midlands	Gweru	MLAFWRD	Training Officer
Midlands	Gweru	ARDA	Agronomist
Midlands	Gweru	Ministry of National Housing and Social Amenities	Provincial
Midlands	Gweru	MLAFWRD	Provincial Coordinator
Midlands	Gweru	MLAFWRD	M&E

Midlands	Gweru	OPC MIDLANDS	Economist
Midlands	Gweru	MINISTRY OF LANDS, AGRICULTURE	Provincial land surveyor
Midlands	Gweru	MLG&PW	PAO
Midlands	Gweru	CTDO	Project Coordinator
Midlands	Gweru	Mining Promotions Company (MoMMD)	Metallurgist
Midlands	Gweru	Forestry Commission	Provincial manager
Midlands	Gweru	Seedco Vegetables	Sales Agronomist
Midlands	Gweru	Agritex	DAEO
Midlands	Gweru	ZRP	Operative
Midlands	Gweru	HEEP	CSA
Midlands	Gweru	Agritex	Horticulture and Agribusiness
Midlands	Gweru	ARDA	PRDO
Midlands	Gweru	Valley Farm Secrets	Manager
Midlands	Gweru	METEOROLOGICAL SERVICES DEPT	Provincial Head
Midlands	Kwekwe	Mlezu Agricultural College	A/Principal
Midlands	Mberengwa	Agritex	DAEO
Midlands	Shurugwi	Agritex	DAEO
Midlands	Zvishavane	RUNDE RURAL DISTRICT COUNCIL	CEO
Midlands	Zvishavane	Local Government	Economist
Midlands	Zvishavane	Agritex	DAEO
Harare	Harare	CTDO	MEAL officer
Harare	Harare	HEEP	CSA & ES Specialist
Harare	Harare	HEEP	Agribusiness Advisor
Harae	Harare	HEEP	4P Advisor

Annex 4: Gender Analysis

This Gender Analysis is prepared in line with the Adaptation Fund Gender Policy and Gender Guidance and demonstrates how Z-ADAPT integrates gender equality and women's empowerment across all components. It identifies gender-differentiated climate vulnerabilities, key barriers to equitable participation, and concrete gender-responsive design measures, indicators, and safeguards (Adaptation Fund, 2016; 2022).

2. Gender Context in the Project Area

Z-ADAPT targets Chiredzi, Masvingo, Mwenezi and Matobo districts in Natural Regions IV and V, characterised by recurrent droughts, erratic rainfall, high poverty, and reliance on climate-sensitive livelihoods (World Bank, 2024).

Women comprise about 52% of Zimbabwe's population, with 80% living in rural areas. Women provide an estimated 60–70% of subsistence agricultural labour, especially in food crops and horticulture, yet face persistent constraints in access to land, water, finance, extension services, and climate information (ZIMSTAT, 2022; FAO, 2022). Approximately 35% of rural households are female headed, with higher poverty and food insecurity, particularly during drought years (ZIMSTAT, 2022). Youth represent 68% of the population but face very high unemployment and limited access to land and capital, constraining engagement in climate-resilient livelihoods (UNICEF, 2023).

Climate change intensifies these inequalities by increasing water scarcity, heat stress, and crop failure, disproportionately affecting women and youth with lower adaptive capacity (IPCC, 2022; World Bank, 2024).

3. Gender-Differentiated Climate Vulnerability

Women face heightened vulnerability due to:

· Water scarcity and time poverty: Only about 5.5% of rural households have piped (safe) water, increasing time burdens for women and girls during droughts (UNDP, 2023; ZIMSTAT, 2022).

· Dependence on climate-sensitive livelihoods, including rain-fed crops, nutrition gardens, and small livestock (FAO, 2022).

· Limited control over productive assets: Only ~20% of women hold land rights, constraining investment in climate-resilient technologies (FAO, 2022).

· Lower access to finance, inputs, insurance and climate information, reducing adaptive capacity (World Bank, 2024).

· Increased care burdens during climate shocks (UN Women, 2023).

Youth vulnerability is driven by limited land access, weak decision-making power, high unemployment, and low access to skills and capital for climate-resilient enterprises (UNICEF, 2023).

4. Intersectional Vulnerability

The project recognizes intersecting vulnerabilities related to disability, old age, chronic illness, and child-headed households, which further constrain access to water, climate information, and participation. Inclusive targeting and accessible design standards will ensure these groups benefit (UN Women, 2023).

5. Gender Gaps Relevant to Z-ADAPT

Key gaps affecting adaptation outcomes include table unequal access to reliable water and women's time burden; insecure land tenure for women and youth; lower access to finance and extension; under-representation in water and land governance; and social risks, including gender-based violence (GBV) that may intensify during climate stress (FAO, 2022; UNDP, 2023; World Bank, 2024).

6. Gender Integration in Project Design

Component 1 – Climate-Resilient Water & Horticulture Infrastructure:

Solar-powered irrigation, sand dams, managed aquifer recharge and climate-proofed conveyance will reduce women's time burden and improve reliable access to water for domestic use and horticulture. Water Point and Water User Committees will ensure 50% women and 30% youth representation, with women holding decision-making roles in 40% of committees. Women and youth will be trained as local technicians for operation and maintenance.

Component 2 – Climate-Smart Agriculture, Diversified Livelihoods & Climate-Resilient Finance:

Women- and youth-headed households will be prioritised for micro-irrigation, protected agriculture, drought-tolerant crops and soil fertility management. Access to revolving funds and input-credit schemes will not depend on individual land titles, but on group-based and community mechanisms, ensuring inclusion of women without formal land documentation. Livelihood diversification (e.g. apiculture, small livestock, solar drying) will prioritise enterprises with strong female and youth participation. Farmer Field Schools will ensure 50% women and 30% youth participation.

Component 3 – Climate Information, Early Warning & Institutional Capacity:

Climate Information Services will be delivered via SMS/USSD, community radio and extension, using accessible formats and local languages. Gender Action Learning System (GALS) methodologies will strengthen women's agency and

leadership in climate decision-making. Youth will be trained as climate information intermediaries and adaptation service providers.

7. Gender-Responsive Targets and Indicators

· 50% of direct beneficiaries are women.
· 30% of beneficiaries are youth.
· 50% women and 30% youth representation in all project-supported committees and Farmer Field Schools.
· 40% of trained local technicians are women and 30% youth.
· 30% reduction in average time spent by women and girls collecting water by project end.

All indicators will be sex- and age-disaggregated (Adaptation Fund, 2022).

8. Monitoring, Budgeting and Accountability

Gender-disaggregated baselines (water access, time use, governance participation, technology adoption) will be established within the first six months. Monitoring will use household and time-use surveys, training records, committee registers and CIS subscription data. Dedicated budget allocations are embedded across components for gender-responsive actions, including GALS facilitation, women's leadership training and gender-sensitive M&E (Adaptation Fund, 2022). A Gender Focal Point within the PMU will oversee implementation and compliance.

9. Safeguards and "Do No Harm"

While the project is not expected to exacerbate GBV risks, increased activity around water points may elevate tensions during droughts. Mitigation measures include codes of conduct, safe participation spaces, confidential grievance mechanisms, and referral pathways to local support services, integrated into the ESMP (Adaptation Fund, 2016; World Bank, 2024).

References

Adaptation Fund (2016). Gender Policy and Action Plan.
Adaptation Fund (2022). Gender Guidance for Project and Programme Proponents.
FAO (2022). Gender and Land Rights in Zimbabwe.
IPCC (2022). AR6 – Impacts, Adaptation and Vulnerability.
UNDP (2023). Zimbabwe Climate Change Gender Action Plan.
UNICEF (2023). Youth and Employment in Zimbabwe.
UN Women (2023). Gender Equality Profile: Zimbabwe.
World Bank (2024). Zimbabwe Country Climate and Development Report.
ZIMSTAT (2022). Population and Housing Census