

**PROJECT DOCUMENT****[ZIMBABWE Project]****Project Title:** Climate Adaptation, Water and Energy Programme (CAWEP)**Project Number:** UNDP-00132730, FCDO-300164**Implementing Agency:** UNDP**Implementing Partner:** Ministry of Environment, Climate and Wildlife**Start Date:** 08 August 2022**End Date:** 30 November 2025**LPAC Meeting date:** 7 February 2024**Brief Description**

The Climate Adaptation, Water and Energy Programme (CAWEP) Project is a Foreign Commonwealth Development Office (FCDO) funded, UNDP implemented, 3-year project, which aims to support the Government of Zimbabwe attain its climate change goals. The project will support vulnerable communities and institutions' adaptation and resilience capacity to climate shocks, through an investment of £12 million (US\$14 million) to increase resilience in Zimbabwe. The project is implemented in four districts, namely Chipinge District (Hakwata area); Chivi District (Gororo area); Insiza district (Wanezi area) and Binga District (Mlibizi area).

CAWEP aims to support the development of Climate- resilient, multiple-use Water, and renewable Energy infrastructure to enable:

- i) Continued access to water for productive and household use including during droughts and floods.
- ii) Improved access to clean and affordable energy to support economic activities.
- iii) Strengthening of early warning systems.

In addition, the programme will rehabilitate existing and establish new irrigation schemes to boost household food security and to support sustainable livelihoods. When complete, CAWEP will have connected 12,500 people to electricity on a solar micro- grid in Hakwata (Chipinge). Almost 150,000 people will access water in Mlibizi (Binga), Wanezi (Insiza) Hakwata (Chipinge) and Gororo (Chivi). One hundred and thirty (130) hectares of agriculture land will be put to productive use and over half a million people will have access to location specific, early warning information.

Contributing Outcome (UNSDCF, CPD, RPD):

UNDP CPD Outcome 2 By 2026, all people in Zimbabwe, especially the most vulnerable and marginalized, benefit from greater environmental stability and robust food systems in support of healthy lives and equitable, sustainable, and resilient livelihoods.

Outcome 3 By 2026, all people in Zimbabwe, especially the most vulnerable and marginalized, benefit from more inclusive and sustainable economic growth with decent employment opportunities.

Indicative Output(s) with gender marker¹:

UNDP Strategic Plan RRF output 2.1 Enhanced resilience and livelihoods of vulnerable people, communities, and regions.

Total resources required:	13,600,000 GBP (US \$16,279,381.19)	
Total resources allocated:	UNDP TRAC:	0
	Donor:	13,600,000 GBP (US 16,279,381.19)
	Government:	USD 750 000
	In-Kind:	USD500000
Unfunded:	0	

¹ The Gender Marker measures how much a project invests in gender equality and women's empowerment. Select one for each output: GEN3 (Gender equality as a principle objective); GEN2 (Gender equality as a significant objective); GEN1 (Limited contribution to gender equality); GEN0 (No contribution to gender equality)

CPD OUTPUT 2. Tools and mechanisms applied to enable evidence-based, risk-informed planning, prevention and preparedness to climate hazards by smallholder farmers and supporting institutions

CPD OUTPUT 3.3. Solutions developed, financed and applied at scale for energy efficiency, transformation to clean energy and low-carbon development

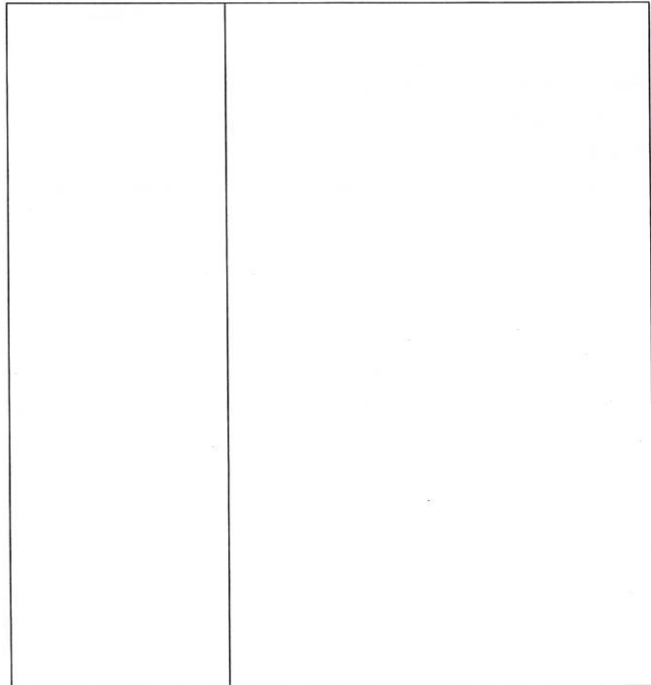
PROJECT OUTPUTS

Output 1. Developed climate resilient multiple use water and energy infrastructure. Gen2.

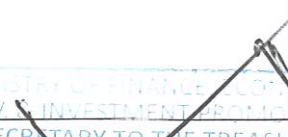


Output 2: Established/resuscitated community governance structures are effective in managing installed infrastructure. Gen2

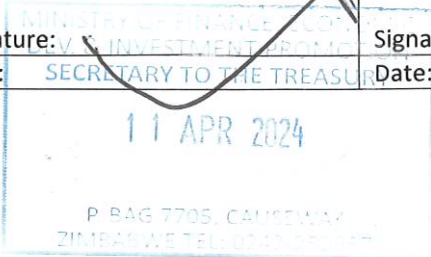
Output 3: Enhanced Early Warning Systems (EWS), helping vulnerable communities to better anticipate, plan and respond to negative impacts of climate change and extreme weather events

Output 4: Improved National Climate adaptation policies/Strategies/learning material supported/developed



Agreed by (signatures)²:

On Behalf of Government	UNDP	On Behalf of Government Implementing Partners
Mr George T. Guvamatanga Permanent Secretary Ministry of Finance, Economic Development and Investment Promotion	Mr. Ayodele Odusola Resident Representative United Nations Development Program Zimbabwe	Prof. Prosper Matondi Permanent Secretary Ministry of Environment, Climate and Wildlife
Signature: 	Signature: 	Signature: 
Date: 11 APR 2024	Date:	Date: 5-4-2024



² Note: Adjust signatures as needed

I. DEVELOPMENT CHALLENGE

Climate change projections are unequivocal about a hotter future for Zimbabwe, with an increased likelihood of heat waves, greater rainfall variability (both in terms of volume of rain and seasonality) and a likely increase in the number and length of dry spells, with implications for more occurrences of drought. According to the Meteorological Service Department (MSD) analysis of temperature data shows a trend towards higher temperatures for both annual minimum and annual maximum temperatures. Five warmest years on record for Zimbabwe have occurred since 1987 and that the increased frequency of droughts since 1990 to date.³ Average annual temperature is projected to increase by 1.2°C (RCP 2.6) and 2.2°C (RCP 8.5) in 2040–2059 and annual median precipitation is projected to decrease by roughly 1.2% (RCP 2.6). (Climate Risk Profile: Zimbabwe, 2021:World Bank Group). “The last three decades have seen increased variability in the seasonal distribution of rainfall, an increase in daytime and night-time average temperatures, increased incidences of intense rainfall interspaced by long dry spells, and late onset and early cessation of rains. (National Climate Policy, 2017). The impact of these changes on Zimbabwe’s agriculture sector are significant. With majority of the sectors remaining rain-fed, it is highly vulnerable in times of climate-related disasters, with long-lasting effects on livelihoods, food and nutrition security, and the economy. These challenges are coupled with a steep decline in the quality of water and energy supply infrastructure and services in Zimbabwe, with lower-income and under-resourced sections of communities being severely water stressed and without access to reliable, clean energy (especially for critical institutions such as schools and clinics). In particular, vulnerable groups such as rural women, youth, the elderly and people with disabilities experience a range of socioeconomic, cultural and physical barriers to accessing resources, services and markets which limits their ability to adapt, respond to and recover from external shocks and stressors (such as extreme weather events, health pandemics, etc.).

Water and energy security is central to building resilience within rural communities across the agriculture, health, and education sectors in Zimbabwe, and, when developed appropriately, water and energy supply infrastructure can act as a fundamental enabler of inclusive growth, sustainable development and gender equality.

UNDP in response to FCDO’s call for proposal submitted a proposal to implement and be the fund manager for the Climate Adaptation Water and Energy Programme (CAWEP) in July 2022. This proposal through this prodoc evolves into a fully fledged project. Four sites were chosen based on the climate capability of UNDP, presence in some of the areas and the vulnerability of the community in those areas. The chosen sites are Gororo, Wanezi, Hakwata and Mlibizi whose scope UNDP further analysed using the secondary data in the feasibility study and also conducted field visits to confirm some of the issues and the proposed interventions. UNDP conducted scoping in the four selected sites to confirm the status quo and baseline so that the proposal would be based on agreed baseline and targets. UNDP engaged and mobilized all the line ministries, government departments and agencies around the implementation of the CAWEP project. To that effect, engagement meetings were done and letters informing the key ministries that UNDP is leading this project were dispatched. A national launch was held in December 2022 and provincial and district inception meetings were conducted in January and February of 2023 to officially begin implementation of the project. Implementation has since been ongoing to date.

Four community based sub-projects are being implemented under the Climate Adaptation Water and Energy Programme: namely Hakwata- Chipinge, Mlibizi-Binga, Wanezi-Insiza and Gororo- Chivi. These projects seek to improve the climate resilience of each community by providing them with information and improved opportunities to adapt in the face of a changing climate. Part of provision of these opportunities is the improved access to water for both domestic consumption and irrigation. Renewable energy infrastructure will be installed to (i) pump water and (ii) provide clean energy for domestic use.

Hakwata – Chipinge District

The Hakwata Community, in Chipinge District (in Manicaland) near the Mozambican border, is an area characterized by extreme poverty. It is considered one of the poorest wards in the district, with almost 100% of households falling below the poverty datum², and thus very vulnerable to external shocks and stressors that impact their assets or ability to earn. Ward 25, the location of Hakwata has a very high poverty prevalence of 85-96%⁴. A project feasibility study conducted by the FCDO in 2022 revealed that the poverty prevalence for Hakwata is quite alarming, with 100% of the respondents falling below the Poverty Datum which was put at less than \$5.50 per day in 2020⁵. Should a shock happen impacting on their assets or ability to earn, the community would be very vulnerable. One of the primary causes of this high poverty prevalence is due to the large family sizes found in the area, which spread resources thin and result in a

³ Climate Issues and Facts- Zimbabwe - Dept of Met

⁴ Zimbabwe Poverty Atlas 2015

⁵ Hakwata Final Feasibility Study 28.02.22

lack of affordability of education, health and other necessities. Hakwata is also home to displaced communities from Mozambique, that moved across the border after the civil unrest. Most of these people settled in Hakwata without amenities or any support provided. These socio-economic circumstances, coupled with the worsening impact of climate change on water availability, crop yields, livestock and disease prevalence, mean that poverty vulnerability is a major concern.

The climate landscape in Hakwata is characterized by increased periods of hot temperatures. A hotter future with a fall in early season rainfall and an increase in late season rainfall is projected, along with increased intra-annual and intra-seasonal variability. Future Climatic conditions of Hakwata were estimated in the feasibility study using a synthesis of credible existing literature (scholarly articles and published works), MSD data, and analysis through Climate change Modelling. The feasibility study used the Representative Concentration Pathways or RCP scenarios used in the IPCC fifth Assessment Report. Two models were used, RCP 4.5 and RCP 8.5 and the timeframe studied was from 2021 and 2040 and findings from this modelling suggest the following:

+1°C temperature rise

- Increase in warm and hot days and nights
- -2% decrease in mean annual precipitation (rainfall)
- Likely increase in length of longest dry spell
- Likely decrease in the number of dry spells annually
- +6% increase in mean annual aridity
- -2% decrease in mean annual soil moisture
- +10% increase in mean annual water discharge (with likely increases in 2-year, 5-year, 10-year, 50-year return periods of annual maximum discharge)
- +8% increase in mean annual water runoff.

Exposure to extreme climate and weather challenges, such as tropical cyclones, is also high in the area. This happened most recently when Cyclone Idai devastated the area in 2019.

Water shortages are pervasive in the area; there are no flowing rivers within a 30km radius from Hakwata and the area is served by a limited number of shallow wells and boreholes – two of which are solar powered and located at the school and clinic, and the others being equipped with bush pumps. Current water supply from these sources does not sufficiently cater for domestic and institutional demands, watering gardens and livestock. Women spend up to three hours per day fetching water, and as much as an hour queuing (which is far more time intensive than portrayed in the district's statistics, which indicate that 72% of households spend less than 15 minutes queuing). Seasonally unsafe sources are therefore relied upon in favour of their accessibility, but often lead to spread of waterborne diseases (malaria, being the major illness affecting the majority of households, as well as diarrhoea, dysentery, bilharzia, and cholera). These health issues are worsened by the poor state of ablutions and lack of handwashing facilities at the school and clinic.

The area is not electrified and is 16km from the last grid electrified point at the business centre. Firewood is therefore the predominant source of energy for cooking at the clinic, school and in households. Women travel anything from 2km to 20km to collect firewood for domestic purposes. Likewise, the school has no electricity and relies 100% on firewood for energy, which pupils are sometimes required to bring. The clinic recently received a solar system from UNDP, but it is undersized and cannot service the needs of the clinic.

Crop production is the main source of income for the community, but the production is usually insufficient to meet the annual cereal needs in most years. The food consumption pattern in Hakwata indicates that the people from Hakwata has relatively more fruit, dairy and pulses consumed than other parts of the country. However, consumption levels of fruit, pulses and animal products was still low, and the low levels of protein-rich foods is concerning. Noting that Hakwata does not receive food aid, nor does the primary school receive meals from aid agencies or the government, it is still important that nutrition food availability and intake is boosted to increase food and nutrition security. Cotton and sesame are currently the main cash crops; however, cotton is no longer making money and sesame is problematic with pests. There is substantial small livestock production in the area, but efforts to scale up are hampered by lack of skills and market knowledge.

There is a multiplicity of social difficulties faced by the Hakwata Community residents. The main ones are chronic poverty spawned by lack of meaningful economic activity, which has led to early (child) marriages, late start to education for some girls, etc. There are many cases of girls aged over 12 still in first grade. Other social problems include lack of lighting for study in the evenings and having to walk very long distances to fetch water for cooking and bathing. Environmentally friendly measures involving the construction of 90 biogas units fed with cattle manure to generate gas for cooking will be implemented. This will have many positive impacts on the environment, which will benefit from reduced firewood demand, as well as cleaner cooking in the kitchens. The biogas effluent will also greatly benefit the small gardens as it is an excellent organic fertilizer. This intervention was particularly attractive as it directly leads to

reduction in reliance on firewood for cooking, which, in turn, arrests the current rate of deforestation brought by the use of firewood.

The above-described circumstances have significant time and health implications on women, girls and infants. The high poverty and unemployment rates in the area are considered key contributing factors for early marriages, which inevitably lead to large family sizes, high dropout rates of school-going girls (leading to high illiteracy levels among women in Hakwata), and at times, poor infant health (infant malnutrition is prevalent among families with teenage mothers). Excessive inhalation of smoke from firewood (for cooking) is a key contributing factor for the respiratory problems of women and children. In addition to these challenges specific to women and girls in Hakwata, there also appears to be a significant burden of physical disability-related vulnerability in this community.

Mlibizi- Binga District

Mlibizi comprises 3 wards in the Binga Rural District, in Matebeleland North Province, and is located on the shores of the southwestern end of Lake Kariba. While the area is endowed with natural resources (such as the Zambezi River waters, timber, hot springs, and wildlife), the District is drought prone and regarded as one of the poorest places within the country (with almost 90% falling below the poverty datum²)- Living on less than \$5.50 per day in 2020, due to a lack of farm implements, hospitals, schools, clean water and good roads. The area is a considerable distance from main economic centres, i.e. Bulawayo and Victoria Falls, which limits market opportunities and is generally underdeveloped. The scourge of displacement from the Zambezi Valley to make way for Lake Kariba has remained a sore point of reference for these people. The Tonga communities feel removed from the national government and in response have initiated organisations run by their own people in order to uplift their communities.

The climate landscape in Mlibizi is characterized by seasonal droughts, as well as low and erratic rainfall. Future projections point to a warming trend, with increased intra-annual and intra-seasonal variability in rainfall.

Mlibizi's ZINWA reticulated water supply (for business centres, schools, and clinic as well as 300 tap stands) fails to supply water to all the connection points due to a design fault, meaning consumers located towards the end of the supply lines go without water for weeks to months. The rest of the community (estimated at over 50%) get their water from seasonal boreholes and deep wells. However, most boreholes dry up in the spring and at times people go for days without water and over a third of the community get their water from unsafe sources (the river or lake). The vast majority of households rely on female family members to fetch water, and several households rely on children for this task. The majority of households have no access to a toilet of any type or handwashing facilities, meaning that open defecation is rampant and hygiene is a major issue.

Mlibizi business centre, Saba primary teachers' houses, and Sianzundu businesses are partially connected to the national power grid, but power outages are a frequent occurrence. The clinic has a solar system, but it is dysfunctional – meaning the clinic sends their vaccines to Binga hospital when power outages exceed 48 hours. Zambezi primary and secondary schools and Zambezi Clinic have no access to energy at all.

All households rely on firewood for cooking and lighting, and women often walk as far as 6km to collect it, which takes a toll on their health. Lack of safe lighting for studying at night is a major issue for children, who often have to study under difficult (unsafe and polluting) circumstances.

Income activities include fishing, crafts making (that are sold to tourists), and livestock rearing. Crop cultivation is not prolific, due to low and erratic rainfall as well as poor infertile Kalahari sandy soils. This means that household production is currently not sufficient to provide families with an adequately diverse, nutritious diet and there seems to be a high dependency on bought and donated food. This has resulted in diets being dominated by cereals with low consumption of protein rich foods (pulses and animal products), fruit and vegetables. While the Zambezi Development Fund did try to improve agricultural production in the area in 2007 through the establishment of an irrigation scheme, it is no longer functioning due to receding water levels that exposed the water intake 5 years ago.

Unavailability of water and lack of girl-friendly toilets at the schools limit girls' attendance and affects their performance. The situation is compounded by the fact that most girls also have to perform household chores to support their mothers (including fetching water and firewood), detracting from time available to study. More broadly, the lack of improved sanitation (and resultant open defecation) in Mlibizi has been a perennial issue and significantly contributes to the spread of waterborne diseases, which largely affect women and infants. In addition, with no access to modern energy systems, the burden on women to collect firewood is immense – particularly on excessively hot or rainy days – and the smoke from cooking with firewood has respiratory related impacts on their health.

From the surveyed households during the FCDO commissioned Feasibility Study, several disabilities were also identified. The disabilities add to the challenges that households face, and a number of disabled children in the community are currently not attending school because of the lack of appropriate facilities and/or skills among the teachers to help such learners.

3. Gororo- Chivi District

The Gororo is located in Zimbabwe's Chivi district, ward 28, Masvingo province, roughly five hours due South of Harare by road, and is situated close to the growing population centre of Ngundu. It is a drought stricken communal area downstream of the Tugwi Mukosi dam which has a 'sub-tropical, local steppe climate (Bsh)' under the Köppen-Geiger climate system. Overall, the district's climate is characterized by relatively high temperatures, and modest precipitation in the rainy season. The area is considered drought stricken, and this is anticipated to worsen as a result of climate change. Temperatures are likely to rise, including hot days and nights, and while rainfall trends are more variable, there is likely to be a drying trend. According to the feasibility studies conducted by FCDO in 2022 and UNDP in 2023, the area typically has an average yearly temperature of 21.94°C (71.49°F) and it is -0.79% lower than Zimbabwe's averages. This region typically receives an average of about 55.56 millimetres (2.19 inches) of precipitation a month and has 88.87 rainy days (24.35% of the time) annually (TckTckTck, n.d.). Generally, the temperature in Chivi district averages 19.5 °C (67.0 °F) and the average rainfall here is around 668 mm annually (26.3 inch per year), which is a low level of rain. The wet season is partly cloudy, the dry season is clear, and it is warm year-round (ClimateData.org, n.d.).

Despite being home to the largest inland lake in Zimbabwe and lying in an area with very low rainfall there is currently no irrigation scheme. Most of the hinterland area is now settled and cultivated through rain fed agriculture which frequently fails. The project area and the district in general fails to produce enough food from the rainfed agriculture. The land area is densely populated and degraded. Agricultural land is not easily available. There is also scarcity of firewood contributing to women travelling long distances to fetch wood.

The project area is densely populated, with several schools, business centres and a large health facility. Tokwe Dam, which lies approximately 21 km from Ngundu commands the entire area.

Key settlement features include the following:

1. Approximately 2640 households.
2. Large business centres which comprise residential areas for owners and employees.
3. Three Large schools comprising:
 - Dare Primary school with 1,386 pupils and 34 teachers.
 - Gororo Primary School with 1,575 pupils and 39 teachers.
 - Mashongamiti Sec school with 1,350 pupils and 46 teachers.
4. Gororo Clinic
 - 6 bed health centre.
 - 8 staff members.
 - catchment of 6,000 surrounding area villagers .
5. Tugwi Mukosi Master Plan
 - Major hotel planned at one of the large islands in the lake complete with access bridge.

4. Wanezi- Insiza District

The Wanezi dam area is located in Zimbabwe's Insiza district, Matabeleland South province, roughly two-and-a-half hours south-eastward by road from Bulawayo and is situated within the Wanezi mission. The climate in Insiza district, and in much of the province, is classified as 'sub-tropical, local steppe climate (Bsh) under the Köppen Geiger climate system (The World Bank Group , n.d.). The district is characterised by low rainfall and high annual evaporation. The district has an estimated population of 122903 people . Agriculture (mainly cattle ranching and crop production) and mining (large and small scale) are the main economic activities of the district. Crop production is mainly through irrigation and not much comes from dry land seasonal farming. . Household poverty rate is at 67.9%, a slight increase from 67.3% in 2011/12. This increase is driven by worsening socio-economic conditions in rural areas. Poor households in the district are characterized by poor resilience capacity, low livestock and household assets ownership and absence of social capital support such as remittances. Villagers usually engage in extreme coping strategies such as begging. Lack of access to agriculture assets normally predisposes them to household food and nutrition insecurity.⁶

Wanezi Dam rehabilitation project is the only dam related project that was in the list of schemes considered for inclusion in CAWEP. The Dam, which supplied water to a large mission in an area with high climate change vulnerability was also a source of water for surrounding villages in the arid area bordering the mission. It supplied the mission with both domestic and irrigation water, as well as being a source of water for livestock watering by the villages. Due to poor ground water in the area most boreholes supply the are frequently dried out leaving the dam as the only source of water for villagers.

⁶ Insiza District Profile FNC 2022

Wanezi Dam, on the Wanezi River was constructed in 1964 by the mission. Despite being well designed and built, it was affected by extreme floods during cyclone Dineo when several smaller upstream dams breached in 2017 leading to its overtopping and eventual failure. It sits on a very large catchment which generated huge floods in combination with stored runoff from the breached upstream small dams resulting in the existing spillway being inadequate to handle the incoming flood. The dam was an important source of water for the mission and surrounding villagers, providing the mission with water for irrigation and domestic, including domestic and livestock consumption for the entire area when boreholes dried out during drought years. When it breached the mission lost its main supply of water resulting in the cessation of irrigation activities and serious shortage of domestic water supply. Several boreholes were drilled as a stop gap measure, but these could not restore supply to normal levels due to low yield. Currently water supplies are severely constrained with very little to go round for the large mission

II. STRATEGY

UNDP is one of the leading agencies in supporting the government's climate and resilience goals. UNDP has taken the lead in policy support in the areas of renewable energy, environment, climate, water and resilience. In addition, UNDP has demonstrated its capacity to successfully implement projects as observed in the various projects UNDP has implemented such as the ZRBF, the Global fund project, the GCF project as well as the GEF 6 project. UNDP has positioned itself as a capable partner to implement large projects. This led to the awarding of the CAWEP Project to UNDP for implementation until 2025.

The CAWEP Project leverages the lessons learnt during the implementation of various projects especially the climate related and resilience building projects. The GCF project is geographically located in 3 of the 4 districts where CAWEP is operating and the projects have a similar focus. CAWEP is benefiting from the lessons learnt and best practices from the GCF Project through platforms created for information exchange between both projects. This includes exchange visits, learning events, field days and technical capacity building from adjacent ZRBF operational districts. These platforms will ensure peer (farmer to farmer) learning of best practices which will strengthen both the implementation and sustainability of the project.

The ZRBF Project was implemented in Binga District and Insiza district where the CAWEP Project is also being implemented, this also provides an opportunity for CAWEP to leverage the successes of this project and upscale successful interventions which built communities resilience. From a UNDP perspective, CAWEP is not being implemented in a vacuum it is building on previous work done in the various thematic areas under various projects such as the work and results achieved under ZRBF Phase 1 and GCF, on the agriculture and water thematic areas as well as work done under the Global Fund Programme specifically interventions on solar for health and under the Energy Offer projects energy related activities .

The project utilizes the solutions mapping framework which is anchored within the portfolio approach, that have been embedded into the country office programming by the Accelerator Lab. Solution mapping is based on the belief that the solutions are found where the problems are, therefore while implementing a program one should engage the local stakeholders to map potential solutions that help the programme deliver more impact. This process will enable UNDP to capture the input from local stakeholders by co-mapping the challenges that CAWEP is addressing in their communities, exploring the solutions, and potential negative and positive spill over effects. In addition, the project will make use of the sensemaking protocol, which is an inhouse stakeholder engagement tool administered by the UNDP Accelerator Lab team. The Accelerator Lab team is part of the global UNDP Strategic Innovation Unit. The sensemaking tool kit was developed by UNDPs Strategy and Innovation Unit to actively engage stakeholders during workshops using methods like horizon scanning, collective intelligence, participatory design thinking and systems thinking to gain a well encompassing understanding of an issue.

In this case, UNDPs deployment of the sensemaking toolkit at in person workshops and conferences enabled UNDP to view CAWEP from the frame of reference of various stakeholder, which resulted in the development of an implementation strategy that minimizes risks by anticipating potential shocks.

Recognising the role that water and energy infrastructure can play in responding to the pressing challenges facing the four selected districts of operation, the UK's Foreign, Commonwealth & Development Office (FCDO) in Zimbabwe initiated the Climate Adaptation Water and Energy Project ("CAWEP", also referred to as "the Program") in late 2020. The CAWEP Theory of Change and the design of the interventions were based on the findings from the following three stages conducted by the funding partner FCDO.

Situation Assessment. The Situation Assessment provided an in-depth examination of six focus areas: climate change; water; infrastructure; EWS; health, nutrition, agriculture, and education; and policy, financial, and institutional arrangements. The process pointed to sub-national priority regions where the need for climate resilience is elevated in relative terms, combined with pressing needs of communities in relation to water security, energy security, and broad-based socio-economic and livelihood security.

Feasibility Study development. Feasibility Studies were then carried out on each of the projects, with the aim of determining each project's viability and likelihood of success. This process entailed robust ground-truthing, technical analyses, stakeholder engagement, and relevant social and technical surveys toward the development of Social, Technical, Environmental, Climatic, Institutional, Financial and Economic, and Market assessments. These assessments collectively informed the development of project concepts, detailed designs and proposed delivery models that were underpinned by technical, financial, and institutional sustainability considerations as well as critical issues of social acceptability, climate resilience and opportunities to enable greater gender equality and social inclusion within the beneficiary communities. The UNDP conducted rapid assessments of the selected four districts to ground truth the findings of the feasibility studies and situation assessments as well as to revise and adjust the scope according to new findings and changes in the context. The UNDP also conducted technical feasibility studies for Chivi and Insiza district to enable the design of the infrastructure as well as the development of the Environmental and Social Impact assessments. Each Feasibility Study conducted by FCDO concluded with a Theory of Change that captures the projects' desired impact, outcomes and outputs, thus the CAWEP project has an overarching theory of change presented in this pro doc as well as project theories of change presented in the feasibility documents.

The CAWEP program theory of change hypothesises that

IF access to multiple use water, clean energy infrastructure, and **IF** access to early warning information are provided, and **IF** capacities of institutions and communities on climate adaptation and early warning are built and an enabling policy environment is supported,

THEN community health outcomes, education outcomes, livelihoods and income will improve, increasing the adaptability of the vulnerable communities to climate change, thus improving their overall climate resilience.

The CAWEP seeks to build a more climate resilient community by embedding tools and processes to allow the community to adapt in the face of changing and disruptive weather; increasing their levels of individual, family and community resilience, "[the] process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances."⁷

The CAWEP target communities face a number of challenges that this project strives to overcome; including inadequate water infrastructure, unsafe water sources, a lack of adequate power, and the resultant health and safety related problems that flow from these infrastructure shortages, including; including inadequate services at the local clinics, a lack of hygienic WASH facilities at schools, and teachers' accommodation, and high opportunity costs for fetching water for domestic purposes, respiratory problems, and inadequate nutritional food intake. High opportunity costs manifest in small scale farming within the community resulting in inadequate nutritional intake, and in time related costs of women and girl children having to fetch and purify water. As a result of inadequate power infrastructure, the local business community is also constrained in its service provision.

The CAWEP project seeks to address these challenges, and presents its Theory of Change describing the causal pathways of the project.

Overall objective: Communities and public institutions supported by CAWEP are more resilient to respond to adverse effects of climate Change (droughts & floods)

the project will improve on the climate resilience of the supported communities and institutions by providing sustainable access to climate resilient water and renewable energy infrastructure, improved early warning systems, capacity building and policy support and therefore greater opportunity to adapt in the face of climate change. This impact will contribute towards ICF key performance indicators 1 and 2, the UNDP CPD Outcomes 2 and 3⁸ and the Government of Zimbabwe NDS1 priorities: food and nutrition security, cross-cutting issues (environmental protection,

⁷Masten, A. S., Best, K. M., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology*, 2(4), 425–444.

climate resilience and natural resource management). Interlinked with this impact is the improvement of community livelihoods, both collectively and individually.

The project will improve community livelihoods and resilience through the following envisioned pathways:

Improved health and education outcomes This will be achieved by providing affordable and sustainable institutional access to water and energy in schools and clinics, (with an emphasis on girl-friendly toilets at the latter) through the construction of climate resilient water and energy infrastructure. Improved and reliable energy will contribute to improved security within the community at the schools and clinics leading to better service provision. Improved facilities at the schools, with reliable water and power, will enable more focused and extended learning opportunities for scholars, in particular girls who would otherwise be deterred from attendance during menstruation. These initiatives will result in improved attendance rates of scholars, in particular girls, and improved retention of teachers, leading to improved academic stability and improved pass rates and subsequently better education outcomes. Improved water and electricity supply at the clinics will improve infection control, information management and transmission, efficiency in service provision and better staff retention all contributing to improved health outcomes.

The project will also enhance community resilience and livelihoods by building capacity for improved domestic food production, through increasing access to water and energy for multi-purpose use... The secure supply of water enables planting cycles to be optimised for the best growing conditions and to avoid more volatile weather conditions at critical stages of the crop cycles, leading to greater agricultural productivity, increased household incomes and deepening the ability of the community to adapt to climate change.

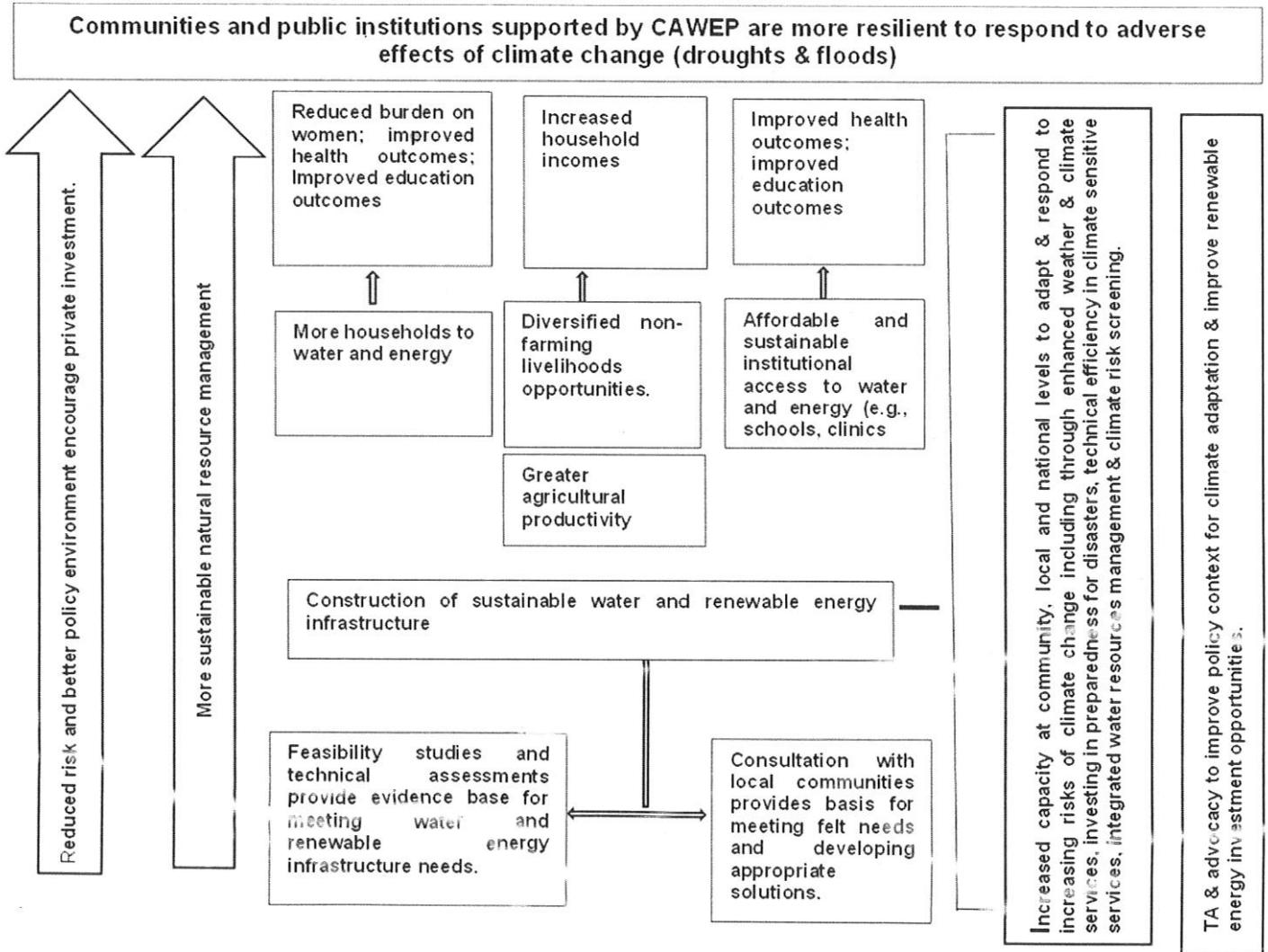
Construction of sustainable climate resilient renewable energy infrastructure , such as the solar mini grid, biogas digestors solar cookers will provide climate resilient and healthier sources of power for cooking lighting and power needs, thus reducing the burden on women and girls and providing access to reliable power sources for broadening the local business offerings. This will in turn bring diversified non farming livelihood opportunities leading to increased household incomes. The resultant increase in income will also aid in improving domestic food consumption as well as open opportunities for further adaptation to climate change by contributing to asset building within households. This increased income will empower the communities to contribute to the operational and maintenance cost of the energy and water infrastructure improving sustainability.

.. , The project will increase capacity at community, local and national levels to adapt & respond to increasing risks of climate change through supporting enhanced weather & climate services, investing in preparedness for disasters, technical efficiency in climate sensitive services, integrated water resources management & climate risk screening, which, will contribute to the institutions and communities' response to climate events.. Finally the project will provide technical assistance & advocacy to improve policy context for climate adaptation & improve renewable energy investment opportunities through the development, updating, alignment and operationalisation of key policies, evidence generation to inform policy and decision making. This will provide an enabling environment for communities and institutions to effectively adapt to climate change and improve resilience.

Key Assumptions

- Government continues to prioritize climate adaptation and resilience building
- Enabling policy environment which also encourages private sector investment in Climate adaptation, water and renewable energy.
- Community Interest and leadership: communities take ownership of the project interventions and fully utilise the infrastructure for betterment of their livelihoods
- There is increased and improved local, national and subnational level capacity in adaptation, disaster risk management, generation and utilisation of EW information.
- More sustainable natural resources management
- EWS data is appropriate , applicable and easily understood
- Local markets can support diversification
- Resilient markets

Figure 1: CAWEP TOC



III. RESULTS AND PARTNERSHIPS (1.5 - 5 PAGES RECOMMENDED)

Expected Results

The results of the CAWEP project all contribute to ICF KPI1, ICF KPI2, ICF KPI4, UNDP CPD Outputs 2.1, 2.2 3.2 and 3.3⁹.

Outcome 1 Poor & vulnerable households become more adaptive to effects of climate change through sustainable access to long term climate resilient and multiple use water and renewable energy infrastructure

The CAWEP Theory of Change hypothesizes that by installing climate resilient water abstraction infrastructure, using solar power, generated solar power can be utilised by social institutions improving their ability to service the community, and by households, with both of these contributing to community resilience. Similarly, improved access to potable water reduces the time individuals spend queuing for water or gathering fuel for and purifying water, increasing the time available for them for other pursuits, and household members are more likely to have improved health outcomes. Access to electricity will also enable school children to study, use technology and have equipped laboratories thereby improving the education outcomes. This outcome will be attained through the following outputs.

⁹ ICF KPI 1: Number of people supported to better adapt to the effects of climate change as a result of ICF. CAWEP will also contribute to ICF KPI 2: Number of people and social institutions with improved access to clean energy as a result of ICF. UNDP Strategic Plan OUTCOME 2: By 2026, all people in Zimbabwe, especially the most vulnerable and marginalized, benefit from greater environmental stability and robust food systems in support of healthy lives and equitable, sustainable and resilient livelihoods UNDP Strategic Plan OUTCOME 3: By 2026, all people in Zimbabwe, especially the most vulnerable and marginalized, benefit from more inclusive and sustainable economic growth with decent employment opportunities. CPD Outputs 2.1, 2.2, 3.2, 3.3

Climate resilient multiple use water infrastructure will be delivered through establishment of piped water schemes for potable and irrigation across the four districts. The project will rehabilitate and upgrade the existing ZINWA water abstraction, treatment and distribution plant in Mlibizi Binga. This will enable uninterrupted potable water supply to 12 schools, 2 clinics, four business centers and 28,037 people. The project will establish handwashing facilities and girl friendly ablution facilities at the target schools. The water scheme will also supply a 20ha irrigation scheme which will be developed by the project in Saba ward. In Wanezi of Insiza district, the project will rehabilitate dams which will provide improved access to clean water to 2 schools, 1 clinic, 2,500 people as well as a 37ha irrigation scheme. Establishment of a 50ha irrigation scheme will be done in Gororo, ward 28 of Chivi district, drawing water from the confluence of Tugwi and Mukosi river near the Tugwi Mukosi dam. Water supply will reach a total of 2,500 people, the nearby mining community, Gororo clinic and Gororo primary school. The project will establish a piped water scheme comprising 5 solar powered boreholes which will provide improved access to water and sanitation for 1 school, 1 clinic and the Hakwata community. The development of climate resilient water infrastructure will improve the health outcomes of the target communities through access to safe drinking water, good sanitation which will reduce water borne disease outbreaks. The productive water component will lead to greater agricultural productivity through the irrigation schemes and horticulture gardens, improving food security, household incomes, health and nutrition outcomes and subsequently improving resilience.

The climate resilient renewable energy infrastructure will be delivered through the establishment of a 200KW solar in Hakwata Chipinge District which will provide access to electricity to 12,500 people for household and productive use. The project will establish 150 biogas digestors in Chipinge, Chivi and Insiza districts to provide clean fuel for cooking. 100 small solar home systems and 30 community floodlights will be installed in Hakwata to provide lighting for home use which enable the school children to study at night as well as illumination of key community areas such as water points and business centres. The project will establish backup solar power for water supply across the four districts for both potable and productive water. Ten (10) Schools, 1 clinic and 1 public institution in Binga district will be solarised to provide electricity for classrooms, laboratories, and staff houses.

The climate resilient energy infrastructure will lead to health benefits from clean energy sources, and thus reductions in health spending and decreased pressure on the area's health services as a result of access to clean, reliable energy sources for cooking and lighting and improved access to safe potable water thus improving the health and education outcomes. The energy component will also deliver lighting benefits (leading to more learning time and improved education outcomes, increased safety, and even after-hours productivity). Productive use of the energy will lead to diversified non farming livelihood opportunities through the establishment of small energy-based businesses which will lead to an increase in household incomes. The energy component will also increase the number of households with access to clean energy and clean water thereby reducing burden on women and girls, improving health and education outcomes. The following Activities will deliver output 1:

Activity Result 1.1: Renewable Energy technologies: infrastructure projects implemented.

The project will implement renewable energy infrastructure projects under the following sub activities.

Sub activities

1.1.1 Mini Solar Grid and Electricity Connections and Wiring

The project will establish a 200KW solar mini grid in Hakwata Chipinge District which will provide access to electricity to 12,500 people for household and productive use. The activity will be implemented by UNDP and the Rural Electrification Fund (REF)

1.1.2 Solar Cook Stoves-design and install (10)

The project through partnership of UNDP and the Ministry of Energy and Power Development (MoPED) will pilot 10 solar cookstoves in Chipinge district to provide clean cooking and research into solar cook stove models, for possible upscale and adoption by the communities.

1.1.3 Solar Home System-design and install.

The project will install 100 Solar Home Lighting systems in 100 households to increase access to clean energy for lighting.

1.1.4 Biogas Digesters

The project will establish 150 biogas digestors (90 in Chipinge, 30 in Insiza and 30 in Chivi) to provide access to clean cooking for 150 Households. The activity will be delivered by the UNDP, Ministry of Energy and Power Development (MoPED), and a private sector partner.

1.1.5 Community Solar Flood lights (30)

The project under the renewable infrastructure development will also install 30 solar community flood lights in Chipinge district, Hakwata village, which will be placed at key community infrastructure as well as along main access roads.

1.1.6 Energy efficient portable solar generators Installed.

1.1.7 CCTV, motion sensors alarm systems and guardrooms for solar array fields in Hakwata, Gororo, Wanezi and Mlibizi

This activity will boost security of the established renewable energy infrastructure, and its technical designs will be done by UNDP, REF, MoPED and ZINWA. The project will install Closed Circuit Television systems, motion sensors and alarm systems at three (3) sites in Mlibizi, and one (1) site in Hakwata, Gororo and Wanezi.

Activity Result 1.2 Climate Smart Irrigation

This activity will see the establishment of climate resilient multiple use water infrastructure under Output 1, supporting the establishment of irrigation schemes and is expected to increase agricultural productivity and subsequently, increase income levels and improve food security. The activity will be delivered through the following sub activities:

1.2.1 Construction of power generation equipment and electricity supply for irrigation and domestic water

This entails the construction of power works for Gororo and Insiza incl 3-phase 15Kva transformer (Wanezi)

1.2.2 Site Specific Feasibility Studies & Environmental Safeguards (Gororo and Wanezi)

The project will contract an independent consultant to conduct the feasibility studies and to produce the designs for the dam and the irrigation scheme. This activity will be conducted by UNDP, the Department of Irrigation (DOI), and ZINWA.

1.2.3 Construction of Climate Proofed Irrigation Infrastructure (Gororo, Mlibizi, and Wanezi)

The project will establish three (3) new climate proofed irrigation schemes to boost agriculture productivity. (Mlibizi- 20ha, Gororo- 50ha and Wanezi 37ha). The project will also establish 5x1ha gardens (4 Mlibizi, 1 Chipinge). This activity will be led by UNDP, DOI and Agritex.

1.2.3.1 Irrigation scheme land Preparation

To support the first 2 cycles of production the project will support the three schemes with land preparation.

1.2.3.2 Support for 2 crop production cycles

The project will provide input support (seed, fertiliser, pesticides, and chemicals) for the first 2 cycles of production in the two-irrigation scheme. This component will be led by Agritex, ARDA and UNDP.

1.2.3.3 Construction of Market and a grading shade for the irrigation shades, market extension Houses

The project will construct market grading sheds and staff ahouses at all three irrigation schemes. Two houses at each site which will accommodate Agritex and ARDA staff.

1.2.3.4 Gully Reclamation along market access roads

To facilitate marketing of the irrigation, produce, the project will support the rehabilitation of the market access roads through gully reclamation. This activity will be led by the local Rural District Councils, and UNDP.

1.2.3.5 strand high voltage solar powered electric fence installation for wildlife control

For security and protection of the schemes from problem wildlife, the project will install solar powered electric fences around the irrigation schemes.

1.2.4 Market linkages (Business model for the scheme.)

The project will conduct farming as a business trainings, marketing trainings and facilitate input and output market linkages. ARDA, Agritex and UNDP will implement this activity.

Activity Result 1.3 Climate Resilient Multiple water use infrastructure projects implemented.

'1.3.1 Portable water supply at Mlibizi, Gororo and Wanezi

The project will establish water infrastructure for drinking and household use to provide access to safe water. The project will rehabilitate the water treatment plants at Mlibizi and Wanezi, upgrade the pipe water distribution in Mlibizi and establish 3 piped water systems (Wanezi-1, Gororo-1 and Hakwata-1)

Activity Result 1.4 Climate resilient water management systems.

'Activity 1.4.1 Water and Sanitation (Borehole Drilling, Water distribution, storage) (Hakwata and Mlibizi, Wanezi, Gororo)

The project will conduct hydro geological surveys in all four target districts to assess the feasibility of borehole drilling to support provision of access to multiple use water. The project targets to drill three (3) new boreholes in Hakwata, one (1) borehole in Mlibizi to support a 1ha garden, one (1) borehole in Wanezi and Gororo respectively.

Activity Result 1.5 Market and value addition (including cold chain establishment) and agro-processing Irrigation Schemes.

Under this activity the project will support production and marketing in the irrigation schemes, through the following sub activities.

1.5.1 Practical Business management and market linkage training

Training of irrigation farmers on Farming as a Business (FAB) and commercial production, led by AGRITEX and ARDA.

1.5.2 Support with agro processing machinery

The project will support the irrigation schemes with oil pressing, peanut butter processing, small grain processing and packaging, bush meal production and feed-formulation (for livestock feeds), pen fattening facilities for value addition and post-harvest management.

1.5.3 Cold chain for horticultural crops, fish and village Dairy

The project will establish solar powered cold chain at Mlibizi, establishment of village dairy, grading sheds at all the irrigation schemes.

Output 2 Established/resuscitated community governance structures are effective in managing installed infrastructure.

The Theory of Change hypothesizes that by providing water, power (where applicable) and capacity building to the community, it will increase the economic opportunities to community members to improve their livelihoods. These improved livelihoods will (i) allow the communities to pay for their use of water and power, which contributes to the maintenance of the utility infrastructure, and (ii) improves the climate resilience of the community. Having representative community structures to oversee the financial and maintenance aspects of the infrastructure is a central component of ensuring this community empowerment and sustainability of the infrastructure. The project will establish and train asset management committees for each community infrastructure which will manage, govern, oversee operation, maintenance and replacement of the assets. The committees will undergo trainings in leadership, governance, operations, financial management, business development and specialised technical trainings according to the asset. The project will establish Village Savings and Lendings groups under this output to establish access to finance for business development under the productive water and energy use. The groups will act as a springboard for the establishment of small business around the energy infrastructure. Village Savings and Lendings Groups will also be established in the irrigation schemes and gardens to bolster operation and maintenance funds and the purchase of agricultural inputs. Currently the project has established 105 groups across the four districts, with an approximate cumulative 100,000 USD total savings. The VSL groups are a form of safety nets improving the transformative and absorptive resilience capacities.

The following activities will contribute to this output.

Activity Result 2.4 Capacity building, Conferences; seminars and meetings (Output 1-3)

The establishment and capacity building of all community infrastructure governance structures, capacity building of community and Government stakeholders through trainings will be conducted under this activity.

Activity Result 2.6 Entrepreneurship development, vocational skills and financial inclusion.

This activity operationalises the CAWEP business Development strategy facilitate productive use of the infrastructure which will lead to diversification of livelihoods, establishment of micro enterprises, which in turn will increase household income, create local employment and build resilience. The productive use of the infrastructure is also a sustainability measure as income generated will contribute to the operation, maintenance and replacement.

This will be achieved through the following sub activities.

2.6.1 vocational skills training and entrepreneurship development

Vocational skills training targeting mainly women and youth will be conducted in all target districts followed by entrepreneurship training to foster establishment of business enterprises.

2.6.2 Market Linkages and Business Development Support

The project will facilitate linkages with private sector and financial institutions.

2.6.3 Revolving fund loan facility

The project will set up a revolving loan facility for the trained project participants to access finance. The fund will be administered by a local financial institution.

Outcome 2

Community livelihoods are improved through reliable access to and use of irrigation infrastructure.

The Theory of Change hypothesizes that by empowering communities by providing access to irrigation infrastructure, communities will improve their climate resilience, by improving the reliability of their domestic, and where appropriate, commercial agriculture. Providing irrigation infrastructure that is well planned, well installed, and well maintained contributes to increasing the climate resilience of the communities. This outcome will be realised through the following outputs and key strategic interventions:

Output 1: Developed climate resilient multiple use water and energy infrastructure.

The project will establish water supply infrastructure, irrigation schemes and horticulture gardens in all four districts of operation. The project will put a total of 114 hectares of productive land under irrigation. Irrigation farmers will be

trained on operation and maintenance of infrastructure, crop production, agronomy, livestock production, citrus as well as marketing and agro processing. The project will promote the adoption of Climate smart agricultural practices through the use of the Resilient and Sustainable Agriculture manual developed by the UNDP led ZRBF programme. The project will develop commercial business models around production in the irrigation schemes and gardens. The ARDA Vision 2030 Accelerator Model will be implemented in the three irrigation schemes. This will enable commercial production, greater productivity, access to resilient markets and ensure sustainability of the irrigation schemes. Engagements with ARDA were conducted and as at January 2024, ARDA has moved in to support production of the summer crop at the 20ha Mlibizi irrigation scheme.

Output 2 Established/resuscitated community governance structures are effective in managing installed infrastructure.

Irrigation management committees have been established for the three (3) irrigation schemes (Mlibizi, Gororo and Wanezi) and the five horticulture gardens in Binga to support operations of the schemes. The committees have been trained in leadership, management, operations and trainings are ongoing. This will ensure community involvement, empowerment and sustainability of the irrigation infrastructure.

Reliable access to and use of climate resilient irrigation infrastructure will lead to greater agricultural productivity, increased household incomes through the sale of produce, increased food and nutrition security and improvement in resilience of the target communities. This outcome will be achieved through Outputs 1, 2 and 3 and their related activities. Activity Results 1 and two stated above under Outcome 1 and Output 1,2 will contribute to this output and Outcome.

Outcome 3: Community climate change adaptation capacity improved as a result of access to reliable weather and climate information (EWS).

The Theory of Change hypothesizes that by empowering communities through providing access to weather and climate related data, they will have information on which to base decisions that will positively impact their livelihoods by opting to adapt their crop cycles, harvesting times, living conditions, etc. improving their resilience to climate change. This outcome will be delivered through the following outputs and strategic interventions:

Output 3 Enhanced Early Warning Systems (EWS), helping vulnerable communities to better anticipate, plan and respond to negative impacts of climate change and extreme weather events.

The Theory of Change hypothesizes that installing EWS and related training within the communities is a foundational step in providing information to the communities that allow them to make decision regarding adaptation to climate change thus improving their climate resilience. By providing EWS systems, data will be available to the communities regarding impending climate events, understanding this data is the first step to developing actionable plans to adapt to these climate events. For these actionable plans to be developed this data needs to be interpreted into information and then into messaging which is communicated to the community members in an understandable manner using appropriate communication methods and vehicles. The EWS component of the project is designed to support institutional and community-level preparedness toward improved resilience to climate and weather impacts, through hardware (equipment support) and software (Capacity Building). The project has supported 16 districts with Automated Weather Stations (AWSs) to improve access to reliable weather and climate information. The (AWSs) will be installed in all 7 districts of Manicaland province, all 7 districts of Matebeleland North Province, Chivi and Insiza districts. The project will conduct institutions and community capacity building and training, as well awareness initiatives around climate and early warning. Targeted institutions are Meteorological Services Department (MSD), Agricultural Advisories and Rural Development Services (AARDS) formerly Agritex, ZINWA and local schools. The project will also procure early warning system enablers in the form of two-way communication radios for communication during disasters and conveying early warning messages, bicycles, and tablets for communication to reach the last mile. This will ensure that no one is left behind in accessing early warning information. The project will also support the DCP, MSD, AARDS to disseminate advisories and warnings through various platforms such as community radio stations, bulk SMS platforms and other relevant media. The project will collaborate with the GCF project in supporting the relevant government entities to generate and disseminate early warning information. The early warning systems component is expected to reach over 500,000 direct beneficiaries. The Early Warning Systems component has the potential to mainstream climate change education and awareness.

Increased capacity at community, local and national levels to adapt and respond to increasing risks of climate change including through enhanced weather & climate services, investing in preparedness for disasters, technical efficiency in climate sensitive services, integrated water resources management and climate risk screening will lead to improved resilience to climatic shocks and stresses.

'Activity Result 3.0 Improved Early Warning Systems (EWS)(Mlibizi, Wanezi, Gororo & Hakwata):

The EWS component of the project is designed to support institutional and community-level preparedness toward improved resilience to climate and weather impacts, through hardware (equipment support) and software (Capacity Building). The following are the specific sub activities under this Activity Result.

Activity Action 3.1 Procure and install 18 automated weather stations (AWS)

The project will procure 18 automated weather stations to be installed in Manicaland Province (all 7 districts will receive 1 AWS, Chipinge will receive 2), Matebeleland North Province (all 7 districts will receive 1 AWS, Binga will receive 2), Chivi and Insiza districts will receive 1 AWS each.

Activity Action 3.2 Other equipment to support early warning dissemination.

The project will procure other early warning enablers to support early warning systems. The enablers include but no limited to two-way communication radios, laptops, tablets and repeaters.

Output 4: Improved National Climate adaptation policies/Strategies/learning material supported/developed

The theory of change hypothesises that by providing technical support & advocacy to improve policy context for climate adaptation & improve renewable energy investment opportunities, there will be increased capacity at community, local and national levels to adapt and respond to increasing risks of climate change, increased investment in disaster preparedness, technical efficiency in climate sensitive services, increased uptake of renewable energy technologies, integrated water resources management & climate risk screening, leading to an improvement in transformative capacities and climate resilience.

The project will employ the following strategic interventions to deliver this output:

Activity Result 4.0 Policy Advocacy

This activity component led by UNDP and the Ministry of Environment, Climate and Wildlife, will support the development, revision, alignment of relevant policies, strategies and statutes to improve the policy generation and operationalisation of policies. The project will support the operationalisation of Renewable Energy and Climate Adaptation policies through all the project interventions. Specifically, the project will support the following policies:

- National Energy efficiency policy which will enable the government at national and subnational levels and the communities to transition into renewable energy technologies and realised the attainment of the Nationally Determined Contributions (NDCs). The renewable energy policies will foster investment in the clean energy sector and the project will use evidence generated from the interventions to inform strategy and scale up of renewable energy infrastructure development.
- National Adaptation Plan: the project will support the roll out and mainstreaming of the National Adaptation Plan at national and subnational levels.
- Piped Water Scheme Protocol: The project in partnership with the National WASH Cluster will support the development and roll out of the National Strategy Document for Insurance of Rural Piped Water Schemes
- National Clean Cooking Strategy: The project will support the development and operationalisation of the National Clean Cooking strategy to support the transition from firewood to green fuel.

The project will conduct knowledge generation activities using learnings from the project implementation and from other Climate Resilience projects both in UNDP and the country. The evidence generated will be used to develop strategies, policy briefs as well as inform decision making.

The policy interventions will lead to reduced risk and better policy environment which will encourage private and public investment in Climate adaptation and ultimately improve institutions and community resilience.

Resources Required to Achieve the Expected Results

Describe what resources are required to achieve the expected results. Thinking about the change pathway in your theory of change, state the key inputs (people, purchases, partnerships, etc.) that are required to deliver the outputs. This should include UNDP staff time from the country, region or HQ level, which must be adequately estimated, costed, and included in the project budget.

Purchases- These resources will enable smooth project implementation in the various sites. These include:

Project vehicles, Computers and laptops, Contractor for Biogas digester construction; Contractor for mini grid installation; Contractor for Mlibizi civil and water works; Contractor for supply and installation of 18 Automated weather stations; Contractor for Feasibility Studies -Wanezi and Gororo; Contractor for Civil and water works- Wanezi and Gororo

The required expertise is as follows:

Project Management Unit- Project Engineer - Civil works/Irrigation; Project Engineer – Renewable energy; M&E Analyst; Finance and Admin Associate; Procurement Analyst; Project Drivers; Project Analyst; UNV Communications Assistant

23/11/20

UNDP will promote a whole of government approach during the implementation of the programme securing buy-in at the right level. The project will have a project Steering Committee which is co-chaired by FCDO and the Climate Change Management Department. UNDP will also leverage on existing aid coordination structures in which the Ministry of Finance is the interlocutor, ensuring all line Ministries are involved. UNDP has an Embedded Partnerships Coordinator in the Ministry of Environment coordinating partnerships and engagement of various government ministries in implementing national climate policies and strategies.

Partnering with permanent mechanisms and institutions such as the Ministry of Agriculture, WASH cluster, AGRITEX, Rural Electrification Fund, Department of Irrigation, Department of Water and the Agriculture Marketing Authority of Zimbabwe. Setting up or riding on the existing local structures such as the Irrigation Management Committees and Energy Management Committees as programming vehicles to ensure sustainability of the project's outcomes and impact. The project will have a knowledge management and lesson learning mechanism which will effectively disseminate lessons and best practises from the project to elsewhere or replication. While the interventions will be implemented at the local level, lessons learnt and approaches maybe replicable at the sub-national and provincial levels. There is potential to remodel the adopted approach to deploy it at these two levels riding on the National Adaptation planning process which has key actions which are in lines with the objectives of the CAWEP to utilise energy and water for adaptation purposes. The partnerships and strategic results framework used in this intervention can also be replicated at the sub-national and provincial level. This project may serve as a learning point for other countries who are seeking more effective ways of implementing both climate change adaptation and mitigation activities driven by innovative models of development moving from funding to financing.

Diversifying donors: The project will Look at various options through which other donors with similar initiatives and priorities can co finance. Private sector partnerships to guarantee quality, quantity and markets will be pursued for viability and sustainability this includes from corporate houses, local institutions, individuals etc.

Risks and Assumptions

The planned interventions were screened for environmental and social risks using the UNDP's Social and Environmental Screening Procedure. The tool helped identify potential project-related social and environmental (E&S) risks and impacts and provided an appropriately-scaled assessment and management measures to address those risks. The identified E&S risks are recorded in the project risk register which informs the project's monitoring plan, ensuring that these social and environmental risks are properly tracked and reviewed during project implementation. UNDP will conduct capacity needs assessment at project inception to gauge the technical, social, institutional, and financial capacity needs of the stakeholders. To ensure sustainable and long-lasting capacity by partners to maintain the infrastructure and the outcomes, the intervention will build on existing capacities of communities, local structures, and government institutions. Partners and stakeholders' capacities for managing social and environmental risks will be strengthened. UNDP has an Accountability Mechanism that ensures individuals, peoples, and communities affected by UNDP projects have access to appropriate procedures for hearing and addressing project-related grievances. Through application of the SES and Accountability Mechanism, the project enhances the consistency, transparency and accountability of its decision-making and actions, improves performance, and strengthens achievement of positive development outcomes. During the project inception phase, UNDP will, through solutions mapping exercise, co-create the related intervention with the community, local stakeholders, and relevant government institutions to avoid activities that may adversely affect the communities. The available local traditional knowledge will be blended with the innovation being introduced by the intervention.

Major risks identified are safeguarding, strategic, political and economic risks. Risks are outlined in the risk register annex.

Stakeholder Engagement

The programme will conduct a series of consultative workshops in person and utilize moderated online forums for greater reach. Both approaches have been successfully utilized UNDP in the past to capture diverse stakeholder voices including recently on the Stockholm+50 consultations. What sets UNDPs stakeholder engagement apart is its use of the sensemaking protocol, which is an inhouse stakeholder engagement tool administered by the UNDP Accelerator Lab team. The accelerator Lab team is part of the global UNDP Innovation Unit. The sensemaking tool kit was developed by UNDPs Strategy and Innovation Unit to actively engage stakeholders during workshops using methods like horizon scanning, collective intelligence, participatory design thinking and systems thinking to gain a well encompassing understanding of an issue. Already sensemaking has been deployed by UNDP in Zimbabwe at high level engagements starting in 2020 when it was used at a multi ministerial workshop in Nyanga called for by the OPC. Recently the tool was utilized in April 2022 to assist Chapter

12 institutions in coming up with a collaboration framework. The tool was also used in May 2022 to engage stakeholders at the regional Informal Economy Workshop, which facilitated government, private and public sector players from more than 15 African countries in making sense of the future of informality in Africa. In this case, UNDP's deployment of the sensemaking toolkit at in person workshops and conferences will enable UNDP to view CAWEP from the frame of reference of various stakeholder, which will result in the development of an implementation strategy that minimizes risks while by anticipating potential shocks.

The UNDP Accelerator lab led the development of a CAWEP Community engagement strategy. The community engagement strategy will involve constructing deliberate processes of working collaboration with communities and key stakeholders to address issues that impact the beneficiaries and districts participating in the program. The overall mandate of CAWEP community engagement strategy is to better engage the community to achieve long term and sustainable outcomes, processes, relationships, discourse, decision-making, and/or implementation. This mandate is imperative to the CAWEP program's capability of improving the localized experience of interventions being implemented in each district the program covers. The strategy, structured around the Consultation Institute model of: *Inform, Consult, Involve, Collaborate and Empower*, will be iterative in nature: it will encompass adaptive communications programming through the continual renewal of the methods and processes to engage people over the next three years. The iterative process leading to the continuous adaptation of the strategy will be informed by co-creative sessions with key stakeholders and partners of the program. This is to ensure that community engagement occurs in a systematic way that is integral to everyday working of the program. This therefore means that community engagement will not be centred around ad hoc activities but will be done in sync with the programmatic needs that provide the fundamental focus of interventions used.

Aims of CAWEP Community Engagement Strategy

The CAWEP Community Engagement Strategy aims to enhance sustainability of the interventions and enhance smooth implementation of the activities, ownership and reduce errors. These aims include :

- To put community involvement as a core element of project rollout and development this will enable the establishment of sound community governance structures for better management of the infrastructures.
- To strive for a broad representation of beneficiaries in the CAWEP project with localised ownership of the project at district level. This will enable full participation of the beneficiaries in the project activities as it enhances ownership through incorporating their inputs into the project
- To have honest, open and transparent communication with CAWEP communities and ensure there is easy access to relevant and clear information.
- To ensure that the views, needs, expectations and outcomes of engagement activities are used to inform decision making processes, policy development and service planning. This is an integral part of knowledge and evidence generation and is pivotal in ensuring that assessments and evaluation processes have maximum support and participation from the communities.
- To provide clear guidance and promote consistent standards of engagement across the project.
- To listen to communities and give feedback to participants about outcomes of engagement activities including the most vulnerable communities.
- To provide balanced and objective information about the CAWEP project encompassing the interventions being provided and the reasons specific beneficiaries were chosen.
- To gather feedback on alternatives, analyses and decisions related to CAWEP to showcase that community feedback has influenced project decisions.
- Working with community members to ensure that their aspirations and concerns are considered at the stage of planning and decision-making.

Digitalisation

CAWEP will utilize a high frequency monitoring approach that is technology based to receive real-time feedback and based on the feedback deploy corrective measures. This approach will benefit from an existing network of AGRITEX extension officers in the areas to receive information from the beneficiaries and relay back to UNDP. In addition, technology tools that bridge the digital divide will be implemented to create a two-way surveying and feedback loop. Examples of digital tools that bridge the digital divide are USSD and SMS based platforms like RapidPro. UNDP is also testing frontier solutions like StreamSpot+, which utilizes a solar powered router box to create a local area network that anyone can use to access pre-loaded online content and also feedback at zero data charges. These can be used both as agricultural information gateways and feedback tools.

The Automated Weather stations transmit real time weather parameters to the MSD central server and the district focal persons. This will enable real time monitoring, interpretation of the data and timely development and dissemination of weather and climate information.

The EWS component embraces digital solutions with a wide array of digital communication equipment to relay information to the last mile. Two way communication radios, Smart phones, remote sensing etc will form part of the EWS network.

Data collection and storage in CAWEP will be done electronically using Online data collection platforms and databases.

The solar mini grid will be equipped with wireless connectivity to enable remote monitoring of the entire grid. This will ensure that usage, faults, overloads etc are quickly detected and attended to.

Knowledge

The use of a strong evidence on what works well in building Climate adaptation is of paramount importance. A robust knowledge generation and management and learning component will be instituted as part of the M&E framework to ensure extraction and dissemination of lessons learned and good practices to enable adaptive management and upscaling or replication.

The project will produce detailed feasibility studies, due diligence reports, Environmental Impact Assessments, technical notes and thematic knowledge products. A project beneficiary and infrastructure database will be developed.

Reports and products produced under monitoring, learning and evaluation activities will be circulated electronically and as hard copies among key stakeholders, and the Steering Committee. These reports will seek to provide an understanding of how projects are progressing towards set results and outcomes. Dissemination of knowledge products will vary depending on intended audience, but all efforts will be made to ensure wider circulation. Throughout the duration of the project, knowledge generation and dissemination will be responding to information needs of different groups. Provincial and District based stakeholders will play a crucial role in knowledge sharing through their district structures. When targeting local communities, products will be translated to local languages with few/no technical terms.

Learning events will take the following forms.

- Biannual joint monitoring visits together with Steering committee, UNDP and the Project Management Unit
- peer review missions which can also be a platform for exchange visits and cross learning. These learning events will facilitate the forming of communities of practices, scaling up of best practices and lessons learnt. These visits can also take place at Steering Committee level and also at the Technical Committee Level.
- Lessons Learnt Workshop: To be done at Close out of the Programme.

Communication and visibility will also be amplified over the UNDP social media platforms according the UNDP and FCDO Communications and Visibility guidelines.

Sustainability and Scaling Up

The definition of sustainability adopted by UNDP is the OECD/DAC definition. OECD/DAC defines sustainability as the continuation of the benefits from a development intervention after major development assistance has been completed. It also entails the probability of continued long-term benefits as evidenced by resilience to risks of the net benefit flows over time. There are several factors that have major influence on sustainability of the intervention including policy, economic, ecological and social aspects among other issues. UNDP will consider all these factors at project design, inception, implementation and on exit. The intervention will largely build on existing capacity of community/local, sub-national and national institutions to enhance ownership and continuity. Local level structures like irrigation management committees, energy task forces and district project committees will be established where they do not exist while existing localised structures will be capacitated to lead local level operation and coordination of the intervention.

The CAWEP project will roll-out an insurance scheme for rural water infrastructure, riding on the work started by Mercy Corps and UNICEF in the previous CAWEP project for some selected districts. Through the National Water and Sanitation Cluster, the project will facilitate the development of a National Strategy for rural water infrastructure Insurance Scheme, to provide a framework for roll-out of a insurance scheme in the rural areas in Zimbabwe. The insurance system will ensure sustainability of rural water infrastructure by establishing a system of replacement investment of the critical component of the water system through insurance. The national strategy will engage government and private sector in the drafting of the guidelines for the insurance system and in the process of tailor-

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making it to suit the needs and contexts of rural communities. The project will roll-out the insurance system in all the 4 targeted districts and engage Rural District Councils in the non-targeted districts to work with communities and the private insurance companies to insure water infrastructure in their jurisdictional areas.

Insurance coverage plays an important role in protecting households, businesses and governments from the financial impacts of climate-related disasters and breakdown related shocks of water systems. Hazards such as flooding, wildfires and storms are (short-term) weather events whose frequency and/or severity will change as a result of changes in longer-term climate. Insurance coverage for such climate perils will play a critical role in absorbing the costs of future climate damages and losses and supporting economic recovery in the aftermath of these disasters. There is some evidence that higher levels of insurance coverage for damages and losses from disasters is linked to quicker recovery and more limited economic disruption¹⁰. The absence of an insurance system will mean that households and governments will absorb a significant share of these damages and losses, which because of their limited capacities to absorb such shocks, usually threaten the sustainability of rural water infrastructure. The project, through the development of the national strategy document on rural water infrastructure insurance will try to ensure that the insurance coverage for water infrastructure remains available (and affordable) in the future. Therefore the insurance system will strengthen the resilience of both the rural water systems and the rural communities livelihoods.

The permanent government institutions which have perpetual existence and mandate in the areas of intervention will be fully incorporated and capacitated to continue supporting the intervention beyond the life of the project, more specifically, Local Government structures exist from national, provincial (Provincial Development Committees), district (District Development Committees) ward (Ward Development Committees) to village (Village Development Committees) level. Institutions like the Rural Electrification Fund will be allocated costs recovery shares within the renewable energy infrastructures so that they continue to have an operational budget to maintain the renewable energy equipment well after the development intervention. The local engineers will be capacitated on the basic operations and maintenance of solar systems and cooking equipment (biogas and solar cooks). Additionally, relevant government ministries who have a direct bearing in the areas of intervention will be capacitated to continue giving oversight of the perpetual existence of the intervention at the policy and operational level. Their role may include continued land tenure security, conflict resolution, market linkages and extension services required by the project.

UNDP will motivate for "Energy Extension Services" by the Rural Electrification Fund in a similar manner implemented by AGRTEX in the agriculture sector. This will enhance the sustainability of the energy service provision much as the agricultural service provisions exist to the lowest tier vis village level. The Government of Zimbabwe has recently resourced all the 1,200 ward extension officers with motorcycles for increased mobility and electronic tablets for real time data collection and reporting. The project intervention will therefore build on the existing strengths for sustainability. The promotion of productive uses of energy and intensive climate smart agriculture for commercial purposes will be introduced during this intervention. Promoting the productive uses is an important aspect in the design and implementation of rural energy and agriculture projects, and renewable energy projects more specifically. Projects with a "productive use" focus or component are developed in recognition of the fact that the provision of energy in itself is not the end-goal, the development service it enables is. Promoting "productive uses" in essence, is an attempt to make the energy input work directly and effectively for rural economic development. For irrigation, projects with a productive use component, focus beyond just the provision of irrigation facilities to improve food security, but incorporate intensive farming for commercial purposes to improve rural economic development. This approach will ensure the maximization of the economic and social benefits that access to energy and irrigation can catalyse. For this project, productive uses will mainly anchor on agriculture, rural enterprise health and education sectors. Viable business models emanating from the productive uses of renewable energy and reliable water supply will be developed to ensure that beneficiaries have inbuilt capacity to realize a return on investment. The intervention will help beneficiaries to increase their productivity and income by supporting the adoption of productive investments and improved farming practices driven by renewable energy and reliable water supply. Sustainability will be demonstrated from two perspectives. First, the sustainability of the infrastructure and second sustainability of livelihood improvement.

- Infrastructure sustainability is when the infrastructure put in place continues to generate and deliver resources (power and water) that meet the community demands during and beyond the programme lifespan

¹⁰ OECD (2023), Enhancing the insurance sector's contribution to climate adaptation, OECD Business and Finance Policy Papers, OECD Publishing, Paris, <https://doi.org/10.1787/0951dfcd-en>.

without any significant additional inputs. UNDP will achieve infrastructure sustainability through power generation optimization and efficient utilisation of resources (power and water).

- Power generation Optimisation: Sun tracking technology will be implemented at the solar farm to ensure that all panels operate at peak capacity throughout the day, every day. This ensures that the plant is continuously able to meet demand. An automated weather station will also be installed at each solar farm to collect data which can be used to forecast power production. Since power generation affects water pumping, forecasting will empower beneficiaries to better plan and use water resources.
- Efficiency in resource utilisation: CAWEP solar farm will have back up storage batteries, therefore the systems need to be carefully designed so that the batteries do not routinely discharge beyond their depth of discharge which would damage them and shorten their lifespan. UNDP plans to use energy monitoring software and the Internet of Things (IoT) to efficiently manage loads. UNDP is already using IoT to provide usage data which can be used to bolster the system efficiency. IoT sockets and outlets can turn on heavy loads only when solar power production has peaked instead of drawing power from the batteries. Energy-efficient variable frequency drive pumps will be utilized at all irrigation sites to ensure a smooth demand curve from the batteries. The result will be a system that is carefully designed to run for many years without needing major repairs. As for water efficiency, UNDP will take advantage of the inhouse experts in climate smart agriculture to deploy water saving farming methods. Last, underground pipe leaks present a major threat to the programme. Not only would they be difficult to detect, but they would force the pumps to overwork. UNDP will resort to leak detecting technologies like Distributed Acoustic Sensors to monitor the major irrigation piping. Once the system is put in place it can operate for decades.
- The second perspective is sustainability of livelihood improvement mechanisms. This will be attained via alternative livelihoods, establishment of robust market linkages for farmers, establish early warning systems, and closing of the digital divide. When combined these four measures will ensure that the programme continues to improve the livelihoods of beneficiaries beyond the project lifespan.
- Alternative livelihoods: UNDP will implement a dual land use policy at all solar farms by working with communities to utilize solar farms as sheep grazing pastures. This will be a sustainable and environmental way to keep grass and shrubs under control at the sites, while also benefiting the local farmers. The use of mechanized shrub cutters has been found to be unsustainable and pose the risk of airborne rocks breaking panels. UNDP will work with the Agritex livestock department to set up a paddocking system that does not lead to soil degradation.
- Market linkages: Without a market it would be difficult for any farming activities to be profitable and sustainable. UNDP is best positioned to provide sustainable market linkages using the AgriData coming from the UNDP led Agritex Data collection platform. Agritex extension officers were trained in using Kobo Collect production and market data. UNDP is the only UN agency that has such a robust market analysis tool, which will be used by beneficiaries to make decisions across the value chain from production to consumption.
- Closing the digital divide: UNDP recognizes the role that digital will play in shaping CAWEP. However, most of the beneficiaries do not have access to smart phone and/or broadband data. That is why UNDP is testing technologies like StreamSpot+, which utilizes a solar powered router box to create a local area network that anyone can use to access pre-loaded online content and feedback at zero data charges. StreamSpot+ will be used to create easy to access agricultural information gateways that offer advisory services to farms across the whole supply chain. All technology discussed above will constitute the information delivery of a robust early warning system as described in the next bullet point.
- Early warning systems: UNDP already possess expertise in information aggregation and early warning systems through the works of the GCF, ZRBF and Accelerator Lab. UNDP is unique in its ability to operate early warning systems on both the production and demand side. Through the GCF, UNDP has experience in setting up and running low cost, automated weather stations for weather advisory services to farmers. In the last seven years, ZRBF has perfected its High Frequency Monitoring (HFM) system, which utilises Agritex Extension officers equipped with Kobo Collect enabled tablets to tracks the state of crop and livestock health. Thus, UNDP brings to CAWEP the ability not only to set up weather related early warning systems, but also monitor crop/livestock condition in near real-time and provide early warning advisory services to communities and policy makers. This reduces the risks of diseases outbreaks which could result in poor harvests. On the demand side, the UNDP Accelerator Lab partnered with Agritex in setting up a supply and demand tracking platform for agricultural produce. Information from the platform will provide beneficiaries a planning and forecasting advantage. Over many years the data will also enable predictive analysis.

To ensure sustainability of the programme outcomes, permanent government institutions which have perpetual existence and mandate in the areas of intervention will be fully incorporated and capacitated to continue to support

the intervention beyond the life of the project. The actors will play distinct roles which will complement each other in ensuring that project outcomes and development gains are maintained. The continuity needs of the intervention outcomes will be embedded in the mandates of the institutions and become service delivery to the beneficiaries. In terms of environmental and social sustainability, relevant government institutions will be trained on ESMP implementation and monitoring and grievances handling and management. The following institutions have been identified as key players for sustainability and they will be fully engaged and capacitated to play this key role:

- Rural Electrification Fund
- Zimbabwe Energy Regulatory Authority
- Ministry of Energy and Power Development
- District Development Fund
- Ministry of Women Affairs, Community, Small and Medium Enterprise Development
- Ministry of Environment, Climate, Tourism and Hospitality Industry
- Environmental Management Agency
- Forestry Commission
- Zimbabwe National Water Authority
- Department of Irrigation
- AGRITEX
- Meteorological Services Department
- Research Institutions (Innovation Centres)

Other institutions will also play key roles in the sustainability of the outcomes, and these include:

- Irrigation Management Committees
- Irrigation Working Group
- Energy Management Committees
- Private sector
- To sustain the infrastructure and social outputs beyond the lifetime of the program, UNDP will create income generating projects under the programme that will provide funds to sustain the infrastructure.
- UNDP will also utilize its experience in setting up Village Savings and Lending Groups (VSALs), Savings and Credit Cooperative Society (SACCOS) to capacitate the beneficiaries in creating SACCOS from the profits made because of agricultural activities. In addition to providing loan facilities for community members, the SACCOS will also save a small "sustainability contribution" which will be used to maintain the power generation and water pumping infrastructure at their local site.
- A "repairs and maintenance" pool fund for the irrigation, water treatment and solar plants will be established for the maintenance and functioning of the investment.. This allows communities to remain in production long after project termination. Similarly, project beneficiaries can contribute membership fees monthly or annually to assist with project continuity. The project will support the initiation of infrastructure insurance for community based infrastructure learning from previous UNICEF interventions under CAWEP as well as government initiatives.
- In order to ensure structural sustainability for the Project supported infrastructure site specific climate proofing considerations will be incorporated from the design phase right through to the implementation and operationalisation phase and beyond the lifetime of the project. Underpinned by the key considerations of a changing climate where resultant effects impact on crop water requirements and the actual infrastructure, extreme events affect the existing infrastructure eg flood events versus surface irrigation in small holder irrigation systems, on river or off river reservoirs. Infrastructure resilience for sustainability is therefore one of the key considerations for the project. It is imperative that infrastructure be designed with a climate proof lens. (irrigation systems and renewable energy infrastructure) that can absorb the climate shocks and stresses.
- The CAWEP project will develop site specific infrastructure ownership models for both the irrigation schemes and renewable energy to ensure accountability and sustainability. These models are in the long run expected to incite the users to contribute towards infrastructure development with the desirable build, modernise and scale up model.
- The project team in consultation with relevant stakeholders will also develop a financial sustainability plan which outlines the various options available for expanding the project's resource stream.
- Market oriented production: Taking advantage of the current Government initiative to Transform Smallholder Irrigation Schemes into Profitable and Sustainable Business Models, the project will implement an effective smallholder irrigation scheme business management model which focuses on viability, profitability, with an

- objective to gravitate towards commercial entities. Farmers will undergo extensive capacity building on farming as a business where production is demand driven and income tracked over time.
- Diversifying donors: The project will look at various options through which other donors with similar initiatives and priorities can co-finance. Private sector partnerships to guarantee quality, quantity and markets will be pursued for viability and sustainability. This includes from corporate houses, local institutions, individuals etc.
 - In-kind contributions from Government will be advocated for to ensure national duties and services that enhance continuity of the projects are honoured.

IV. PROJECT MANAGEMENT

Cost Efficiency and Effectiveness

The project has a total of 700,000 beneficiaries (336,000 male and 364,000 female) at a cost of £12,000,000 resulting in a £17 spend per beneficiary, including the Early warning systems component which will reach all districts in Manicaland and Matebeleland North province, spend per beneficiary becomes £4 spend per beneficiary.

The following are some of the strategies the project will employ to achieve efficiency and effectiveness.

- The use of a strong evidence on what works well in building Climate adaptation using evidence from other UNDP programmes such as the ZRBF, GCF to make informed decisions leading to continuous improvement and overall effectiveness. It is anticipated that CAWEP project will evolve into an NCE portfolio, maximising efficiencies and effectiveness within UNDP. A robust knowledge management and learning component will be instituted as part of the M&E framework to ensure extraction and dissemination of lessons learned and good practices to enable adaptive management and upscaling or replication.
- The project's detailed feasibility studies, due diligence, Environmental Impact Assessments, inception meetings, and solutions mapping will guide and refine the targeting of beneficiaries to ensure that the maximum level of benefits is reaching as many of our target groups as possible. A procurement plan will be developed and monitored to ensure timely delivery of the project interventions improving on efficiency and effectiveness.
- The project's budget is linked to the log-frame, activities and outputs. This will ensure coherence and a logical flow between the budget, theories of change, log-frame and interventions being implemented.
- Use of appropriate technologies in delivering interventions. (RSA technologies, High frequency Monitoring, best practices in renewable energy)
- Promotion and implementation of best practices based on learning and evidence generated within the project and from other similar projects
- Facilitate learning between project participants and stakeholders through various fora such as exchange visits to foster increased adoption of climate adaptation interventions
- Set up of robust context relevant early warnings systems to enable effective disaster risk management by communities

Project Management

The Project will be implemented by UNDP and the Government of Zimbabwe under a Direct Implementation Modality (DIM) in Chipinge, Chivi, Binga and Insiza Districts. The Project Offices will be at the UN complex in Harare and the project management unit will be housed there. District based UNDP Individual consultants will be deployed to each of the project sites where they will operate through and within the government system under the supervision of the District Development Coordinator. The project will be part of the Poverty Reduction, Environment and Climate Change Unit and the PMU will report directly to the Head of this Unit and the Ministry of Environment Climate and Wildlife. UNDP Country Office procurement, finance and senior management will provide oversight and the necessary approvals.

V. RESULTS FRAMEWORK¹¹

Intended Outcome as stated in the UNSDCF/Country [or Regional] Programme Results and Resource Framework:

Outcome 2: By 2026, all people in Zimbabwe, especially the most vulnerable and marginalized, benefit from greater environmental stability and robust food systems in support of healthy lives and equitable, sustainable, and resilient livelihoods.

Outcome 3: By 2026, all people in Zimbabwe, especially the most vulnerable and marginalized, benefit from more inclusive and sustainable economic growth with decent employment opportunities.

Outcome indicators as stated in the Country Programme [or Regional] Results and Resources Framework, including baseline and targets:

Outcome 3. Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies

Applicable Output(s) from the UNDP CPD:

OUTPUT 2. Tools and mechanisms applied to enable evidence-based, risk-informed planning, prevention and preparedness to climate hazards by smallholder farmers and supporting institutions

OUTPUT 3.3. Solutions developed, financed and applied at scale for energy efficiency, transformation to clean energy and low-carbon development

Project title and Quantum Project Number: CLIMATE ADAPATATION WATER AND ENERGY PROGRAMME (CAWEP) 00132730

EXPECTED OUTPUTS	OUTPUT INDICATORS ¹²	DATA SOURCE	BASELINE		TARGETS (by frequency of data collection)					DATA COLLECTION METHODS & RISKS
			Value	Year	Year 1	Year 2	Year 3	Year 4	Year ...	
Output 1 Developed climate resilient multiple use water and energy infrastructure	1.1 No. of community multipurpose water & clean energy infrastructure developed/rehabilitated with special technical designs and features that respond to climate risks. Disaggregated by type (i) Solar Piped Water Systems (PWS) (i) mini/micro grids, (iii) small dams (iv) Irrigation systems/networks.	Progress Reports & Infrastructure completion certificates	28 PWS	2023	36 Piped Water Systems (2 UNDP)	38 Piped Water Systems (2 UNDP)	40 Piped Water Systems (4 UNDP)	40 Piped Water Systems (4 UNDP)	40 Piped Water Systems (4 UNDP)	Registration: simple count Risks: Lack of resources to collect data, -poor quality data

¹¹ UNDP publishes its project information (indicators, baselines, targets and results) to meet the International Aid Transparency Initiative (IATI) standards. Make sure that indicators are S.M.A.R.T. (Specific, Measurable, Attainable, Relevant and Time-bound), provide accurate baselines and targets underpinned by reliable evidence and data, and avoid acronyms so that external audience clearly understand the results of the project.

¹² It is recommended that projects use output indicators from the Strategic Plan IRRF, as relevant, in addition to project-specific results indicators. Indicators should be disaggregated by sex or for other targeted groups where relevant.

EXPECTED OUTPUTS	OUTPUT INDICATORS ¹²	DATA SOURCE	BASELINE		TARGETS (by frequency of data collection)						DATA COLLECTION METHODS & RISKS
			Value	Year	Year 1	Year 2	Year 3	Year 4	Year ...	FINAL	
					grid systems, - UNDP 0 small dam 2 Irrigation systems /net works- UNDP	UNDP 3 Irrigation systems /net works- UNDP	UNDP 5 Irrigation systems /net works- UNDP	UNDP 4	...	UNDP 5 Irrigation systems /net works- UNDP	
	1.2 Proportion of functional water and renewable energy infrastructure	CAWEP Feasibility Study reports (for baseline), Committee Registers, constitutions, Project progress reports	Water: 67.6% Renewable Energy- 0		80%	80%	90%			90%	Survey/Assessments, Risks: Lack of resources to collect data, poor data quality
	Number of vulnerable households and rural public institutions with access to solar energy.	REF Reports, CAWEP Project Reports			Institutions-2 HHS-650	Institutions- 10 HHS - 2000	HHS- 3000			Institutions-15 HHS 5000	Registration

EXPECTED OUTPUTS	OUTPUT INDICATORS ¹²	DATA SOURCE	BASELINE		TARGETS (by frequency of data collection)						DATA COLLECTION METHODS & RISKS		
			Value	Year	Year 1	Year 2	Year 3	Year 4	Year ...	FINAL			
	1.3 Proportion of water and renewable energy infrastructure with a community management structure and business model for maintenance	CAWEP Feasibility Study reports (for baseline), Committee Registers, constitutions, Project progress reports	Water-Management structure-91%, Management Structure +Business Model-0 Renewable Energy-0		80%	80%	90%					90%	Baseline, Assessment reports, DDF Reports, Endline Report Risks: Lack of resources to collect data, poor data quality
Output 2 Established/resuscitated community governance structures are effective in managing installed infrastructure	2.1 No. of governance structures trained to operate, manage, and maintain installed infrastructure are operational. Disaggregated by (i) community/ districts	Source: CAWEP Feasibility Study reports (for baselines), Committee Registers, Constitutions and Progress Reports	28 PWS	2022	8	7	7					7	Count of committees trained. Documents review Risks: Lack of resources to collect data, poor data quality
	2.2 %age of people in community governance structures who are women	CAWEP Feasibility Study reports (for baselines), baseline report, Committee Registers, Constitutions and Project	62%	2023	53%	55%	60%					60%	Survey, Documents review Risks: Lack of resources to collect data, poor data quality

EXPECTED OUTPUTS	OUTPUT INDICATORS ¹²	DATA SOURCE	BASELINE		TARGETS (by frequency of data collection)					DATA COLLECTION METHODS & RISKS		
			Value	Year	Year 1	Year 2	Year 3	Year 4	Year ...		FINAL	
		Progress Reports										
	2.3 % of representative community governance structures engage effectively with both community and external stakeholders, including maintenance service providers. Measured by No. of regular community & stakeholder meetings	CAWEP Feasibility Study reports (for baselines), baseline report, Committee Registers, Constitution and Project Progress Reports	0	2023	65%	70%	75%				75%	Survey, Documents review Risks: Lack of resources to collect data, poor data quality
	2.4 % of the households that pay for water and/or power use/maintenance. Disaggregated by (i) community	ZINWA and REF Reports, Project Progress Reports, Baseline and endline Reports	water use 14.5% Water maintenanc e-49.3% Power use and Maintenannc e-0 Community Disaggregati on Binga Water use-47.7% Maintenanc e-30.1% Chippinge Water use-10.4%	2023	60%	65%	70%				70%	Survey, Documents Review Risks: Lack of resources to collect data, poor data quality

EXPECTED OUTPUTS	OUTPUT INDICATORS ¹²	DATA SOURCE	BASELINE		TARGETS (by frequency of data collection)						DATA COLLECTION METHODS & RISKS	
			Value	Year	Year 1	Year 2	Year 3	Year 4	Year ...	FINAL		
		reports, Project progress reports, Database										
Output 4 Improved National Climate adaptation policies/Strategies /learning material supported/developed	4.1 No. of policies or strategies developed/supported as a result of programme influence. Disaggregated by Type e.g specific policy, strategy, learning paper, operational manuals	Policy and Strategy Documents	0	2023	3 (NA P, Pipe d Wat er Sche me Prot ocol, Ener gy Effic iency Polic y.	4 (NAP, Piped Water Scheme Protocol, Energy Efficiency Policy, water policy)	5 (NAP, Piped Water Scheme Protocol, Energy Efficiency Policy, water policy, National Clean Cooking Strategy/Fram ework)	5 (NAP, Piped Water Scheme Protocol, Energy Efficiency Policy, water policy, National Clean Cooking Strategy/Fram ework)				Documents Review Risks: Policy work implementation delays,
		Policy Briefs, Knowledge products	0	2023	1	2	3	3	3			Documents Review Risks: Policy work implementation delays,

VI. MONITORING AND EVALUATION

In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation plans: *[Note: monitoring and evaluation plans should be adapted to project context, as needed]*

Monitoring Plan

Monitoring Activity	Purpose	Frequency	Expected Action	Partners (if joint)	Cost (if any)
Track results progress	Progress data against the results indicators in the RRF will be collected and analysed to assess the progress of the project in achieving the agreed outputs.	Quarterly, or in the frequency required for each indicator.	Slower than expected progress will be addressed by project management.		\$122864
Monitor and Manage Risk	Identify specific risks that may threaten achievement of intended results. Identify and monitor risk management actions using a risk log. This includes monitoring measures and plans that may have been required as per UNDP's Social and Environmental Standards. Audits will be conducted in accordance with UNDP's audit policy to manage financial risk.	Quarterly	Risks are identified by project management and actions are taken to manage risk. The risk log is actively maintained to keep track of identified risks and actions taken.		In office
Learn	Knowledge, good practices and lessons will be captured regularly, as well as actively sourced from other projects and partners and integrated back into the project.	Bi annually	Relevant lessons are captured by the project team and used to inform management decisions.		\$33680
Annual Project Quality Assurance	The quality of the project will be assessed against UNDP's quality standards to identify project strengths and weaknesses and to inform management decision making to improve the project.	Annually	Areas of strength and weakness will be reviewed by project management and used to inform decisions to improve project performance.		In Office
Review and Make Course Corrections	Internal review of data and evidence from all monitoring actions to inform decision making.	Bi Annually	Performance data, risks, lessons and quality will be discussed by the project board and used to make course corrections.		In Office
Project Report	A progress report will be presented to the Project Board and key stakeholders, consisting of progress data showing the results achieved against pre-defined annual targets at the output level, the annual project quality rating summary, an updated risk log with mitigation measures, and any evaluation or review reports prepared over the period.	Quarterly and Annually, Endline			
Project Review (Project Board)	The project's governance mechanism (i.e., project board) will hold regular project reviews to assess the performance of the project and review the Multi-Year	quarterly	Any quality concerns or slower than expected progress should be discussed by the project board and		\$10000