

Annual Performance Report (APR)

Reference Number (FP072): Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia
UNDP

*Annual Reporting Period Covered in this Report:
From 01-01-2020 to 31-12-2020)*

Sections in this report:

- Section 1: General Information
- Section 2: Implementation Progress
- Section 3: Financial Information¹ ([excel report hyperlinked](#))
- Section 4: Report on Environmental and Social Safeguards & Gender
- Section 5: Annexes
- Section 6: Attachments

SUBMITTED BY	
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<i>Please indicate if this report has been shared with the relevant NDA(s) for this Funded Activity: Yes</i>	<i>Date of submission to NDA: 26 February 2021</i>

¹ Please refer to hyperlinked excel worksheet “APR Section 3 (Financial Information)”

SECTION 1: GENERAL INFORMATION

This section provides general information on the funded activity.

1. Funded Activity Title:	<i>Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia</i>
2. Funding Proposal Number:	<i>(FP072)</i>
3. Date of Board approval - Board Meeting Number:	3/1/2018 <i>B.19</i>
4. Accredited Entity:	<i>UNDP</i>
5. Focal Point of the Accredited Entity for this Project:	<i>Mr. Benjamin Larroquette email/telephone</i> Benjamin.larroquette@undp.org +919786293578
6. Executing Entity(ies):	<i>Ministry of Agriculture</i>
7. Implementation Period:	<i>From:</i> 10/12/2018 <i>To:</i> 10/12/2025
8. Current year of Implementation:	<i>Year 3</i>
9. Date of Submission of the Report:	2/27/2021
10. Annual Reporting period covered in this report:	<i>From:</i> 1/1/2020 <i>To:</i> 12/31/2020
11. Total Project Budget:	<i>137,269,000.00</i>
12. Total amount of GCF Proceeds Approved:	<i>32,000,000.00</i>
13. Total amount of GCF Proceeds disbursed (cumulative) to the Accredited Entity:	<i>Grant: US\$</i>

SECTION 2: IMPLEMENTATION PROGRESS

2.1 OVERALL (SUMMARY) PROJECT PROGRESS

In 2020, the implementation of the project called Strengthening Climate Resilience of Agricultural Livelihoods in Agro-Ecological Regions I and II in Zambia (SCRALA), has met with serious challenges, but has never-the-less managed to deliver and achieve a strong impact.

- On the one hand the restrictions associated with Covid-19 had a detrimental impact on activities with a focus on capacity development, especially those that depend on meetings of large groups of people in a closed space.
- On the other hand, two of the responsible parties were able to find ways to adjust and reach out to beneficiaries using different mediums such as radio and SMS. In addition, in some instances, facilitators were able to turn large group training events into smaller, more hands-on training approaches. This placed greater demands on the trainers and yet in the short term was effective.

In terms of support and management functions, SCRALA has struggled to meet its full potential due to the impact of the COVID pandemic, an understaffed Project Management Unit (PMU), delays in procurement and ongoing coordination issues between partners. UNDP and the Ministry of Agriculture (MoA) are in the process of addressing all these issues in the medium term, however it is taking longer than they had planned. Despite these challenges the project has delivered on most of this year's commitments and the impact of the grant and co-finance is starting to be felt on the ground, the details of which are given below.

Under Output 1, improving access to climate change weather related data, the Zambia Meteorological Department (ZMD) was able to successfully release a rainy season forecast for 2020/21 and using radio, SMS, and meetings, they were able to effectively disseminate this information across all the project districts, in many cases, in local languages. In addition, by the end of the year UNDP on behalf of ZMD placed an order with a supplier for 20 Automatic Weather Stations (AWS) which are vital to upgrading the meteorological infrastructure of Zambia. The Zambian Water Resources Management Authority (WARMA) however, continues to experience difficulties in finalising and formalising its roles and responsibilities regarding the project and its relationship with other project partners. The project expects that WARMA and the MoA will reach a formal agreement by the first quarter of 2021.

Under Output 2, the promotion of resilient agricultural livelihoods, under infrastructure development, the MoA with the guidance of the project engineer, has prepared and concluded social agreements, plans and drawings for 9 fish ponds, 1 weir, 158 boreholes, 3 bulking centres and 2 irrigation schemes. UNDP has now handed these schemes over to selected contractors for completion during 2021. In contrast, serious delays in 2020 have hampered the provision of agricultural inputs through a combination of Covid restrictions and procurement issues. Meanwhile training in Conservation Agriculture (CA) has gone off relatively well, with a total of 33,000 famers (40% women and 60 % men) trained. Under activity 2.4, alternative livelihoods, MoA has made some progress in supporting farmers with bee and goat keeping, despite some delays in payments made through mobile phones. On the other hand, fish breeding has been somewhat delayed, and the MoA has put government staff training on alternative livelihoods on hold. Finally, although FAO has made some notable progress with setting up Farmer Field Schools, Covid restrictions have delayed implementation to some extent.

Output 3 of the project has as its focus, processing, post-harvest storage, financial services, and marketing. Apart from the processing activity, which is under the responsibility of MoA and remains on hold due to Covid, WFP implements Output 3. Despite the Covid issues, on the whole WFP activities progressed quite well with.

- 17,631 (46% women) reached by training in post-harvest losses
- 11,891 (51% women) farmers trained in agricultural commodity aggregation
- 15,442 (51% women) in post-harvest storage
- 11,260 (48% women) aggregating and marketing produce valued at US\$ 1.1 million
- 134 savings groups formed.

Additional and proven innovative solutions which WFP is currently setting up include weather related insurance, the rollout of the Warehouse Receipt System and matchmaking farmers to producers.

An outstanding issue which Zambia has faced during 2020 has been a 50% reduction in the value of the Kwacha against the US\$. This has clearly had an impact on the governments co-financing, especially under activities in Output 2. Despite this, as an indication of their commitment to supporting smallholder farmers, the governments budgetary allocations towards the Farmer Input Support Programme (FISP) under Output 2 will increase fourfold in 2021.

To summarise, overall, the project has continued to build on the momentum generated in 2019, however not to the same extent as expected without Covid-19. During 2021 UNDP will need to pay continued attention to ensuring that procurement and the process of streamlining financial transfers continues to improve, while the MoA will need to focus on refining collaboration and coordination between project partners. 2021 will be a critical year for the SCRALA project to be able to fulfil its potential.

2.2 Performance against the GCF Investment Criteria (summary) (max two (2) pages).

2.2.1 Impact Potential (max one (1) page).

Adaptation impact potential

Overall, despite continued erratic rainfalls, resulting in both flooding and drought in several project districts,² as well as the ongoing impact of Covid-19, during 2020 the project has been able to significantly scale-up its impact towards the increased resilience and enhanced livelihoods of the most vulnerable people affected by climate-related disasters and variability in Zambia. As the project has gained momentum, a greater proportion of the vulnerable population have benefitted. Specifically, 397,413 of the planned total number of direct and indirect beneficiaries (946,153 or 157,692 households) benefitted from at least one of the project activities.

The various immediate practical implications for the beneficiaries of these value-chain interventions are:

- Improved access to more timely and accurate weather information
- Increasingly effective use of scarce water resources
- Enhanced climate resilient farming skills and inputs
- And increased returns from farming produce through improved post-harvest processing, transport, and sales.

Under Output 1, “the improved capacity to plan and manage climate risk”, 161,095 (73,419 women, 46% and 87,675 men, 54%) small-scale farmers have received more accurate and localised seasonal weather forecasts and are now in a significantly stronger position to plan for the next planting season. This is because the project has been able to provide increasingly localized detailed and demand-led weather reports, including the development and testing of an SMS based reporting system.

As far as the longer-term impact potential, the increased capacities of ZMD after attending the Southern African Climate Outlook Forum (SARCOF-24) workshop have resulted in significantly improved weather advisories. In addition, the final approval for a supplier for 20 Automatic Weather Stations (AWS) will mean that by the end of 2021, ZMD will have significantly improved data gathering capacities for the most vulnerable parts of Zambia.

Under Output 2, “new climate-resilient agricultural practices and alternative livelihoods”, 165,965 (75,156 women, 48% and 85,785 men, 52%) small scale farmers are now less vulnerable to extreme weather events by availing resilient agricultural inputs and improved skills through the project activities, including;

- receiving drought resistant seeds to 87,899 farmers (39,256 women, 45% and 47,543 men 65%) from GRZ co-financing, despite a significantly worsening economic situation, partly due to the fall-out from Covid-19
- the training of 78,066 lead farmers (35,900 women, 46% and 38,246 men, 54%) in Conservation Agriculture (CA)
- the distribution, passing on and monitoring of goats received directly or bypass-on to 5,494 farmers (2,905 women, 53% and 2,309 men, 47%), as well as
- the completion of preparatory activities for Farmer Field Schools (FFSs) in an additional 6 districts.

² See the IPC update for 2020 for the latest food security related data in Zambia: <http://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1152931/?iso3=ZMB>

In the cases of CA and FFS, district and camp level government staff have received an intensive training of trainers programme which they plan to use for a wide range of applications, beyond the project, over the next years.

Preparatory activities for infrastructure activities include: the completion of bidding for 2021 construction activities for two irrigation schemes and three bulking centres, as well as the development of operation and maintenance manuals for a community managed multipurpose irrigation weir. In addition, the project engineer has been able to mentor government irrigation staff in standard operating procedures both for the construction and well as the maintenance of civil works.

The focus of Output 3 is on “post-harvest value addition”. These activities are distinctive to this an innovative value-chain project, which seeks to “join the dots” for the beneficiaries, from the seed to sales. Beneficiaries under output 3 have included 18,386 farmers (10,233 women, 56% and 8,153 men, 44%) who have accesses training in postharvest storage solutions as well as savings and credit, with the formation of 134 savings groups,

Under output 3, apart from the direct impacts on beneficiaries, during 2020 the focus has been on making connections with the private sector, including 4 financial service providers, to accesses financial services and directly source produce from project beneficiaries. In addition, WFP carried out several trainings for central and local government staff in 14 of the 16 target districts on commodity aggregation, warehousing and insurance products linked to weather indices.

2.2.2 Paradigm shift potential

Potential for scaling up and replication

The project selected the target area specifically for its vulnerability to climate change risks and a high incidence of poverty. Already during the first two years of the project, drought and floods have had a direct impact on the lives of project beneficiaries. However, despite this challenging environmental and economic context, the projects theory of change aims to improve famers capacities in planning for climate risk, diversifying and improving agricultural production, as well as maximising post-production opportunities. In other words, the project aims to turn project beneficiaries from vulnerable subsistence farmers to resilient individuals and communities with the capacities to plan for and respond to climate related risks. If the projects theory of change proves to be viable in this part of Zambia, the approach taken has even greater potential in the parts of the country with higher potential and less risk from clime related impacts.

Potential for knowledge and learning

To maximise documentation and learning, during 2020 the project has made concerted efforts to re-examine and deepen baseline information concerning the projects social and economic context at the district and camp levels. Local consultants IPSOS, working in cooperation with C4ED, collaborators on the GCF Learning-Oriented Real-Time Impact Assessment (LORTA) initiative, have been working closely together on an in-depth study of ground conditions in project target districts. The aim of the Impact Evaluation (IE) baseline assessment is to be able to provide evidence of tangible changes linked to the impact of project activities. These findings will directly feedback into the way that the project is run, with lessons learned and good practices being extended to other projects across Zambia.

Contribution to the creation of an enabling environment

For SCRALA, or any other intervention to succeed in many rural parts of Zambia, the project must make investments in developing human resources at all levels.

Especially during the first two to three years of the project, the emphasis of project activities has been on building the capacity of local government, from the camp to district and national levels. With the aim of reviewing and consolidating the various capacity development initiatives, during the third quarter of 2020 the MoA took the initiative to carry out a training needs assessment exercise in all 16 project districts. The results indicate that urgent needs remain in both the technical as well as the administrative capacities. Using the results of the assessment, the project will roll out a collaborative approach to training needs out during 2021.

Contribution to regulatory frameworks and policies

The Technical Committee on Climate Change (TC) as well as the Steering Committee on Climate Change (SC) met four times during 2020. Both committees have representatives from the NDA (Ministry of National Development Planning), including the National Coordinator in the TC meetings. In addition, senior representatives, including Permanent Secretaries and the Directors of at least seven ministries and additional agencies and departments attend the meetings

in which SCRALA was one of the main topics for review. In this way, although the project is not having a direct role in policy and regulatory framework development, it does serve as an example of a resilient climate change project.

Management in the UNDP Country Office acknowledge that the agency could do more as far as contributions to national discussions around climate change, gender as well as the environment. Partly because of a shift from physical to virtual meetings due to Covid restrictions, in this respect, 2020 was a particularly slow year for policy discussions. The project has made a first step in resolving this issue through the development of a draft revised project structure to include the specific function of Policy.

2.2.3 Sustainable development potential

The SCRALA project contributes to the achievement of several SDG's, in particular SDG 2 (zero hunger), SDG 1 (no poverty), SDG 13 (climate action) and SDG 8 (decent work and economic growth).

Economic benefits

Economic benefits correlate most closely to SDG 1 No poverty and 2, Zero hunger. Those beneficiaries who have directly received inputs and materials such as seeds and tools, as well as goats and bees have obviously benefitted from the project in very real terms already. By the end of 2021 a substantial number of beneficiaries will also benefit from access to irrigation and fishponds.

In the medium term, ongoing capacity development in the form of training and hands-on demonstrations in terms of topics like acting on climate information, Conservation Agriculture, Farmer Field Schools, Post-harvest storage and financial services will serve to significantly increase the livelihood options and potential for beneficiaries.

Social benefits

Having access to sufficient food and a basic income allows individuals and households to be able to make a wider range of decisions about their life choices. In other words, it gives people greater agency and enables them to be more resilient in the face of shocks. This in turn enables subsistence farmers to become increasingly engaged with the world outside of their immediate contexts, for instance in terms of access to further education, financial services, and markets for their produce at the national level. In this sense, for the project resilience means more than simply the absence of vulnerability. Resilience implies the capacity for individuals, households, and communities to not only bounce back, but also learn and adapt to prevent and mitigate against shocks in the future.

Environmental benefits

As this project lifts the beneficiaries out of poverty and from vulnerability to resilience, the environment will be at a reduced risk from over exploitation, for instance through overgrazing and charcoal burning, as a coping mechanism. For example, if farmers can grow more produce and gain more income from the same area or even a smaller plot of land

- more land may be set aside for the purposes of ecological regeneration / watershed protection and
- there is less pressure to harvest trees
- there is more available forage for livestock to graze without over exploiting common grazing lands.

Gender-sensitive development impact

In the last quarter of 2020, the project contracted an experienced gender expert. From the second quarter she plans to support the project to initiate broader learning processes and events beyond day-to-day activities, including training, exchanges and collaborations with other partners involved with gender in development in Zambia. The aim of these initiatives is to leverage lessons learned and good practices for broader application across the country.

2.2.4 Needs of the recipient

Vulnerability of country and beneficiary groups

According to the most recent Integrated Phase Classification IPC ACUTE FOOD INSECURITY ANALYSIS July 2020 – March 2021 Issued in December 2020³, “it is estimated that around 1.42 million people (22% of the analysed population) were facing high levels of acute food insecurity (IPC Phase 3 or above) between July and September 2020, despite increased crop production in most areas”. According to the same analysis, the report rated 13 out of the 16 project Districts as being “in crisis” at the time of reporting. The project districts have faced either droughts, floods or in some cases both, with Covid-19 resulting in reductions in remittances to the countryside during 2020 and projected into 2021. The report goes on to suggest the urgent need for proposed solutions very much in line with the activities that the project is implementing, including improved early warning, small-scale irrigation, climate-smart agriculture and creating market linkages.

This information clearly indicates that the overall geographical targeting of the project is still very relevant and in addition, project interventions remain as appropriate now as they were at the time of project initiation.

Financial, economic, social, and institutional needs

In November 2020 Zambia became the first African country to default on its debt repayments since the onset of the Corona virus and despite having the African continent's second-largest copper deposits, Zambia's external debt has surged to nearly 12 billion US\$ during 2020. Based on those figures, experts consider it extremely challenging for Zambia to be able to implement its national budget as planned during 2021. It is unclear if and how this will impact the MoAs co-financing contributions as well as regular costs. A separate document⁴ is available through the link below which goes into more detail on this topic.

As far as the specific institutional needs of this project, during 2020 it has become clear that in many cases government staff have greatly differing levels of technical skills. Participants discussed this topic during the third quarterly project meeting and as a result the MoA carried out a Training Needs Assessment which detailed the areas where the needs were most urgent.

2.2.5 Country Ownership

Beneficiary country ownership of, and capacity to, implement a funded project or programme.

Existence of a national climate strategy and coherence with existing plans and policies, including NAMAs, NAPA and NAPs.

As stated in the Financial Proposal, the project remains closely aligned with the government's national policies and strategies related to sustainable development, as well as climate change. These include, Zambia's Revised Sixth National Development Plan, Vision 2030 Strategy, the NAP and NAIP as well as the National Climate Change Response Strategy and national Climate Change Policy.

In October 2020, UNDP and FAO collaborated to publish a cost-benefit analysis to analyse the financial and economic worthiness of conservation agriculture practices, under the Integrating Agricultural Sectors into National Adaptation Plans programme (NAP-Ag) with the aim of generating empirical evidence about adaptation options in agriculture and to inform adaptation policy dialogues in Zambia: Conservation agriculture for climate change adaptation in Zambia: A cost-benefit analysis⁵. This is highly relevant to the project, especially for activity 2.3 for which Conservation Agriculture (CA) forms the basis. The Conservation Farming Unit (CFU), a local partner of the MoA takes a large role in implementing this activity and considering the findings of the report the CFU have adopted the recommendations, including the provision of additional ongoing support for the transition period from conventional agriculture to CA.

Capacity of accredited entities and executing entities to deliver

Despite difficulties with Covid-19 in 2020, UNDP and the MoA have been able to continue to demonstrate their capacities to deliver. Solutions have included putting a greater emphasis on virtual meetings and interactions as well as a rotating staff presence in their respective offices.

During 2020 the MoA and UNDP have given increased attention to improving their communication and collaboration, including a draft combined and revised organisational structure which will pave the way for increased clarity on

³ Ibid <http://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1152931/?iso3=ZMB>

⁴ A Reduction of the Exchange Rate Between the US \$ and the Zambian Kwacha Implications for the SCRALA project – January 2021

<https://www.dropbox.com/s/t2qc4ohiiuopj1b/Explanation%20of%20co-financing%20for%20SCRALA%20during%202020%2020012021.docx?dl=0>

⁵ <https://www.adaptation-undp.org/resources/case-study/conservation-agriculture-climate-change-adaptation-zambia-cost-benefit-analysis>

respective roles and responsibilities. In addition, the PMU is now physically located in the MoA which has automatically increased the frequency of interactions between staff members.

Engagement with NDAs, civil society organisations and other relevant stakeholders

In 2020, at the Steering Committee (SC) and technical SC meetings, the Zambia Climate Change Zambia Network (ZCCN) represented the perspectives of NGO's and civil society organisations. UNDP is a donor of ZCCN.

During 2020 WFP has actively collaborated with the International Fund for Agricultural Development (IFAD) to support the Ministry of Fisheries and Livestock (MFL) in rolling out the Livestock Index Insurance, which aims at protecting smallholder farmers from losses resulting from shocks and helping them buy feed for their livestock. With the contribution from GCF, WFP is supporting the technical product design and capacity building activities, while IFAD is supporting the private sector market development of the product uptake by financing premiums for 5,000 farmers participating in the pilot phase.

In addition, under activity 2.5, the Zambia Agricultural Research Institute (ZARI), through the Msekera Research Station in Eastern Province, partnered with FAO in undertaking the diagnostic exercise for the roll out of the Farmer Field Schools (FFS) over 6 additional project districts. A validation exercise carried out with FAO was able to demonstrate the quality and relevance of the work carried out.

2.2.6 Efficiency and Effectiveness

Economic and, if appropriate, financial soundness of the project/programme

Cost-effectiveness and efficiency

During 2020, on behalf of WFP the MoA has been finalising contracts to build three warehouses which they will use as bulking or aggregation centres for the beneficiaries. In addition, the MoA continued its successful partnership with ZMD to put together agricultural advisories based on information from the projected rainfall figures. ZMD then included the advisories in the climate change adaption information packages which were issued over SMS and radio as well as physical meetings with small scale farmers. Finally, FAO and the MoA have continued to make the best use of their respective skills, knowledge, and presence in the field to successfully establish two centres of excellence and carry out capacity development activities in the Farmer Field School methodologies.

Financial viability

WFP, under activity 3.4, has been active in rural market aggregation. Building on the initial activities implemented in the 2019, and following good harvests during the 2019/2020 agricultural season, the current marketing season showed significant scope for aggregation, with 6,348 metric tonnes of various commodities including white and orange maize, cowpeas, groundnuts, sunflower, and soya beans marketed through the aggregation network worth ZMW 23,039,170.40 (USD1,129,925) in Namwala, Nyimba and Gwembe districts.

During 2020 the World Food Programme (WFP) also went to scale in implementing its three project activities under Output 3, namely activity 3.2, 3.3 and 3.4. An overall approach that WFP has taken is one of market engagement and supporting public / private linkages with the broader aim of ensuring financial viability. For instance, under activity 3.2, in collaboration with the Lusaka Securities Exchange (LuSE) and the Zambia Commodity Exchange (ZAMACE) WFP will operationalise the electronic Warehouse Receipt System (WRS), WFP, by generating WRS awareness among smallholder farmers to enhance their access to diversified commodity markets.

In addition, WFP and Digital PayGO, a financial technology (fintech) company and subsidiary of the Zambia National Commercial Bank (ZANACO), have started the redevelopment of the Virtual Farmers Market (VFM) and Dial-a-load application. The digital marketing platform brings together various players including input suppliers, transporters, and financial institutions to offer services to smallholder farmers, especially those with last mile challenges. The VFM will eventually merge with Agripay, a payment solution that offers farmers services to transact, save, send, and receive money.

Under activity 3.3 WFP was also able to make significant progress in training government staff of weather index insurance as well as the livestock index insurance.

Application of best practices

During 2020, to some extent all activities have had to deal with delays related to controls to reduce the spread of Covid-19. This has had obvious implications as far as meetings between project staff and with beneficiaries. One of the

practical ways in which the project has responded has been to emphasise those interventions which can take part either by SMS or radio.

ZMD has been able to further increase its reach during 2020 by developing and releasing weather information through an innovative SMS weather forecast system as well as translating the 2020/21 rainy season forecasts into seven local languages which they broadcast on local radio stations covering all the project districts.

In addition, as part of efforts to promote awareness on Post-Harvest loss Management (PHM) among smallholder farmers, WFP developed radio programmes on PHM that they aired on Zambia National Broadcasting Corporation (ZNBC), targeting all the 16 districts, thereby minimizing human-to-human contact while continuing disseminating PHM messages amidst the COVID-19 pandemic. ZNBC produced 31 radio programmes in four major local languages (Nyanja, Bemba, Lozi and Tonga).

2.3 PROJECT OUTPUTS IMPLEMENTATION STATUS			
Project Output	Project Activity	Status	Implementation progress (%)
<p><i>1. Smallholder farmers are able to plan for and manage climate risk to support resilient agricultural production</i></p>	<p><i>Project Activity 1.1 Strengthen generation and interpretation of climate information and data collection to ensure timely and detailed weather, climate, crop and hydrological forecasts are available to support smallholder farmers in planning and management of water resources used in resilient agricultural practices</i></p>	<p>Activity Started -progress delayed</p>	<p>10%</p>
	<p>Overall implementation of activity 1.1 has been challenging in 2020. Issues included delays in the procurement of procurement of Automatic Weather Stations (AWS) as well as consultants. On the other hand, there are reasons for optimism starting from the first quarter of 2021.</p> <p>ZMD</p> <p>Beginning in 2019, the project encountered several serious delays in the procurement of the AWSs. Issues centred around coming to common agreements on technical specifications, as well as delays met in carrying out procurement procedures. The partners were able to eventually resolve these difficulties and UNDP placed the order in November. The supplier plans to deliver the AWS's before the end of January 2021 and site preparation and installation will proceed as quickly as possible, for completion before the 2021 / 22 rainy season begins.</p> <p>WARMA</p> <p>WARMA has created Expressions of Interest (EoI) and finalized the ToRs for the three consultants for 1. planning, designing, and enhancing specifications for boreholes; 2. surface water specifications as well as 3. ensuring that the plans for the regional water quality laboratory will meet accreditation standards. The next step will be to advertise in national papers as required by the Zambia Public Procurement Regulations. The consultant contracting process should be complete by the first quarter of 2021. Unfortunately, it has become apparent that the ideal candidate as consultant for surface water specifications may not be available in country in which case UNDP may need to launch an international call for candidates.</p> <p>The two remaining milestones under activity 1.1 for WARMA in 2020, namely: Construct 5 gauging weirs and commence construction for the regional water quality testing laboratory, require the input of consultants before they can proceed.</p> <p>WARMA, UNDP and the MoA continue to experience difficulties in finalising and formalising their respective roles and responsibilities regarding the project and its relationship with other project partners. The partners met to address this issue in December, and they expect to conclude the details of a formal agreement by the first quarter of 2021.</p>	<ul style="list-style-type: none"> • ZMD - 220 rainfall stations procured, installed, fenced and in use. • ZMD - 220 camp officers (166 men & 54 women) and 440 Lead farmers (242 men and 198 women) trained in capturing and interpreting basic rainfall information. • ZMD - Technicians (20 men and 10 women) trained in operating and maintaining of AWS and related infrastructure. The necessary spares purchased. • ZMD – Complete specialized short-term training in the production of Climate, Hydromet, Agromet services using tools under the MOSAICC platform target for 15 staff (9 men and 6 women). • ZMD – Engage Mulungushi University, University of Zambia, Copperbelt University, MoA, WARMA and other stakeholders to revise the curriculum content for the Climatology programme and strengthen Agromet, Hydromet, Statistics and Mathematics courses. • WARMA - Construction of 10 groundwater monitoring boreholes and 5 surface water monitoring stations. Installation of water tracking equipment. • WARMA – 20 staff trained (15 men and 5 women) in the use of water tracking equipment. • WARMA – Phase 1 of the construction of a Regional State of the Art Water Quality 	

		Laboratory complete.						
	<i>Project Activity 1.2. Strengthen dissemination and use of tailored weather/climate-based agricultural advisories to ensure smallholder farmers receive the information they need for planning and decision-making</i>	<table> <tr> <td>Activity Started</td><td>-progress</td><td>25%</td></tr> <tr> <td>delayed</td><td></td><td></td></tr> </table>	Activity Started	-progress	25%	delayed		
Activity Started	-progress	25%						
delayed								
	<p>Despite some potential issues due to Covid restrictions, ZMD was able to successfully develop and disseminate the rainy season forecast for 2020/21 through several mediums. On the other hand, WARMA's progress is slow due to continued unclarity on respective roles and responsibilities.</p> <p>ZMD</p> <p>Southern African Regional Climate Outlook Forum (SARCOF 24)</p> <p>Due to COVID-19 travel restrictions, the hosts, the Southern African Development Community (SADC), carried out the first CLIMATE EXPECT meeting virtually from the 10th – 26th of August. The purpose of the meeting was to generate the 2020/21 regional rainy season forecast for Southern Africa and the participants achieved this successfully⁶. A total of 24 staff took part in the main climate expert meeting, of which 10 were from the provinces, 3 from MoA, 1 from WARMA and 10 from ZMD HQ (5 women, 21% and 19 men, 79%).</p> <p>The USER FORUM MEETING took place on 27th & 28th August. 49 participants attended physically while 12 participated virtually, giving a total of 61 participants (13 women, 20% and 48 men, 80%) for this meeting. Its purpose is for climate sensitivity sectors to generate impacts and mitigation measures for the generated SADC forecast and the meeting was a success in this regard.</p> <p>Customised local weather forecasts</p> <p>After generation of the regional (SADC) rainy season forecast, each SADC member state downscales the regional forecast to a country forecast. Downscaling increases the resolution of the forecast, create accompanying agricultural advisories, and makes it easier to incorporate into the local sector and community plans for decision-making. The project translated the forecast into seven local languages and the director of ZMD officially launched the 2020/2021 Rainy Season Forecast on the 4th September 2020. This forecast comprises attachment 2 of this report⁷.</p> <p>ZMD held dissemination workshops for the 2020/2021 rainy season forecast and agricultural advisories in all 16 project districts⁸. Additionally, with the aim of increasing farmers preparedness, two selected agricultural blocks in each project district also took part in dissemination workshops where forecasts indicated adverse weather. In</p>	<ul style="list-style-type: none"> • ZMD / WARMA – Support staff and permanent representative (38 men and 6 women) to attend the WMO as well as the SADC Climate Expert Forum meeting for the 2021/2022 rainy seasonal forecast. • ZMD / WARMA – support 40 staff (34 men and 6 women) to downscale the Regional 2021/2022 Rainy Seasonal Forecast to be able to launch the location specific 2021/2022 rainy season forecast and translate them into local languages. • ZMD – Carry out workshops to strengthen the capacity for the interpretation and dissemination of the Rainy Season Forecast and the advisories in 5 provincial capitals, all 16 project districts, on Community Radio Stations and a digital interactive mobile app, targeting a total of 250,000 people (60 % men and 40% women). • WARMA - Capacity building for 15 WARMA staff (12 men and 3 women) in the localization of the Global Flood Awareness Platform (GLOFAS) to the 16 Districts of the Project area. • WARMA – Train 80 extension officers (60 men and 20 women) in water management, irrigation scheduling and water user associations, including an operations manual 						

⁶ https://www.sadc.int/files/1215/9980/9222/24th_SARCOF_Statement_on_Climate-English.pdf

⁷ <https://www.dropbox.com/s/rad3zzyvnu4a798/Attachment%202%20-%202020%2B2021%20Rainy%20Season%20Forecast%20FINAL.pdf?dl=0>

⁸ <https://www.facebook.com/ClimateChangeAdaptationProjectinZambia/videos/870286870399325/>

	<p>some cases, dissemination took place later than planned and as a response, ZMD has planned for an earlier dissemination next year.</p> <p>SMS weather platform</p> <p>During 2020 ZMD supervised the development of an SMS platform/portal for issuing alerts to enhance efficient transmitting of climate information and advisories to smallholder farmers. In addition to basic one-way weather information, the platform also provides a feedback mechanism for users to send real time information and updates. In addition, the service provider trained four ZMD and one MoA staff on how to add users, assign roles, develop SMS messages, send, and respond to feedback.</p> <p>Training media outlets</p> <p>ZMD held a four-day training workshop for media personnel in weather and climate information dissemination. The aim of these workshops was to improve the methods of dissemination of climate information to the smallholder farmers in the 16 project districts. The trainers did this by broadening and improving the basic understanding of weather and climate information by the media personnel, as well as helping them to package their messages to match the needs of the small holder farmers most effectively.</p> <p>The net effect of these weather forecasts on project beneficiaries us brought to life in the following story about the impact they have had on the lives of women in Chongwe District: Fighting Extreme Weather https://undp-climate.exposure.co/fighting-extreme-weather, attachment 6 of the APR.</p> <p>WARMA</p> <p>As part of the milestones for activity 1.2, namely a. the preparation for sector tailored water advisories and b. Ongoing capacity development for flood and drought forecasting, to produce more accurate water advisories; WARMA attended the Virtual Meeting for Climate Users Platform at SARCOF-24 between 10th and 24th August, 2020 as described above.</p> <p>Upon request from ZMD, WARMA also participated in the development of ToRs for the Consultant who was to conduct climate information needs assessment to improve development and dissemination of tailored advisories in the Project Area.</p> <p>Unfortunately, due in part to Covid travel restrictions, WARMA put on hold the milestones of: c. Testing improved early warning systems for droughts and floods and d. Carrying out training for District and camp level officers and extension workers on improved water management and irrigation scheduling.</p>	and local laws for water usage grievance mechanism and in all 16 districts.	
2. Resilient agricultural livelihoods are promoted in the face of changing rainfall, increasing drought and occasional floods	<p><i>Project Activity 2.1 Promote irrigation schemes, water storage, and capture as well as other resilient water management strategies to increase access to water for agricultural production in the target districts within Agro-Ecological Regions I and II</i></p> <p>The emphasis of infrastructure activities in 2020 has been on the preparation and procurement of contracts to carry out the various construction projects. Therefore, it is too early to quantify the number of beneficiaries.</p>	Activity Started -progress on track	25%
		• Construction of 20 fishponds and 10 water ponds for livestock in 6 districts.	

	<p>Preparatory activities have proven to be more time consuming than planned and this has led to some delays. As a response, UNDP have increased their procurement capacities to meet the demand.</p> <p>Fishponds (for MoA activity 2.4)</p> <p>Despite a slow start due to delays in getting to the field, a fish specialist from the Ministry of Livestock was able to conduct a technical assessment. Following from the assessment, the project engineer completed the required designs and specifications. UNDP / MoA has advertised the tender for procurement of fish breeding units and evaluations are ongoing. The selected contractors will begin fishpond construction in March 2021.</p> <p>Community managed multi-purpose weir</p> <p>The site of the weir in Mafinga district is a Covid hotspot due to its proximity to the border with Tanzania and this had initially delayed the surveying. Despite this, the project engineer has been able to complete the designs and Bill of Quantities (BoQs) for the community weir and the MoA will carry out the tendering process in the first quarter of 2021.</p> <p>Boreholes</p> <p>The MoA and contractors have signed a contract for the construction of 158 boreholes in 15 districts. Project staff expect the construction to be complete by April 2021. 2021 has been a preparatory year for the digging of boreholes and therefore it is too early to quantify the number of beneficiaries.</p> <p>Bulking centres (for WFP under activity 3.2)</p> <p>The MoA and the contractors have signed the contract for the three bulking centres in Kazungula, Nyimba and Senanga and the sites have been handed over to the contractors to begin construction. The project team expect construction to be complete by the end of the first quarter of 2021.</p> <p>Small-scale irrigation canals and water distribution systems</p> <p>The MoA and contractors have signed agreements for the construction of two irrigation schemes in Chirundu and Sioma and the site has been handed over to the contractors. The members of the cooperatives to run the irrigation scheme in both districts have formed and registered their cooperatives.</p> <p>The other four sites were late in getting Environmental clearance from the Zambia Environmental Management Agency (ZEMA) and therefore the project will implement them in 2021.</p> <p>Initial Operation and Maintenance strategies in place</p> <p>The project engineer has completed the draft Operation and Maintenance (O&M) guidelines. The project will finalise them after the commissioning of the irrigation schemes.</p> <p>O&M procedures for small-scale irrigation schemes</p>	<ul style="list-style-type: none"> • Construction of 6 multipurpose weirs and associated canals in 4 districts primarily for water storage for irrigation and livestock. • Construction of 25 solar powered low-pressure drip irrigation schemes in 15 districts. • Procurement of 5 sets of surveying equipment and training in design software for 24 (20 men and 4 women) technical officers. • Construction of 6 bulking centres for the aggregation of small-holder harvests to create supply chain linkages to markets under Output 3. • 3,000 farmers and extension officers (40% men and 60% women) trained in use of newly installed irrigation equipment and water management in 25 irrigation schemes. • Formation and operation of 30 water user associations in the districts with at least 50% women representatives. • 16 ESS management plans developed, and 16 risk registers developed for the 16 project districts.
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	<p>As a first step in this activity, in the first week of December, a firm called Netafim carried out a ToT for 24 irrigation officers (23 men and 1 woman) in the O&M of drip irrigation systems. The participants received the training very well. Please find details of the training programme as Attachment 4⁹. The next step will be for the officers to train the farmers in Quarter 2.</p> <p>Water User Associations</p> <p>The project engineer has completed drawing up draft WUA guidelines. However, a current lack of legislation has delayed the formation of WUAs. Despite this, one Water User Association (WUA) has begun informally in Chirundu district and they formed a committee of 10 people with 40% women representation. The project plans to initiate another informal WUA for Sioma, which will be form in February.</p>				
	<p><i>Project Activity 2.2 Increased access to agricultural inputs (e.g. seeds, soil kits, tools) for resilient crops</i></p>	<table> <tr> <td>Activity Started</td><td>-progress delayed</td><td>20%</td></tr> </table>	Activity Started	-progress delayed	20%
Activity Started	-progress delayed	20%			
	<p>2020 was a difficult year for activity 2.2, with the delayed procurement of seeds and the impact of Covid restrictions on events requiring large gatherings.</p> <p>Drought resistant seed</p> <p>Due to a late start in the procurement process, the planned purchase of resilient seeds, seedlings and fertilisers did not take place as planned and therefore no credible suppliers were available to supply the inputs in time for the planting season.</p> <p>In response to this, two districts asked for permission to use some funds that had remained from the conservation farming ToT. Siavonga district bought input seeds for 100 farmers lead farmers, Nyimba bought seed for 16 farmers.</p> <p>As far as the procurement of tools within the same activity, those for sprayers and rippers went ahead and the MoA will supply 1,500 rippers and sprayers to 1,500 beneficiaries by the middle of March.</p> <p>To avoid these delays in procurement in the future, the MoA and UNDP will make the requests for procurement as early as possible and they will schedule additional time for concluding the contracts.</p> <p>Cooperatives trained/strengthened</p> <p>Due to Covid-19 restrictions on gatherings, the MoA formed only two cooperatives during 2020. The two cooperatives formed in Chirundu and Sioma and the government officially incorporated them as a special priority so that the irrigation schemes could go ahead as planned.</p>	<ul style="list-style-type: none"> • 118 Senior Agricultural Officer and Crops Officers (64 men, 54% and 54 women, 46%) trained in seed production • 786 seed growers (gender breakup unavailable) trained in seed production in selected camps and seed growers associations formed. • One central training for 32 seed inspectors (15 women, 47% and 17 men 53%) conducted. • Procure and distribute start-up inputs for 20 hectares of completed Irrigation Schemes • Purchase pest resistant seeds and equipment for 4,670 Lead farmers (gender break up TBD) in Conservation Agriculture (CA). • Procure 80 soil testing kits, 5 for each district. • Certify 786 seed growers (40% women, 60% men) by Seed Control and Certification Institute (SCCI). 			

⁹ https://www.dropbox.com/s/6fk6qr9oxwohkrq/Attachement%204%20-%20NETAFIM_UNDP%20TRAINING%20PROGRAM%202020_11_25.pdf?dl=0

	<p>Agricultural field days</p> <p>Agricultural field days involve large public gatherings of people and the government normally organises them between April and August. These months coincided with the time of strictest Covid-19 restrictions and therefore no field days took place.</p> <p>Farmer Input Supply Programme (FISP)</p> <p>Despite a worsening exchange rate against the US \$ the pack went ahead in the project districts and 87,899 farmers (47,543 men, 54% and 39,256 women 46%) in the project districts benefitted from the programme.</p>		
	<p><i>Project Activity 2.3 Introduction of new resilient agricultural production practices to strengthen production and diversify crops amidst climate variability and change</i></p>	Activity Started -progress delayed	25%
	<p>Despite the threat of Covid restrictions training and the project was able to carry out the training and rollout of Conservation Agriculture (CA) successfully.</p> <p>Training in crop diversification</p> <p>Phase 1 of the CA rollout is the ToT training for the government agriculture and extension staff. The MoA, with assistance from an NGO called the Conservation Farming Unit (CFU https://conservationagriculture.org/) carried out training for a total of 372 individuals trained. (64 District staff; 14 (16) RAs; 20 Provincial staff; 50 BEOs; 224 CEOs. gender disaggregation pending).</p> <p>Practicing one or more CA technologies.</p> <p>Phase 2, of the CA Rollout shifts the emphasis to farmers and the MoA has achieved the following:</p> <ul style="list-style-type: none"> • The identification of Lead Farmers (LFs) and Follower Farmers (FFs) • Roll out training to LFs, which the CFU and MoA conducted in the fourth quarter of 2020. Participants included 2 LFs per zone or 10 LFs per camp for a total of 2,200 LFs • Each LF trained 15 FF for a total of 33,000 farmers (13,200 women, 19,800 men, 60%) trained in CA during 2020.¹⁰ 	<ul style="list-style-type: none"> • Identification and training of 4,670 Lead farmers (40% women, 60% men). • Outreach to 70,000 follower farmers (40% women and 60% men), in CA, including monthly backstopping by extension workers, including crop residue management, setting up 4,670 demonstration plots, selection and land preparation. • Follow up CA practice through extension (Field days, Seed fairs, Exchange visits, Agritech Expo, documentaries and radio programmes with 44,000 farmers supported to attend field days (40% women and 60% men). 	
	<p><i>Project Activity 2.4 Introduce alternative livelihoods to strengthen resilience in target communities</i></p>	Activity Started -progress on track	20%
	<p>Alternative livelihood activities were late in some districts like Chirundu, due to the delayed release of funds through mobile banking, which requires a thorough verification of mobile phone owners through third parties</p>	<ul style="list-style-type: none"> • 300 smallholder farmers (gender breakup TBD) supported with inputs for rising chickens in 4 districts. 	

¹⁰ https://fb.watch/37DcB3_Qi1/

	<p>before payment. In the future, the MoA will verify mobile phone numbers in advance of requests for funds from UNDP.</p> <p>In addition, following a financial accountability assessment in 2019, districts have made some progress towards ensuring the clearance for the transfer of funds directly from UNDP. Following recommendations for follow up, UNDP will check on progress towards compliance shortly, with the expectation of improved funds transfer in the future.</p> <p>Inputs for alternative livelihoods</p> <p>The project supported 2,727 (1,091 women, 40% and 1,636 men, 60%) farmers with 5 goats each in the 2nd phase of the goat distribution. This constitutes 95% completion of the target and the MoA will distribute the remaining goats by the end of Jan 2021.</p> <p>Fish breeding cooperatives</p> <p>The project made good progress on building nine fishponds, please see activity 2.1 above for details. UNDP and MoA will conclude the procurement of fish breeding by the end of January, to coincide with the completion of construction by quarter 2, 2021</p> <p>Due to Covid restrictions on meetings, cooperatives have struggled to form during 2020. The MoA held preliminary meetings for the formation of cooperatives in Chongwe, but they have yet to complete the process.</p> <p>Strengthened capacity to adopt and maintain alternative livelihoods.</p> <p>Out of the 7,000 famers that the MoA targeted, 5,494 (2,309 men, 42% and 2,905 women, 58%) including pass-on beneficiaries have so far received goats. The mode of payments for the goats was through mobile money which turned out to be time-consuming and tedious. The MoA and UNDP have made plans for improving the processes efficiency in 2021.</p> <p>Policy makers sensitized on alternative livelihoods.</p> <p>Due to Covid restrictions, the MoA has not carried out this activity.</p> <p>Beekeeping farming</p> <p>A firm signed 5 contracts to train 500 farmers spread over 5 districts i.e., 100 farmers per district, in beekeeping and supply them with inputs. These districts are Luangwa, Gwembe, Sesheke, Kazungula and Mulobezi. By the end of the training 592 farmers (334 men, 56% and 258 women, 44%) had benefitted. The MoA plans field visits and exchanges for 2021. ¹¹</p>	<ul style="list-style-type: none"> • Support 1,140 farmers (gender breakup TBD) with beekeeping inputs in 8 districts through linkages with the private sector. • Carry out training of farmers (20 men and 60 women) in improved fish farming and support with starter inputs. • Support 1,500 farmers with inputs to start goat keeping including water points in 4 districts. • Establish two cooperatives to manage fish breeding. • Strengthen the capacity of 7,055 farmers (at least 2,862 of them women) to adopt and maintain alternative livelihoods, through trainings in all the 16 districts in goat rearing, beekeeping, and fish farming. • 220 camp extension officers trained (54 women and 166 men) on the Prevention of Sexual Exploitation and Abuse and Gender as well as the Grievance Redress Mechanism (GRM) undertaken.
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¹¹ <https://fb.watch/37Dibo1eXx/>

	Project Activity 2.5 Establish farmer field schools and learning centres of excellence to further document and scale up successful practices	Activity Started -progress on track	20%
	<p>Due to the COVID 19 pandemic restrictions on community/farmer gatherings, FAO did not undertake all the planned activities planned for the phase II districts. These activities include the farming systems diagnostic survey, community awareness and sensitisation meetings on the FFS and identification of existing FFS and extension approaches and identification of Centres of Excellence of Experiential Learning.</p> <p>To streamline project activity implementation, FAO adopted a phased approach and grouped the participating districts into two phases with 8 districts per phase.</p> <p>Farming Systems Diagnostic Survey</p> <p>FAO undertook the diagnostic assessment of the farming systems related risks, vulnerabilities, and knowledge gaps in 6 SCRALA districts (phase I) namely Chama, Mafinga, Luangwa, Rufunsa, Chongwe and Chirundu, for evidence-based identification and development of appropriate adaptation options. This was the main activity carried out for activity 2.5 in 2020 and included several visits to each district. The project did not cover Nyimba and Mambwe districts as FAO had completed them under a previous project in 2019.</p> <p>The diagnostic survey included a detailed assessment of the institutional setting for adaptive planning and implementation of good agricultural practices in each target district. The Zambia Agricultural Research Institute (ZARI), through the Msekera Research Station in Eastern Province partnered with FAO in undertaking the diagnostic exercise. The diagnostic survey instruments used were adapted from those used in the project diagnostic surveys of the pilot districts Nyimba and Mambwe, to include additional data requirements necessary for the SCRALA project.</p> <p>A total of a total of 144 participants (108 male and 36 female) attended 6 district meetings. A maximum of 24 staff and farmers {14 staff (district block and camp) and 8 farmers} participated per meeting and observing all the COVID 19 protocol guidelines of social distancing and sanitation. The team appraised a total of 40 selected sites out of which they selected the 36 required to host Farmer Field Schools (FFS) adaptation options demonstrations for the 2020/21 season and FAO completed 5 crop-based adaptation options protocols by the end of December 2020</p> <p>The main products of the exercise were 6 detailed district diagnostic survey reports which the project is using in the planning and implementation of the FFS demonstration of adaptation options.</p> <p>Capacity development</p> <p>In the second week of November, FAO facilitated Trainers of Trainers (ToT) training sessions for selected district, block, and camp staff from six phase I districts. The Farming Systems Research Team (FSRT) at Msekera Research Station conducted the Training of Trainers sessions with technical support from FAO. The three-day training sessions involved an elaborate presentation and discussion on the Farmer Field School approach and a stepwise</p>	<ul style="list-style-type: none">• For phase I districts, upscale the FFS and adaptation options demonstrations to other camps within each district, drawing upon lessons from the implementation of the FFS adaptation options demonstrations in the 2020/21 agricultural season.• In the 8 phase II districts, review, planning and training of Farmer Field School (FFS) facilitators and District Subject Matter Specialists (DSMSs) on the FFS approach as well as management of adaptation options / demonstrations. (The exact number of trainees to be determined based on the capacities of each district pending review).• Construct and establish 4 Centres of Excellence in 4 selected Districts (Luangwa, Chama, Sesheke, Gwembe) and procure and deliver inputs for the same.• Procure and distribute of inputs for crop demonstrations in all 16 districts.	

	<p>explanation of each of the prioritised adaptation options demonstration protocols. Practical protocol marking and pegging of the demonstrations in the field for some selected crops demonstrations followed the theoretical sessions. The training also enhanced skills in capturing of critical economic data for economic analysis.</p> <table><tr><td></td><td>Camp Extension Officers (CEOs)</td><td>Block Extension Officer (BEOs)</td><td>Subject Matter Specialists (SMSs)</td><td>Research Assistants (RAs)</td><td>Totals</td></tr><tr><td>Planned</td><td>109</td><td>20</td><td>40</td><td>0</td><td>169</td></tr><tr><td>Actual</td><td>36</td><td>12</td><td>18</td><td>6</td><td>72 (60 m and 12 w)</td></tr><tr><td>Variance</td><td>- 73</td><td>- 8</td><td>- 22</td><td>+6</td><td>-97</td></tr></table> <p>Because of COVID-19 restrictions, trainers had to limit each training to 24 participants. In addition, partly due to the rather low existing capacities of the extension staff, the Activity Focal Point made the decision to concentrate efforts on 6 camps per district, rather than the 10 to 12 camps initially envisioned.</p> <p>Materials</p> <p>In addition to the two Centres of Excellence already identified in Mambwe and Nyimba, two additional sites qualified, in the two project districts of Luangwa and Chama.</p> <p>For Mambwe and Nyimba, the project procured perimeter fencing and livestock demonstration construction materials in July. Staff have erected the Perimeter Fences covering two ha at Mambwe and Nyimba FTCs respectively and they also completed the construction of the livestock demonstrations for housing goats and chicken for both sites.</p> <p>The capacities of MoA extension staff facilitating the establishment of the FFSs in the 6 phase I districts is rather low and they will require regular technical backstopping from ZARI and FAO Technical Team.</p>						Camp Extension Officers (CEOs)	Block Extension Officer (BEOs)	Subject Matter Specialists (SMSs)	Research Assistants (RAs)	Totals	Planned	109	20	40	0	169	Actual	36	12	18	6	72 (60 m and 12 w)	Variance	- 73	- 8	- 22	+6	-97		
	Camp Extension Officers (CEOs)	Block Extension Officer (BEOs)	Subject Matter Specialists (SMSs)	Research Assistants (RAs)	Totals																										
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Actual	36	12	18	6	72 (60 m and 12 w)																										
Variance	- 73	- 8	- 22	+6	-97																										
3. Increasing farmers' access to markets and commercialization of resilient agricultural products	Project Activity 3.1 Strengthen processing of resilient products			Activity Not Yet Due	0%																										
	Activities under which are dependent on the construction of bulking centres will begin in 2021 due to a delay in their completion under 2.1. In addition, due to Covid restrictions, MoA has postponed nutrition training until 2021.			<ul style="list-style-type: none">• Processing equipment and energy sources sourced and installed at each of the 9 bulking centres in 9 districts.• Completion of a detailed report profiling 13 of the project districts for the processing of resilient products and identify additional commodities for value addition.																											

		<ul style="list-style-type: none"> • Training on post-harvest processing for 5 women and 5 youth groups and cooperatives carried out.
	<i>Project Activity 3.2 Strengthen storage, aggregation and transportation of resilient products to enhance commercialization and linkages to market and SMEs</i>	<div>Activity Not Yet Due</div> <div>30%</div>
	<p>Due to the COVID-19 outbreak, WFP put some activities on hold or implement them at a limited scale to minimize human-to-human contact. Despite this they managed to keep most activities on track.</p> <p>Dial-A-Load</p> <p>So far plans for the virtual farmers market are in inception phase and have not yet reached the target of four transporters per project district, nevertheless this activity has seen good progress. WFP and Digital PayGO, a financial technology (fintech) company and subsidiary of the Zambia National Commercial Bank (ZANACO), commenced the redevelopment of the Virtual Farmers Market (VFM) and Dial-a-load application, which they expect to deploy in the first quarter of 2021 in readiness for the marketing season. VFM will merge with AgriPay during the marketing season to facilitate for payment solutions that offers farmers services to transact, save, send, and receive money.</p> <p>Hermetic storage solutions / Post-harvest Management and Storage</p> <p>WFP facilitated the initial Post-Harvest loss Management (PHM, including hermetic solutions) training of 262 MoA staff (186 men, 70% and 76 women, 30%). With the help of the Camp Extension Officers (CEOs), WFP followed this by a training for 15,442 (7,636 men, 49% and 7,806 women, 51%) farmers representatives from 10 districts who will go on to train those that they represent. WFP and the CEOs will carry out the training in the remaining six districts after the government lifts the Covid restrictions.</p> <p>In addition to the training above, WFP developed radio programmes on PHM that the Zambia National Broadcasting Corporation (ZNBC) aired, targeting all the 16 districts. WFP produced 31 radio programmes in four major local languages (Nyanja, Bemba, Lozi and Tonga). This proved to be an innovative way to disseminate information despite the Covid pandemic.</p> <p>Finally, WFP facilitated the engagement of two private companies (AgroZ and Polythene Products Zambia (PPZ)) to develop marketing and sales strategies, as well as ensure the supply of the materials required.</p> <p>Warehouse receipt system</p> <p>To operationalise the electronic Warehouse Receipt System (WRS), WFP, in collaboration with the Lusaka Securities Exchange (LuSE) and the Zambia Commodity Exchange (ZAMACE), trained 343 (104 women, 30% and 239 men, 70%) people comprising of MoA national level staff, District Market and Development Officers, as well as aggregators to service SCRALA operational districts. WFP went on to roll out the training to 214 lead farmers (122 men, 57% and 92 women, 43%) who, in turn, will train approximately 6,420 follower farmers in 2021.</p>	<ul style="list-style-type: none"> • Four meetings per district to link financial service providers and famers with the aim of offering transport credit products, including the Purchase of 32 Demo Toyo cycles. • An awareness campaign caried out for 35 cooperative groups per district on the use of hermetic storage among smallholders to reduce post-harvest losses. • 4 awareness campaigns per district to promote and support the capacity of smallholder farmers' organizations on the use of ZAMACE and the WRS. • 20,000 farmers using virtual farmers' market' (VFM) supply supply-and-demand information and payment platform that focuses on climate-resilient products.

	<p>Trainings are meant to generate WRS awareness among smallholder farmers and enhance their access to diversified commodity markets through this platform.</p> <p>The project did not reach the target of 20,000 linked famers because other structures from other activities were not yet in place.</p>	
	<p><i>Project Activity 3.3 Increase access to finance and insurance products for smallholder farmers by strengthening financial education and facilitating engagement with potential financing sources including public, private, bilateral and multilateral sources</i></p>	<p>Activity Not Yet Due</p> <p>25%</p>
	<p>Interventions under this activity depend on having functional farmers' groups to facilitate trainings and linkages to the private sector actors. Most farmers in the targeted districts were not organised in groups, resulting in the delayed rollout of some activities.</p> <p>Access to Credit</p> <p>WFP facilitated the training of 262 (186 men, 71% and 76 women, 29%) MoA staff from provincial, district and camp levels in rural and agriculture finance in 14 of the 16 districts. The project will reach the two outstanding districts in 2021. WFP also developed 400 financial literacy booklets to ensure that extension officers had the right material to cascade the training to smallholder farmers on access to credit.</p> <p>As access to credit is among the major hindrances to increased production among smallholders, WFP partnered with One Acre Fund and Zambia National Commercial Bank (Zanaco) to extend credit to targeted smallholder farmers in the 2020/21 farming season. Zanaco has onboarded the first batch of 500 farmers on their Agri pay application in Southern Province districts under the sorghum value chain collaboration with Zambian Breweries.</p> <p>WFP developed Radio programmes on access to credit which the Zambia National Broadcasting Corporation (ZNBC), particularly, Radio 1 aired, targeting all the 16 districts. The radio stations produced the programmes in four major local languages (Nyanja, Bemba, Lozi and Tonga). Radio programmes are especially critical to ensuring farmers have access to information during the Covid 19 pandemic.</p> <p>Community Based Savings</p> <p>WFP trained 44 (18 men, 41% and 26 women, 59%) staff, from the MoA and Ministry of Community Development and Social Services in Savings for Change on community-based savings across the 16 GCF-supported districts. This was more WFP originally planned. The trained staff will facilitate the training of smallholder farmers in Savings for Change and support the formation of smallholder farming savings groups as part of WFP efforts to foster financial inclusion.</p> <p>WFP trained 560, (196 men, 35% and 364 women, 65%) representatives as Master trainers of farmer groups in the Savings for Change methodology across the 16 districts. Each trained representative represented at least one</p>	<ul style="list-style-type: none"> • 35 Cooperative groups trained per district in the formation of savings clubs including group lending and saving. • 320 savings groups linked to formal financial institutions. • At least three aggregators linked to financial services providers. • At least one innovative product developed per year to support the promotion of resilient crops and livestock specific indexes. • 320 national experts (genders TBC) trained in the design, pricing, and monitoring of different kind of indexes and linked to the private sector.

	<p>savings group, for a total of 560 savings groups across the 16 districts. This activity will reach an estimated 12,000 farmers who will participate in savings groups.</p> <p>Weather index insurance</p> <p>As part of technical assistance on climate risk financing, WFP supported the establishment of an Inter-Ministerial Technical Working Group (TWG) to enhance the capacity of the Government and agro-based private companies (including Mayfair Insurance Company, and ZEP-RE (PTA Reinsurance Company)) to develop and improve national weather index insurance products. The TWG will improve agricultural risk management by enhancing weather index insurance product management.</p> <p>WFP through the International Research Institute for Climate and Society (IRI) and PartnerRe trained 30 government staff (7 women, 23% and 23 men, 77%) from seven different ministries in agronomic data collection to strengthen the weather index insurance product offered under the Farmer Input Support Programme (FISP).</p> <p>WFP supported the training of 136 (109 men, 80% and 27 women, 20%) provincial and district level Ministry of Agriculture staff on Weather Index Insurance. The trained staff will cascade the training to an additional 2,071 agricultural extension staff. Agricultural extension staff are critical to sensitising smallholder farmers on the benefits of the insurance scheme, providing technical support and serving as a feedback link between the farmers and the insurance providers.</p> <p>To promote national awareness on weather index insurance, WFP in partnership with the National Agriculture Information Services (NAIS) developed 13 radio programmes on weather index insurance. The radio programmes are in eight languages (i.e., seven local languages and English) which aired on national radio stations, reaching smallholder farmers with weather index insurance messages in all the targeted districts.</p> <p>Livestock index insurance</p> <p>WFP collaborated with the International Fund for Agricultural Development (IFAD) to support the Ministry of Fisheries and Livestock (MFL) in rolling out the Livestock Index Insurance. With the contribution from GCF, WFP is supporting the technical product design and capacity building activities, while IFAD is supporting the private sector market development of the product uptake by financing premiums for 5,000 farmers participating in the pilot phase.</p> <p>WFP expects the Livestock index insurance scheme to reach an estimated 600,000 farmers across the country, including the 16 districts under the SCRALA project.</p> <p>WFP has developed 600 sets of tailored training materials on the livestock index insurance to support the 62 (53 men, 85% and 9 women, 15%) trained staff from MFL in rolling out the Livestock Index Insurance at district level.</p>	
	<p><i>Project Activity 3.4 Identify available markets and promote climate-resilient products</i></p>	<p><i>Activity Not Yet Due</i></p> <p>25%</p>

	<p>Due to the COVID-19 outbreak, WFP put some activities on hold or implement them at a limited scale to minimize human-to-human contact. Despite this they managed to keep most activities on track.</p> <p>Rural markets aggregation</p> <p>WFP trained 262 (186 men, 71% and 76 women, 29%) government staff from provincial, district, block, and camp levels on agricultural commodity aggregation model and agricultural marketing. In addition, WFP developed 700 agricultural commodity toolkits, which they distributed to MoA staff who are cascading the trainings at camp level and they trained a further 11,891 (5,789 men, 49% and 6,102 women, 51%) farmers.</p> <p>WFP with support from MoA developed radio programmes on commodity aggregation in four major local languages (Nyanja, Bemba, Lozi and Tonga) which national and community radio stations will air, targeting all the 16 SCRALA districts, as part of efforts to reach more smallholders with commodity aggregation awareness.</p> <p>WFP has identified commodity bulking centres in three districts: Kazungula, Senanga and Nyimba. Key stakeholders were engaged during the site identification and so far, pieces of land have been allocated for the construction of the bulking centres.</p> <p>Nutrition education</p> <p>WFP did not carry out the nutrition assessment on school gardens due to Covid restrictions. The project has put nutrition education, as an extra-curricular activity, on hold until further notice.</p> <p>Matchmaking farmers to producers</p> <p>Due to the covid-19 pandemic, the match making sessions did not take place. However, the project developed radio programmes in 4 local languages to partially bridge the gap and this led to at least 11,260 small holder farmers (gender disaggregation not available) accessing commodity markets through the aggregation model in three districts.</p> <p>Aggregation</p> <p>As part of supporting farmers to access markets through the aggregation model, WFP linked 58 (20 women, 34%) micro aggregators (25 in Gwembe and 33 in Namwala) to nine intermediary aggregators.</p> <p>11,260 smallholder farmers (5,855 men, 52% and 5,405 women, 48%) from Nyimba, Gwembe and Namwala districts aggregated and supplied 6,347.62 MT of various commodities including white and orange maize, cowpeas, groundnuts, sunflower, and soya beans. The aggregators then marketed these products through the aggregation network worth ZMW 23,039,170.40 (i.e., approx. USD1,129,924.98).</p>	<ul style="list-style-type: none"> • At least three private sector players engaged for each district, based on assessment of the value chain in each (inclusive of the purchase of aggregation equipment). • Training (participant numbers and gender TBD) conducted on nutrition education and the establishment of school gardens to sensitize schoolchildren in each of the 16 target districts. • Using the aggregation model, link 400,000 smallholder farmers (60% men and 40% women) to local markets.
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	See Attachment 3 of this document or the link below for details of a case study on the value of the aggregation methodology for farmers ¹² .	
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¹² <https://www.dropbox.com/s/545qe2t78179rks/Attachement%203%20-%20Case%20Study%20Maxwells%20bargaining%20power.docx?dl=0>

2.4 PROGRESS UPDATE ON THE LOGIC FRAMEWORK INDICATORS

2.4.1 PROGRESS UPDATE ON FUND-LEVEL IMPACT INDICATORS OF THE LOGIC FRAMEWORK

Fund-level impact Core indicators	Baseline	Current value	Target (mid-term)	Target (final)	Remarks (including changes, if any)
A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions: Indicator 1.2: Number of males and females benefiting from the adoption of diversified, climate-resilient livelihood options	0	186,546 (women 89,271, 48% and men 97,275, 52%)	400,000 (women 160,000, 40% and men 240,000, 60%)	950,000 (women 380,000, 40% and men 570,000, 60%)	This is the total number of small holder farmers who have directly benefitted from at least one livelihood related project activity.
A2.0 Increased resilience of health and well-being, and food and water security: Indicator 2.2¹³ Number of food secure households (in areas / periods at risk of climate change).	0	0	60,000 (women 24,000, 40% and men 36,000, 60%)	157,000 (62,800 women, 40% and 94,200 men 60%)	The current value of this figure will be determined as part of the Impact Evaluation assessment, due at the end of quarter one of 2021.

Project/Programme indicators (Mitigation/Adaptation)	Baseline	Current value	Target (mid-term)	Target (final)	Remarks (including changes, if any)
A7.0 Strengthened adaptive capacity and reduced exposure to climate risks					
7.1 Extent to which target beneficiaries (vulnerable households, communities, businesses and public-sector services) adopt climate-resilient technologies (improved tools, instruments, strategies and activities to respond to climate variability and climate change).	0	62,271 (31,840 women, 51% and 30,431 men, 49%)	136,110	245,516 direct (50.2% of whom are female).	Adoption of climate-resilient technology includes adopting drought-tolerant crop, crop rotation, intercropping, cover-cropping, mulching, agroforestry, organic fertilizer, composting, micro-irrigation, zero tillage, fodder production, or local animal feeding.
1. Smallholder farmers are able to plan for and manage climate risk to support resilient agricultural production					
Percentage of smallholder farmers demonstrating knowledge to plan for and manage climate risk to support resilient agricultural production disaggregated by gender	0%	33% (35,152) smallholder farmers able to plan and manage risk (approximately 40% of women and 60% of men ¹⁴)	45% female and male smallholder farmers able to plan & manage risk	90% female and male smallholder farmers able to plan & manage risk	Demonstrating knowledge on climate risk includes being familiar to drought-tolerant crop, crop rotation, intercropping, cover-cropping, mulching, agroforestry, organic fertilizer, composting, micro-irrigation, zero tillage, fodder production, and local animal feeding.
Percentage of population with access to improved climate information, weather and agricultural advisories (disaggregated by gender)	0%	36% (71,801) with access to improved climate information (approximately 40% of women and 60% of men ¹⁵)	52% of female and male population	62% of female and male population	Having access to climate information includes information on threats to crop or animal health, climate insurance, methods to improve production or animal health, business opportunities, crop prices, animal prices, and grazing conditions.

¹³ After the signing of the FAA the project logical framework was slightly revised and indicator 2.4 shifted to output 2 below and replaced by the GCF indicator 2.2 as given here.

¹⁴ While most districts collected gender disaggregated data a minority did not and therefore the author has extrapolated the percentages given from the data available.

¹⁵ Ibid as above.

Project/Programme (Mitigation/Adaptation)	Indicators	Baseline	Current value	Target (mid-term)	Target (final)	Remarks (including changes, if any)
	Perception of targeted populations on the timeliness, content and reach of weather, agricultural and water advisories	0%	72.33% of those who received advisory perceived it as very useful. ¹⁶	30% of both female and male populations	70% of both female and male populations	The table gives “perceptions” for any household having received advisories such as threats to crop or animal health, climate insurance, methods to improve production or animal health, business opportunities, crop prices, animal prices, and grazing conditions.
2. Resilient agricultural livelihoods are promoted in the face of changing rainfall, increasing drought and occasional floods						
	Area (ha) of agriculture land made more resilient to climate change through changed agricultural practices (e.g. planning times new and resilient native varieties, efficient irrigation schemes adopted).	0 ha	465 ha	800 ha	2,700 ha	
	Number of farmers adopting new agricultural practices and alternative livelihoods	0	43,464 (22,122 women, 51% and 21,342 Men, 49%)	Female: 40,000 Male: 60,000	Female: 83,000 Male: 124,510	
	Percentage increase in agricultural incomes in the project sites	0%	0%	35% of both male and female smallholder farmers show an increase in agricultural incomes by at least 25%	70% of both male and female smallholder farmers show an increase in agricultural incomes by at least 60%	The current value of this figure will be determined as part of the Impact Evaluation assessment, due at the end of quarter one of 2021.
3. Increasing farmers’ access to markets and commercialization of resilient agricultural products						
	Percentage of resilient commodities produced by target farmers that are sold on the markets	0%	0%	40% for both female and male	80% for both female and male	It is still too early in the implementation of this project to measure this indicator.
	Percentage of households accessing financial education programmes related to credit and insurance schemes	0%	16%	20%	50%	

2.5 IMPLEMENTATION CHALLENGES AND LESSONS LEARNED				
Challenge encountered	Type	Measures adopted	Impact on the project implementation	Lessons learned and Other Remarks
Coordination between WARMA and other project partners has continued to be a challenge in 2020.	Political	WARMA, MoA and UNDP held a meeting in December to resolve the challenges in coordination. As an outcome of that meeting WARMA and MoA will sign a project implementation agreement in the first quarter of 2021 to clarify roles and responsibilities between the two parties.	Moderate	No project should start without clear, mutually agreed, and signed agreements on roles and responsibilities.

¹⁶ As per preliminary findings of the IE assessment.

For much of 2020 the Project Management Unit (PMU) has been severely understaffed, relying on the Project Engineer as the acting Project Manager, assisted by a Chief Technical Advisor.	<i>Implementation</i>	By December the UNDP Country Office had recruited both a Gender as well as an Environmental and Social Safeguards (ESS) expert. Supported by a proposed new project structure and ensuring financial sustainability, the recruitment of permanent staff for Finance and Admin, M & E, PM, Engineering, Communications, ESS and Gender is ongoing.	<i>Moderate</i>	Especially on a Nationally Implemented (NIM) project, the role of the PMU is critical and therefore requires support for proper set up and running.
Despite HACT clearance, the transfer of funds and submission of accounts between UNDP the MoA, and in turn to the Districts and Responsible Parties remains a cumbersome process, leading to delays in some cases.	<i>Financial</i>	During 2020, to try improving accountability and speed, UNDP began to make transfers by mobile phone. UNDP expects this process to be smoother as the users become more familiar with the method in 2021.	<i>Moderate</i>	In some instances, especially to begin with, the use of IT can slow, rather than speed processes up. Extra time needs to be allocated for the adoption of new practices.
Coordination meetings between project partners have yet to be regularised.	<i>Implementation</i>	The MoA Project Coordinator took an increasingly active coordination role during 2020, including carrying out several coordination and implementation meetings.	<i>Moderate</i>	Regular project coordination meetings are a requirement for effective communication, collaboration, and project implementation.
While clearly accountable and transparent, procurement in the UNDP is laborious and time consuming. Therefore, it was a challenge to ensure 70% disbursement in time and this caused a delay in some project activities.	<i>Procurement</i>	UNDP Country Office (CO) held regular and well attended procurement meetings towards the end of the year. The procurement office in the CO has had its capacities increased with the recruitment of an additional staff member.	<i>Moderate</i>	Procurement is much more demanding than is apparent and UNDP will continue to give it a greater priority in 2021.

2.6 REPORT ON CHANGES DURING IMPLEMENTATION (include actual and expected changes)

Project partners foresee no major changes in the project at this point. However, during 2021 the project will need to closely monitor the co-financing capacities of the Government of Zambia in case the value of the Kwacha continues to depreciate against the US\$. In that case there may be an opportunity to accelerate the adoption of climate resilient approaches with a greater emphasis on low external input agriculture and self-sufficiency by reducing the supply of imported fertilisers.

The Impact Evaluation team carried out a baseline assessment towards the end of 2020 and they expect to provide the full results before the end of the first quarter 2021.

As part of ongoing project monitoring activities please find an updated monitoring plan for 2021 as attachment 1 of this document.

SECTION 4: REPORT PROJECT SPECIFIC ON ENVIRONMENTAL AND SOCIAL SAFEGUARDS & GENDER

4.1 IMPLEMENTATION OF ENVIRONMENTAL AND SOCIAL SAFEGUARDS AND GENDER ELEMENTS

(1) The information includes description on any changes in the key environmental and social risks and impacts as identified and arising from the implementation including any unanticipated risks and impacts (ex. from changes in laws and regulations) and, based on these if any change in the project's environmental and social risk category. In case of a change in the E&S risk category for the project, please provide an explanation.

Key risks and Impacts as Identified

To date the initial social and environmental risks described in the FP and its annexes have not changed. During the implementation of the project the PMU and UNDP CO will continue to carry out regular monitoring and assessments of these risks, in accordance with the project's ESMF.

This project spreads over 16 Districts and individual interventions tend to be rather small with a correspondingly small impact on the surrounding environmental and social context. Never-the-less, the project has already taken precautions to ensure that project implementers follow the necessary environmental and social guidelines carefully. This is especially the case for activities which will require the construction of infrastructure, such as those under activity 2.1.

- The project developed an ESMP which includes control and mitigation measures to address any potential negative environmental and social risks that could be associated with the project's activities.
- The project engineer and the MoA have carried out a thorough reconnaissance survey, including an assessment of site-specific environmental and social factors, in advance of any actual intervention.
- The recently recruited ESS consultant is in the process of updating the ESMP / ESMF, to be completed in the first quarter of 2021.

(2) The information should include status of compliance with applicable laws and regulations of the country as well as the relevant conditions or covenants under the FAA. This can be captured in the table below:

Status of compliance with applicable laws and regulations and the conditions and covenants under FAA

Applicable laws and regulations/ conditions and covenants	Status of compliance
<p>FAA Clause 10.02</p> <p>In addition to Clause 18.02 of the AMA, the Accredited Entity covenants that as from the Effective Date of this Agreement it shall: [. . .]</p> <p>(d) Undertake and/or put in place any adequate measures in order to ensure that the management of the environmental and social risks and impacts arising from the Funded Activity complies at all times the recommendations, requirements and procedures set forth in the Environmental and Social Management Framework ("ESMF"), which was provided by the Accredited Entity to the Fund before the Approval Decision;</p> <p>(e) Ensure that the GCF Proceeds will not support or finance, directly or indirectly, any activities with potential environmental and social risks that are equivalent to category A pursuant to the Environmental and Social Risks Categories to be conducted as part of the project</p> <p>(f) Obtain, or ensure that the Executing Entity shall acquire, all land and rights in respect of land that are required to carry out the Funded Activity and promptly furnish to the GCF, upon its request, evidence that such land and rights in respect of the land are available for the purposes of the Funded Activity;</p>	<p>FAA Clause 10.02 [. . .]</p> <p>d. The project engineer has written an Irrigation Development Plan manual which includes draft SOPs for undertaking environmental assessments and drawing up ESMPs for each site. During 2020, the ESS officer as well as Zambia Environmental Management Authority (ZEMA) will verify and approve these plans before carrying out training Implementation of the ESMF is reported on in sub-section (3).</p> <p>e. UNDP will ensure that, during the implementation of the project, GCF Proceeds will not support of finance any activities with category A risk.</p> <p>f. The land in which the project will be carried out is predominantly government customary owned, for which usage has been granted through letters of consent provided by village Heads and Chiefs. In the case that the private-owned land is used by the project, letters of consent will be collected.</p> <p>g. The project engineer has undertaken an ESMP for a pilot irrigation site. As per guidelines, before commencing construction in 2020, the site ESMP will be submitted by the ESS officer to ZEMA for verification. The project is designing an ESMP checklist</p>

<p>(g) Prior to commencing any construction works or activities for the implementation of the Project, submit the detailed Environmental and Social Management Plan (“ESMP”) related to the relevant construction works or activities to be executed [. . .]</p> <p>(j) Ensure that (i) in case the access to the land on which the project will be implemented and the access to natural resources thereon are restricted due to the project implementation, for any period of time, prior written consent from the affected communities is obtained and (ii) any such restrictions do not result in temporary or permanent economic displacement of communities; [. . .]</p>	<p>for contractors that will be appended to contract bid documents. Contractors will be required to report to the PMU on a regular basis on monitoring requirements contained within site-specific contractor ESMPs. [. . .]</p> <p>j. Appropriate measures will be taken to ensure (i) and (ii) during implementation of the project. [. . .]</p>
<p>Environmental Management Act 2011</p> <p>The principal legislation governing environmental management in Zambia is the Environmental Management Act 2011 (EMA). The EMA provides for the sustainable management of natural resources and protection of the environment, and the prevention and control of pollution. Section 29 of the Act is of relevance which states that “A person shall not undertake any project that may have an effect on the environment without the written approval of the Agency, and except in accordance with any conditions imposed in that approval”. The Act also provides for public participation in decision-making and access to environmental information. The EMA and its regulations provide the overall environmental regulatory framework for the project. Environmental Protection and Pollution Control, (Environmental Impact Assessment) Regulations 1997: The Environmental Impact Assessment Regulations (EIA Regulations) under the EMA requires that before a developer commences implementing a project, an EIS be prepared and submitted to the relevant regulatory authority for review and approval. With respect to the project, the following may be relevant: First Schedule (Regulations 3(2)) lists projects that require Project Briefs, 11n): Pumped Storage schemes is potentially relevant. Second Schedule (Regulation 7(2)) Projects which require EIA; potentially relevant to project are: 3. Dams, rivers, and Water Resources a) Dams and barrages: covering a total of 25ha or more b) Exploration for, and use of, groundwater resources including production of geothermal energy: water to be extracted to be more than 2 million cumecs (m3/s) 5. Forestry Related Activities b) Reforestation and afforestation 6. Agriculture (a) Land clearance for large scale agriculture. (b) Introduction and use of agrochemical new in Zambia. (c) Introduction of new crops and animals especially exotic ones new to Zambia. (d) Irrigation schemes covering an area of 50 Ha or more. (e) Fish farms: production of 100 tonnes or more a year. (f) Aerial and ground spraying 10. Nature Conservation Areas (c) Introduction of alien species of flora and fauna to local ecosystems Fees apply for assessment of Project Briefs and EIAs and are listed in Fifth Schedule (Regulation 37)</p>	<p>The PMU and MoA required more time for planning infrastructure projects, such as for irrigation and the construction of warehouses, than had originally been allocated. Therefore, to date, no project activities have required the conduct of an EIA as outlined by the EMA 2011. As per the project’s ESMF, the ESS Officer will screen project activities and will assesses them for any additional ESS-related risks that could require further studies as stipulated by the EIA regulations under the EMA. The project and its associated activities remain compliant with this Act.</p>
<p>Lands Acquisition Act 1994:</p> <p><i>Section 12 (b) of the Lands Acquisition Act 1994 provides that any person whose property is affected by a public project is entitled to compensation. The Act also provides a mechanism by which people not satisfied with compensation may seek redress through the courts of law.</i></p>	<p>The project is compliant with the Lands Acquisition Act (1994) and continues to have a dedicated GRM for which to receive and handle any grievances related to land acquisition/donation.</p>
<p>Bio Safety Act 2007:</p> <p><i>This Act applies to the import, development, export, research, transit, contained use, release or placing on the market of any genetically modified organism whether intended for release into the</i></p>	<p>The project has used no GMOs under any of its interventions and thus the project remains compliant with this Act.</p>

<p>environment, for use as a pharmaceutical, for food, feed or processing, or a product of a genetically modified organism</p>	
<p>Fisheries Act 2011:</p> <p><i>The Act provides for the appointment of the Director of Fisheries and fisheries officers and provides for their powers and functions (i.e.; to promote the sustainable development of fisheries and a precautionary approach in fisheries management, conservation, utilization and development; establish fisheries management areas and fisheries management committees; provide for the regulation of commercial fishing and aquaculture; establish the Fisheries and Aquaculture Development Fund).</i></p> <p>Section 45 is relevant to EIA and states:</p> <p><i>A person who intends to engage in aquaculture shall conduct an environmental impact assessment in accordance with the provisions of the Environmental Management Act, 2011, and prepare a report thereon for the purposes of this Act.</i></p>	<p>The trigger for an EIA under the Act is a fish farm output of 400 tonnes or more output from the fish farm. The fish farms supported by this project do not exceed the trigger value. The project remains compliant with this Act.</p>
<p>Occupational Health and Safety Act 2010:</p> <p><i>The Act establishes the Occupational Health and Safety Institute and provides for its functions, such as to provide for the establishment of health and safety committees at workplaces and for the health, safety and welfare of persons at work; provide for the duties of manufacturers, importers and suppliers of articles, devices, items and substances for use at work; provide for the protection of persons, other than persons at work, against risks to health or safety arising from, or in connection with, the activities of persons at work.</i></p>	<p>UNDP and MoA ensure that they provide information, instruction, training, and supervision to ensure the health and safety of the employees at their workplaces and assist other project employers and workers to understand their legal responsibilities. The project's ESMP provides further Occupational Health and Safety (OHS) considerations and control activities. As such, the project remains compliant with this Act.</p>
<p>Water Resources Management Act 2011:</p> <p><i>The Act was promulgated to establish the Water Resources Management Authority (WARMA) and define its functions and powers; provide for the management, development, conservation, protection and preservation of water resource and its ecosystems; provide for the equitable, reasonable and sustainable utilization of the water resource; ensure the right to draw or take water for domestic and non-commercial purposes, and that the poor and vulnerable members of the society have an adequate and sustainable source of water free from any charges; create an enabling environment for adaptation to climate change; provide for the constitution, functions and composition of catchment councils, sub-catchment councils and water users associations; provide for international and regional co-operation in, and equitable and sustainable utilization of, shared water resources; provide for the domestication and implementation of the basic principles and rules of international law relating to the environment and shared water resources as specified in the treaties, conventions and agreements to which Zambia is a State Party.</i></p>	<p>In conformity with the Act, the project engineer will ensure that activities that fall into the required categories (i.e., abstraction of the water from boreholes, waterway works, dams, weirs) have (and will continue to) be done under license and specifications obtained from the WARMA, who is also a Responsible Party for activities 1.1 and 1.2 of this project and as such works closely with the project engineer on a day-to-day basis. As such, the project remains compliant with this Act.</p>
<p>The National Heritage Conservation Commission Act 1986:</p> <p><i>The NHCC Act provides for the conservation of ancient, cultural and natural heritage, relics and other objects of aesthetic, historical, pre-historical, archaeological or scientific interest. In the event that any artefact is found, National Heritage and Conservation Commission (NHCC) will be notified</i></p>	<p>The ESS expert has screened this project for any risks relating to cultural heritage (both tangible and intangible) with no risks/impacts identified. The project's ESMP includes certain control measures in cases where project staff and contractors may make uncover chance finds and adheres to the requirements of the NHCC Act (1986). As such, the project is compliant with this Act.</p>
<p>(3) Provide a report on the progress made in implementing environmental and social management plans (ESMPs) and frameworks</p>	

(ESMFs) describing achievements, and specifying details outlined in the tables below.

Progress in the implementation of environmental and social management plans and programs including monitoring activities undertaken during the implementation of the funded activity.

On November 26th 2020, an International Environmental and Social Safeguards Specialist was hired by UNDP to audit and review the project's ESMF, ESMP and associated SES documentation. The consultant is responsible for establishing mechanisms for updating and implementing the ESMF/ESMP and undertaking audits to ensure compliance. The expert is working closely with the PMU staff on related aspects of the project, including reporting, monitoring, evaluation, and communication. Specific responsibilities include:

- Conducting the ESMP audit to assess compliance of project activities with the ESMP
- Reviewing the current ESMP and make amendments as necessary; and,
- Ensuring an effective and accessible mechanism is in place for full disclosure of the GRM with concerned stakeholders.

ESMP/ESMF activities carried out in 2019/20 focused on preparatory actions as described below. The SES consultant will work on updating and auditing the ESMP and will provide further guidance and actions which the contractors, MoA, and Camp Officers will take (with civil/construction works under Activity 2.1 of the project as the focus) to ensure effective environmental and social risk/impact mitigation and management.

There have been extensive deliberations between UNDP and the MoA over the position of ESS Officer, including the type of contract, budget allocation, roles and responsibilities and reporting lines. They have resolved these discussions and the recruitment of the ESS officer will now begin in earnest.

(i) activities implemented during the reporting period, including monitoring	(ii) outputs during the reporting period	(iii) key environmental, social and gender issues, risks and impacts addressed during implementation	(iv) any pending key environmental, social and gender issues needing accredited entity's actions and GCF attention
<ul style="list-style-type: none"> • The ESS expert is auditing and updating of the projects ESMP / ESS-compliance checklists, developed for the camp officers and contractors who will report on ESS performance/compliance on a case-by-case basis. 	<ul style="list-style-type: none"> • Updated and audited project ESMF and ESMP • ESS -compliance checklists for contractors and camp officers 	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • Not applicable
<ul style="list-style-type: none"> • The project engineer has produced a pilot environmental assessment for a proposed drip irrigation system in Siangwemu, Chirundu District. The objective of this study was to ascertain environmental and socio-economic impacts, and mitigation measures for the Siangwemu drip irrigation scheme. 	<ul style="list-style-type: none"> • The project engineer and Zambia Environmental Management Agency (ZEMA) carried out a pilot environmental assessment for the Siangwemu, Chirundu district drip irrigation system. Based on information gained from this, the project engineer has prepared a site specific Environmental and Social Monitoring Plan. ZEMA cleared this report with the feedback, that as the projects are rather small, a more simplified procedure will suffice in the future. 	<ul style="list-style-type: none"> • Project staff and contractors will avoid and / or minimize any environmental and social risks that may be encountered as part of the Siangwemu, Chirundu district drip irrigation system. 	<ul style="list-style-type: none"> • Not applicable

<ul style="list-style-type: none"> • Project staff continue to inform beneficiaries about the steps taken to ensure that safeguards were in place. Project implementers will carry out standard procedures for site specific assessments and reporting through the Zambia Environmental Management Agency (ZEMA). 	<ul style="list-style-type: none"> • District governments have made a signed commitment to cross-check and update the ESMF topics which are relevant to their localities on a quarterly basis. • As above, ZEMA has suggested that in the future the project can afford to scale back their ESS reporting and clearance procedures as the project activities do not constitute a significant environmental or social risk. 	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • Not applicable
<ul style="list-style-type: none"> • The project engineer and MoA carried out a reconnaissance survey to crosscheck and update the status of the sites that the feasibility study had identified for eight districts. 	<ul style="list-style-type: none"> • Based on the reconnaissance survey, the project engineer and the MoA have drawn up an irrigation development plan. This plan including important guidance on how to ensure that contractors take into consideration environmental and social issues while implementing this project. 	<ul style="list-style-type: none"> • Land ownership is a very complex topic in Zambia with several grey areas between “traditionally owned lands” under the local chiefs and modern government registered land. During 2019, project staff carried out discussions on how to address these issues. For the irrigation component to avoid the possibility of conflicting claims, the project will use communal land which small-scale farmers will donate themselves. The MoA will ensure that they obtain consent letters only after the respective Headmen and Chiefs sign off. Never-the-less, the project will pay close attention to the issue of ensuring clarity on land ownership in any relevant intervention. 	<ul style="list-style-type: none"> • Not applicable
<ul style="list-style-type: none"> • UNDP in conjunction with WARMA, have drawn up procedures for water acquisition agreements with farmer cooperatives and the regulatory agency. The permits will cover water ownership rights, permissible rate of extraction, annual costs of water and sustainable sources of water. In addition, the project will form Water User Associations (WUAs) and register them with WARMA. 	<ul style="list-style-type: none"> • The project engineer has drawn up Water User Association guidelines and these are now awaiting approval by the Ministry of Justice. In the meantime, Siangwemu, Chirundu have established informal WUAs. 	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • Not applicable
<ul style="list-style-type: none"> • Under the alternative livelihoods’ activity, UNDP and FAO have developed manuals for goat-rearing and beekeeping which specifically address potential ecological issues. For instance, the goat rearing manual encourages farmers to plant three trees for every tree they cut for constructing goat houses and the manual encourages farmers to house goats away from water bodies to avoid contamination. 	<ul style="list-style-type: none"> • Project staff have completed ecologically sensitive goat rearing and bee keeping manuals which they have used in training and adopted by farmers. 	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • Not applicable

The project has not received any grievances so far. As part of the ToR for the ESS consultant, he will review the GRM to further ensure its accessibility and effectiveness for project beneficiaries and stakeholders. A key area of focus for the review of the project-level GRM will be to ensure that awareness and accessibility of the mechanism is widespread amongst potentially affected communities, and that it takes into consideration access issues for marginalized and disadvantaged groups. The ESS consultant will pay special attention to the effectiveness and accessibility of the GRM in circumstances of communal land donations, especially concerning appropriate and timely disclosure of information for beneficiaries and potentially affected groups and individuals. The review of the GRM is part of the experts workplan, and he will complete it by the end of the first Quarter of 2021.

When the project established the Environmental and Social Safeguard Committees (ESCs), they informed them of their roles and responsibilities regarding grievance redress. In case where stakeholders are not satisfied with the measures that the GRM sub-committees take to ensure independence and non-interference, said stakeholders have direct recourse to the UN Resident Representative.

Implementation of the stakeholder engagement plan

(i) activities implemented during the reporting period	(ii) dates and venues of engagement activities	(iii) information shared with stakeholders	(iv) outputs including issues addressed during the reporting period
<ul style="list-style-type: none"> • The project has carried out orientations of project stakeholders on the arrangements for ensuring the appropriate management of environmental and social safeguards. • Social Safeguard Committees (ESCs) exist at the district and camp level and they are aware of their roles and responsibilities with regards to the grievance procedures. 	<ul style="list-style-type: none"> • EIA undertaken on irrigation sites engaged community members, along with District Development Coordinating Committees, and the Provincial Development Coordinating Committees. 	<ul style="list-style-type: none"> • UNDP and the MoA trained the ESCs in tools for carrying out periodic reviews of the Environmental and Social Management Framework (ESMF) in their given localities. The trainers particularly highlighted irrigation activities as activities which the ESCs will need to closely monitor. • The goat production manual highlighted the importance of safeguards in goat production, with specific guidance given around the importance of avoiding overstocking and remaining within the locally determined carrying capacities. 	<ul style="list-style-type: none"> • Under activity 2.4 Alternative Livelihoods, goat distributions took place having specifically taken into consideration the stocking rates provided in the goat manual. To date, the project has maintained low stocking rates to avoid the risk overgrazing. In addition, as a preventative measure to reduce the risk of deforestation, the MoA plans to introduce fodder production and establish woodlots in all 220 Camps. Finally, the project has promoted alternative building materials for goat houses, including bamboo and fruit tree timber.

The project has not received any grievances so far.

4.2 GENDER ACTION PLAN

The project aims for 50.2 per cent of the final number of beneficiaries to be women.

In December 2020, SCRALA hired a Gender Expert to expedite the Gender Action Plan; this is important given the challenges of implementing the Gender Action Plan in 2020, in part due to COVID and from previous budget issues related to hiring of the Gender Officer.

The project has finalized ToRs for a Gender Officer (GO) who the project expects to come on board by the second quarter of 2021.

The Gender Expert developed an inception plan which focuses on supporting the capacity development of the SCRALA Gender Officer and staff/partners and supporting implementation of the Gender Action Plan (GAP) through the first few months of 2021.

A baseline survey was undertaken in 2020 with a sample of 3,000 households distributed between a treatment and a control group across SCRALA project districts. It is expected that the findings will provide baseline information on the issues facing vulnerable households in the project areas (with some limited aspects in relation to gender dimensions, e.g., decision-making, leadership, participation/benefits). **The findings will also be used to inform a proposed rapid participatory gender appraisal/study in selected district(s) using Focus Group Discussions (FGDs) and key informant interviews focused on understanding in greater depth the gender issues and challenges/opportunities related to specific activities** (e.g., access to climate information, access to inputs, prioritization of adaptation options, etc.). The findings of this rapid study will be used to strengthen SCRALA's gender approaches on the ground.

There is a need for stronger capacity to implement the GAP across the project. The gender expert will carry out a capacity needs assessment in 2021 to identify the capacity strengths and gaps. The assessment will inform the development of a gender capacity development strategy for supporting staff and partners.

There is a lack of consistent Gender Disaggregated Data (GDD) and limited information on implementation on the ground in terms of mainstreaming gender across different activities (several which are still in early implementation phase). Much of the input to date is anecdotal. The project needs a more robust system for collecting GDD (or compliance thereof) to monitor effectively the implementation of the GAP (which the gender expert will also be revise for clarity, conciseness, and monitorability) and the project overall.

Further to this point, SCRALA appears to be integrating approaches that may be gender-responsive or even gender-transformative (e.g., WFP's adaptation of Oxfam's Scaling for Change Methodology for [Village Savings and Loans](#)), but the project needs more evidence. SCRALA would benefit from documenting experiences of using these approaches, highlighting good practices, and any opportunities and challenges (e.g., around decision-making power at household level or community; increase in social capital, etc.) for GAP monitoring purposes and for sharing across project districts and activities. While the Scaling for Change methodology has a built-in women's economic empowerment approach, understanding how the SCRALA implements this would be useful – also for awareness raising among government and other staff/partners, and potentially leveraging additional resources to scale out these approaches, etc.

Additionally, any documentation and communication of indigenous knowledge by SCRALA should integrate a gender approach as women/men (and youth) often have different knowledge about different issues based on their different roles and responsibilities. There is much research/literature to help guide a gender-responsive framework for this work. FAO has strong experience working on gender, biodiversity, and local/indigenous knowledge systems and may be a good partner in providing technical support on this work (along with national CSOs, NGOs, CGIAR, etc.).

While the technical advisor informally identified challenges of social and cultural norms, practices, and attitudes in 2019, he was not able to understand to what extent these have impacted interventions across the different activities although. For example, while both women and men, receive goats, there is an information gap as to what happens once the household receives the goat. There is the perception that in some cases, at least, while the goats went to women, it is the men in the house who took control over the decisions. This points to the need for SCRALA to better understand what is happening at the intra-household level to address vulnerability and strengthen resilience. While the project understands from 2019 that it takes time to create significant shifts in attitudes and norms, the project length does provide a reasonable length of time to build on synergies of partners' experiences/initiatives to, for example interweave approaches of:

1. Engaging men on gender equality/developing change agents
2. Building in household visioning. For example, Gender Action Learning Systems/Household Methodologies) into FFS, cooperatives, extension, or other relevant groups

Incorporating these types of approaches will also help address some of the challenges of social/cultural norms including problems, noted in earlier reports about the challenges of women's participation in activities after marriage.

In relation to the dissemination of climate/weather advisory services, it was noted informally that men in male-headed households may tend to own/control the mobile phone rather than women. It is not clear if women are therefore able to receive advisory updates via SMS and if so, to what extent the information is transferred fully/correctly. Further, it was suggested that SCRALA needs to work also with existing women's groups on disseminating climate advisories. Understanding how women access climate/weather-related information, for example,

is it through neighbours/family members, community groups, mobile, radio, other or not at all, would also help identify solutions to sharing this important information. This aspect should be integrated into the rapid gender appraisal/study along with other issues.

Further, in relation to Activity 1.1, a broader recommendation where SCRALA could contribute to the enabling environment (based on feedback from ZMD re: fewer women in this line of work): The work under this activity and 1.2 could provide an opportunity for SCRALA/ZMD to raise awareness with climate-interested youth (young women) to pursue careers in relation to this issue through participating in events to raise awareness (by sharing re: project activities, what it takes to enter into this kind of career, etc.), or sharing learning, raising awareness with technical colleges/universities, engaging with the Ministry of Gender, etc. on SCRALA's work.

While many of the project's interventions are intended to mainstream gender and ensure quotas of women's participation, SCRALA may also benefit from some strategic gender-focused interventions which will require additional resources either from the existing budget or through leveraging other complementary funds.

- This includes, as indicated above, undertaking a rapid gender appraisal/study (which should be followed up midway to completion and at completion). Such a study would be undertaken by SCRALA with the support of partners /other organizations experienced in designing and conducting rapid gender appraisals/studies (FGDs/key informants).
- Another proposed area that will require at least some resources for training/implementation/monitoring is that of incorporating a strong approach to "engaging men" (UNDP has a project with the Men's Network that could be leveraged). This could be complemented by incorporating a household visioning approach in FFS/community dialogues, and/or other appropriate groups to strengthen activities and help address some of the challenges posed by social/cultural norms, thereby increasing the likelihood of building resilience in all household members and thus the entire household. In early 2021, the Gender Expert will investigate these possibilities as part of the inception activities.

4.2.1 PROGRESS ON IMPLEMENTING THE PROJECT-LEVEL GENDER ACTION PLAN SUBMITTED WITH THE FUNDING PROPOSAL.

In case relatively complete data is available for a given activity, the table below gives this information for all the project districts. However, in the absence of detailed GDD across specific activities, as a useful example and for the sake of analysis, the table below focuses on two districts, Nyimba and Mambwe, where relatively complete data across all activities is available. In the future this analysis will cover all the project activities across all districts.

The data given below was correct at the time of the analysis. However, at the same time, the ongoing baseline assessment was generating additional information daily, therefore, to some extent, it may be liable to change and / or differ to that given in the indicators table in section 2.4.1.

Activities/actions	Indicators	Base-line	Targets, including sex-disaggregated targets	Time	Responsibilities	Budget	Report on annual progress
Output 1: Smallholder farmers can plan for and manage climate risk to support resilient agricultural production							
Activity 1.1: Strengthen generation and interpretation of climate information and data collection to ensure timely and detailed weather, climate, crop, and hydrological forecasts is available to support smallholder in planning and management of water resources used in resilient agricultural practices							
Identification of both men and women's needs when it comes to climate information and weather / agricultural advisories. Engagement of both men and women in the generation and analysis of climate-related data. Development and promotion of tailored and targeted weather and agricultural advisories	Number of women and men engaged in the generation and analysis of climate information. Type and quality of weather and agricultural advisories produced.	(From GAP approved by GCF) Base-line: 0.	(From GAP approved by GCF) Target: 62% of female population provided with access to improved climate information, weather and agricultural advisories.	Yr 1 to 7	ZMD in coordination with MOA and WARMA		Specific data are needed on the number of women and men engaging in the generation and analysis of climate information. Staff have suggested that the numbers of women are lower than men. To date, ZMD have developed an SMS Platform. A more thorough analysis will need more information on the actual implementation of the advisories. It has also been noted anecdotally that while women and men participate in training, it is men who tend to participate most vocally. <i>Therefore while, more</i>

that are gender sensitive and consider the needs of women and men.							information is also needed on how women and men perceived these services and how they are (or are not) benefiting from/applying them.
Activity 1.2: Strengthen dissemination and use of tailored weather / climate-based agricultural advisories to ensure smallholder farmers receive the tailored information they need for planning and decision-making							
Identify differentiated needs related to format and content of weather and agricultural advisories to target both men and women Define specific dissemination channels that would be best able to reach women and men. Integration of gender into trainings on interpretation and use of climate information	Number of dissemination channels designs specifically to target women Number of women and men receiving weather and agricultural advisories Number of women and men smallholder farmers using advisories to inform their agricultural planning Number of women and men involved in training on interpretation and use of climate information.			Yr 1 to yr 7	ZMD in coordination with MOA and WARMA	100,000	Data for some districts is missing, therefore there is an incomplete overall picture. In Nyimba District, ZMD disseminated the seasonal rain forecast for 2020/21 and agricultural advisories to 20,640 farmers (12,040 men and 8,600 women) in all the 16 camps through extension meetings and local radio. Chama reports that female farmers adopting advisories in their planning is relatively low. There is a suggestion of encouraging participation of women in training and workshops through working with traditional leaders to encourage them. <i>However, there is also a need to understand what the barriers are to women's ability to use the advisories if at all (this may be related to ownership/access to land, agricultural inputs, intra-household decision-making) and resources to access inputs needed; limited/lack of decision-making power over plots, etc.</i> For Chama District through ZMD in coordination with camp extension officers and Kwenje radio station, the district disseminated weather/climate-based agricultural advisories to 4,060 farmers of the population reached – 1,705 women (42%) and 2,355 men (58%). In Chama, ZMD trained 50 lead farmers (19 women 38% and 31 men 62%), local radio station officers (2 men) and 35 district officers (4 women, 11% and 31 men 89%) on how to interpret and disseminate 2020/2021 weather forecast information to farmers.
Output 2: Resilient agricultural livelihoods in the face of changing rainfall, increasing drought and occasional floods							
Activity 2.1: Promote irrigation schemes, water storage, and capture as well as other resilient water management strategies to increase access to water for agricultural production in the target districts within Agro-ecological Regions I and II							
Identify female smallholder farmers who are working with existing irrigation schemes and / or those	Number of male and female smallholder farmers adopting			Yr 1 to yr 7	MOA and DWA	200,000	In Chama, project staff sensitised 350 farmers on the sites – 122 women (34%) and 228 men (67%).

<p>who are interested in introducing water management technologies.</p> <p>Integration of gender and the roles / responsibilities around access and use of water to trainings on water management approaches for water user groups and Water User Associations.</p> <p>Define strategies to support increased water access and irrigation for both men and female stallholder farmers.</p> <p>Ensure the involvement of both men and women in water user groups and associations, including equal participation in leadership positions.</p>	<p>new irrigation schemes.</p> <p>Number of men and women participating in trainings on resilient water management approaches.</p> <p>Number of men and women participating in water user groups.</p> <p>Number of women in formal leadership positions of Water User Associations.</p> <p>Changing role of men and women in water access and use, including water management approaches.</p>						
Activity 2.2: Increased access to agricultural inputs (e.g., seeds, soil kits) for resilient crops							
<p>Identify differentiated needs and priorities of input types (e.g., type of crop) for men and women in target districts.</p> <p>Increase access to seeds of drought, pest-resistant and early maturing crop varieties equally for both men and women farmers</p> <p>Increase adoption of diversified crops equally for both men and women farmers in target communities.</p> <p>Engagement of both men and women equally in seed multiplication training and implementation.</p>	<p>Number of farmers supplied with drought tolerant seed disaggregated by gender.</p> <p>Number of women and men involved in trainings on seed multiplication.</p> <p>Number of small-holder farmers receiving agricultural inputs, disaggregated by gender.</p>			Yr 1 to yr 7	MOA	8,000,000	<p>87,889 farmers (39,256 women and 47,543 men) received drought tolerant seed.</p> <p><i>However, while women may access the inputs, the gender expert needs more information on whether they were in female-headed households, male-headed households (perhaps accessing, but not necessarily having decision-making power over these). The analysis also needs more information on what happens in the household when beneficiaries access these inputs.</i></p>
Activity 2.3: Introduction of new agricultural practices to strengthen production and diversify crops in the context of climate variability and change.							

<p>Increase adoption of diversified crops for women in target communities.</p> <p>Introduce new agricultural practices for both women and men drawing on indigenous knowledge strategies from both genders.</p> <p>Identification of agricultural practices that also align with the needs and priorities of both men and women.</p> <p>Identify and document indigenous knowledge, practices and coping mechanisms informed by both men and women.</p>	<p>Number of participants engaged in training and technical support for introduction of new agricultural practices, disaggregated by gender.</p> <p>Number of female recipients able to strengthen production and diversify amidst climate variability and change with the introduction of new agricultural practices.</p>	<p>From GCF-submitted GAP (0)</p>	<p>(From GCF-submitted GAP) Target: 90% of female.</p> <p>recipients are able to strengthen production and diversify amidst climate variability and change with the introduction of new agricultural practices.</p>	<p>Yr 1 to yr 7.</p>	<p>MOA</p>	<p>3,000,000</p>	<p>The MoA trained 2,658 (1,559 men, 59% and 1,009 women, 41%) as lead farmers.</p> <p>The MoA also identified and trained 35,108 follow up farmers (17,842 men, 51% and 17,266 women, 49%).</p> <p>In turn. Lead farmers introduced 36,470 farmers (18,845 men, 52% and 17,625 women, 48%) to sustainable agriculture practices.</p>
Activity 2.4: Introduce alternative livelihoods to strengthen resilience of target communities							
<p>Community dialogue / conversation and engagement to identify livelihood options that fit the needs of both men and women.</p> <p>Identification of female community members who are interested in becoming champions and leaders for adopting alternative livelihoods members who are working within existing systems and whom the MoA introduced to alternative livelihoods.</p> <p>Engagement of both men and women in training and technical support for introducing alternative livelihoods.</p>	<p>Number of participants engaged in training and adoption of new alternative livelihoods, disaggregated by gender.</p> <p>Number of women in leadership positions in newly established cooperatives or farmer groups for alternative livelihoods.</p>	<p>From GCF submitted GAP (0)</p>	<p>From GCF submitted GAP: Target: 378,461 women benefit from the adoption of diversified, climate-resilient livelihood options.</p>	<p>Yr 1 to Yr 7</p>	<p>MOA</p>	<p>4,000,000</p>	<p>792 farmers (334 men, 56% and 258 women, 44%) adopted alternative livelihoods (BEE KEEPING); 4,601 farmers (2,051 men, 45% and 2,550 women, 55%) adopted alternative livelihoods (GOAT KEEPING); and 613 farmers (258 men, 40% and 355 women, 60%) were pass on beneficiaries.</p> <p><i>Anecdotaly, the gender expert noted that there are cases where women may be the beneficiaries of the goats, but men may end up controlling what happens (decision-making) with the goat. The project will need to investigate more, along with ways to ensure both women and men benefit from adopting these alternative livelihoods. The same goes for other alternative livelihood practices promoted.</i></p> <p><i>No data on the number of women in leadership positions in cooperatives or other livelihood groups is available. Suggest any qualitative/FGD/KII study looking at gender issues within the project establish an understanding of this issue from women's and men's perspectives. This is important as it can be indicative of any changes in the community around behaviour/attitudes towards women's empowerment.</i></p>

Activity 2.5: Establish farmer field schools and learning centres of excellence to further document and scale up successful practices considering gender differing needs

Consider gender differentiated needs for knowledge exchange and learning to inform the approach and curriculum of the schools and learning centres. Community dialogue / conversation and engagement with women and men to determine local context specific and appropriate training methods for farmer field schools and learning centres of excellence. Identification of local context specific female appropriate training methods, identifying their specific needs, priorities, and goals, including existing roles and responsibilities (e.g., timing of trainings). Integration of gender into the content of training and curriculum of schools and centres. Development and promotion of tailored and targeted gender sensitive training manuals / guidelines / workshops.	Number of female participants consulted and engaged in the development of farmer field schools and learning centres of excellence (influencing their power of autonomy, exposing them to decision-making and leadership opportunities and generating ownership). Number of farmers engaged in training programmes, disaggregated by gender. Number of female participants completing training programmes (retention rates). Number of women trainers or in other leadership positions. Number of female recipients able to strengthen production and diversify amidst climate variability and change with the introduction of new agricultural practices.	From GCF-submitted GAP: 0	From GCF-submitted GAP: Target: 83,000 female recipients are able to strengthen production and diversify amidst climate variability and change with the introduction of new agricultural practices.	Yr 1 to yr 7	FAO	100,000	FAO Trained a total of 72 (60 men, 83% and 12 women, 17% - 6 Research Assistants, 18 District Subject Matter Specialists, 12 block and 36 camp) extension staff in the FFS approach. COVID reduced the number of staff that FAO could train. FAO trained 988 farmers (534 men, 54% and 454 women, 46%) and these were actively participating in FFSs. FAO, validation exercise conducted of the adaptation options in six Phase I SCRALA Districts (Chama, Mafinga, Luangwa, Rufunsa, Chongwe and Chirundu) included a total of 144 participants (108 men, 75% and 36 women, 25%). <i>While there is information on the numbers of women/men trained, it would be useful to understand how women and men in the validation exercise agreed (or differed) on their perspectives of the adaptation options and to understand if women and men might need different (or even complementary) options based on their roles, access to resources, information, etc.</i>
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Output 3: Increasing farmers' access to markets and commercialization of resilient agricultural products

Activity 3.1 Strengthen processing of resilient products

Identification of processing methods and strategies which align with the roles/responsibilities of both men and women.	Number of women and men engaged and supported in processing of resilient crops.			Yr 1 to yr 7	MoA	200,000	No activities to date. <i>SCRALA would benefit from a rapid assessment of the needs and interests of women in relation to their participation in processing. This could be part of the rapid</i>
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Engage women in training on processing resilient crops, supported by targeted measures to strengthen their leadership in this process.	Number of women in leadership positions around processing approaches (e.g., responsibility for maintenance funds, organized cooperatives, training of trainers).						<i>participatory appraisal focused on gender dimensions.</i>
Activity 3.2 Strengthen storage, aggregation, and transportation of resilient products to enhance commercialization and linkages to market and SMEs							
Engage women in all trainings and provide opportunities for them within the storage, aggregation, and transportation networks. Identify approaches that consider the differing roles and responsibilities of both men and women. Identify female community members who are working within existing market systems and those who are interested in joining this form of employment. Promotion of market-orientated and gender sensitive training. Incorporate gender sensitive training on business skills, leadership and decision-making. Addition of gender training into the rollout or curriculum of any agricultural, climate change adaption, business, leadership, and entrepreneur training.	Number of women and men engaged in the new storage, aggregation and transportation networks. Number of female smallholder farmers with improved access to markets. Number of women supported in the development of rural enterprises, business training and capacity/skills building. Number of women engaged in leadership and decision-making training. Number of women in leadership and decision-making roles.			Yr 1 to yr 7	WFP	100,000	<p>WFP trained 17,631 farmers (8,025 men, 46% and 9,606 women, 54%) were in reducing post-harvest losses.</p> <p>For the other sub-activities, no disaggregated data available, but following the training of 262 Ministry of Agriculture (MoA) staff during the second quarter of 2020, WFP, working with MoA, facilitated the training of 11,891 representatives (GDD unavailable) from various farmer groups/ cooperatives in post-harvest loss management (PHM) and storage and introduced them to hermetic solutions through the Camp Extension Officers (CEOs). The farmer groups/cooperatives representatives will in turn cascade the acquired knowledge to the members from their cooperatives/farmer groups.</p> <p>WFP distributed 3,400 PHM training materials were to lead farmers through MoA staff during the camp level trainings.</p> <p>As part of efforts to promote awareness on PHM among smallholder farmers, WFP developed radio programmes on PHM that the Zambia National Broadcasting Corporation (ZNBC) aired, targeting all the 16 districts. WFP produced 31 radio programmes were in four major local languages (Nyanja, Bemba, Lozi and Tonga). WFP leveraged the use of this channel to minimize human-to-human contact while continuing to disseminate PHM messages amidst the COVID-19 pandemic. <i>There is no information on whether these programmes were accessible to women as well as men and if/how women/men used the information.</i></p> <p>In Nyimba WFP carried out a ToT for 25 (18 men, 72% and 8 women 28%), including both field and district staff, on</p>

							<p>Post-Harvest Handling, Storage and Financial Services.</p> <p>The project also trained 450 small scale farmers (234 men, 52% and 216 women, 48%) on Post-Harvest Handling, Storage and Financial Services in 16 camps.</p>
Activity 3.3 Increase access to finance and insurance products for smallholder farmers by engaging with potential financing sources including public, private, bilateral, and multi-lateral sources.							
<p>Identify specific barriers to access to finance for both men and women and facilitate dialogue with finance providers.</p> <p>Project staff to ensure that they deliver all training on finance and business capacity equally to both men and women.</p> <p>Integrate gender issues into all training on business skills, leadership and decision-making.</p> <p>Building and tailoring an asset base for female-headed households and poor women, in addition to improving access to service providers, including micro-credit and insurance providers.</p>	<p>Number of women participants engaged in training on finance, insurance, and business.</p> <p>Number of women and men adopting new financial or insurance products.</p>			Yr 1 to yr 6.	WFP	100,000	<p>755 (75%) of households (128 MHH and 627 FHH) have accessed financial education programmes related to credit and insurance schemes.</p> <p>WFP supported the training of 136 provincial and district level Ministry of Agriculture staff on Weather Index Insurance. The trained staff will cascade the training to an additional 2,071 agricultural extension staff.</p> <p><i>No disaggregated data on numbers of women and men trained or how gender issues are incorporated into training.</i></p> <p>The Livestock Index Insurance scheme is expected to reach an estimated 600,000 farmers across the country, including the 16 districts under the SCRALA project. Number of women vs men to be included is not highlighted.</p> <p>WFP has developed tailored training materials on the livestock index insurance to support the MFL staff in rolling out the Livestock Index Insurance at district level.</p> <p><i>Need information on whether/how gender issues are addressed....and disaggregated information for the following:</i></p> <p>WFP trained 44 staff from the MoA and Ministry of Community Development and Social Services in Savings for Change on community-based savings across the 16 GCF-supported districts. The trained staff will facilitate the training of smallholder farmers in Savings for Change and support the formation of smallholder farming savings groups as part of WFP efforts to foster financial inclusion.</p> <p>Currently WFP is training, 560 representatives of farmer groups on the Savings for Change methodology across the 16 districts. Each trained representative will form at least one savings group, for a total of 560 savings groups that will receive training across the 16 districts. The project estimates that this activity will reach about 12,000</p>

							farmers who will participate in savings groups in the first year of implementation.
Activity 3.4 Identify available markets and promote climate-resilient products for women.							
Engagement of both men and women in campaigns around nutrition and alternative crops. Ensure procurement of indigenous foods is from both male and female smallholder farmers equally. Ensure links with private sector actors on resilient crops target both male and female stallholder farmers. Identify strategies to target both men and women in nutrition education. Identify strategies to target both girls and boys in school garden activities and raising awareness on resilient crops.	Number of farmers engaged in providing crops to national home-grown school feeding programme (disaggregated by gender). Number of women and men targeted for nutrition education, disaggregated by gender. Number of school children engaged in establishing school gardens, disaggregated by gender. Number of private sector partnerships between private sector and smallholder farmers, disaggregated by gender.	From GCF-submitted GAP: 0	From GCF-submitted GAP: Target: 80% of resilient commodities produced by target female farmers are sold on the markets.	Yr 1 to yr 7	WFP	100,000	<i>There is still the need for organizing women's and farmers' groups / cooperatives and FFS. COVID has had an impact on organizing.</i>

4.3 PLANNED ACTIVITIES ON ENVIRONMENTAL AND SOCIAL SAFEGUARDS

The project carried out the following activities in 2020, to adhere to the project's ESMF/ESMP:

- The hiring of an International Safeguards Specialist consultant to review, audit and update the projects ESMF, ESMP and GRM (he will finalize the work by the end of Q1 2021)
- The orientation of beneficiaries and stakeholders on the environmental and social safeguards management during workshops, and through implementation of the Stakeholder Engagement Plan and ESMF.
- Capacity building for the ESS committees on their roles in project implementation
- The project engineer has prepared a preliminary methodology for drawing up site specific Erosion, Drainage and Sediment Control Plans and carry out Sediment Sample Field Testing as required. The person responsible will submit and ensure that ZEMA will approve any site specific ESMP before construction activities begin. The project engineer will review these preliminary efforts in collaboration with the ESS consultant during the first quarter of 2021 and revise as required.

The project plans the following activities for 2021 to adhere to the project's ESMF/ESMP:

- Audited and updated ESMP and ESMF.

- Reviewed and updated project-level GRM.
- Finalisation of the contractor and camp officer ESS-compliance checklists/monitoring report templates.
- The person responsible will conduct activities as per the ESMP schedule for site-specific interventions involving construction/civil works.
- Continue to follow up with stakeholders through implementation of the Stakeholder Engagement Plan and ESMF.
- Capacity building for the ESS committees on their roles in the project implementation
- Promptly respond to grievances as they arise.
- ESS Officer to carry out regular screening and monitoring of the Environmental and Social Management Framework and the risks associated to it, throughout the project period. Based on this assessment the ESMF and the ESS officer will update the risks as appropriate.
- WARMA will carry out groundwater pump tests and laboratory testing as well as water quality monitoring as required by the ESMP
- In collaboration with the MoA, the project engineer will implement the site specific ESMP and Erosion, Drainage and Sediment Control Plans for each relevant irrigation and water storage structure.

The Implementation Plan included as Annex 1 includes the monitoring schedule concerning ESS.

4.4 PLANNED ACTIVITIES ON GENDER ELEMENTS

Activities planned for 2021 include:

- Finalize the recruitment of the Gender Officer.
- Provide feedback/inputs on the impact evaluation baseline analysis.
- The gender expert will review project documentation, project activities to date and interact with project staff and partners to identify synergies that SCRALA partners (e.g., FAO, WFP) can leverage through and other organizations integrating gender-transformative approaches to strengthen the implementation for 2021 and beyond and to expedite implementation of the Gender Action Plan (GAP).
- Revise the GAP to strengthen alignment with the overall project, remove unnecessary indicators and clarify others; and reformat overall for ease of use and monitoring purposes.
- Develop and conduct a Capacity Needs Assessment with staff/partners to identify specific capacity strength and gaps that the project needs to address to support SCRALA implementation. The Capacity Needs Assessment will inform a Capacity Development (CD) Strategy / Plan aimed at strengthening individual and institutional capacity across the project's implementation (and therefore contribute to the enabling environment also). The project will target this at, for example: gender focal points as well as extension working in FFS and community dialogues; those working on climate advisory services with smallholder farmers, business/entrepreneurship/leadership training; village savings and loans, conservation agriculture, etc. This will include making accessible tools and other resources for staff/partners as well as identifying knowledge sharing opportunities in the country.
- Roll out the CD Strategy. Activities to strengthen SCRALA capacity will begin to roll out in the first half and build, in part, on training and other activities that the 2021 AWP includes (e.g., village and savings, index, climate advisory services, etc.). This means the project partners will ensure that sessions on gender and gender-responsive approaches are part of training and activities at different levels as well as developing separate targeted trainings and other institutional capacity development supports on gender where needed (to be determined after the gender expert carried out the capacity assessment).
- Strengthen the framework/process for capturing disaggregated data to track the participation of women and men as project beneficiaries and ensure this data is systematically incorporated into monitoring processes and reports. This should include finding a way to include qualitative as well as quantitative information as well so that project staff can revise activities as needed during implementation.
- Design and implement a robust, but rapid participatory gender appraisal/study leveraging partnerships with existing or other partners who have strong experience in this area – to dig deeper into the gender issues and surface effective means for the project to address these in implementation.
- Strengthen implementation (e.g., through adding value to ongoing FFS, Village Savings and loans, community dialogue interventions, etc. by leveraging synergies with partners experienced in applying robust gender transformative/engaging

men/household visioning approaches. This may include, for example, building on UNDP/Men Engage Network's work to support gender equality/women's empowerment; WFP's gender-transformative approaches and other organizations' work in similar areas.

Strengthen outreach to other initiatives/organizations in Zambia with experience/good practices that the project can leverage to ensure that SCRALA integrates its experiences into wider reporting and frameworks and processes (e.g., national cross-sectoral NAP/NDC/Sendai Framework fora/processes; Common Country Assessment; UNSDCF, etc.) and knowledge sharing events/initiatives relevant to climate change/adaptation/gender. Of particular interest are leveraging approaches to engaging men and household visioning approaches to support alternative livelihoods/effective value chains/strengthening resilience of households (UNDP/Men Engage network already collaborate on the former).

SECTION 5: ANNEXES

Annex 1. [Updated implementation timetable for the Funded Activity](#)

SECTION 6: ATTACHMENTS

Attachment 1. [SCRALA 2021 Monitoring Plan](#)

Attachment 2. [2020 + 2021 Rainy season forecast](#)

Attachment 3. [Case study – Maxwell’s bargaining power](#)

Attachment 4. [NETAFIM/UNDP irrigation training](#)

Attachment 5. [SCRALA Zambia national television appearances](#)

Attachment 6. [Fighting extreme weather - story](#)