AFB/PPRC.27/25
8 March, 2021

Adaptation Fund Board
Project and Programme Review Committee
Twenty-Seventh Meeting
Bonn, Germany (Virtually held) 22-23 March 2021

Agenda Item 8 c)

PROPOSAL FOR INNOVATION SMALL GRANT FOR ZIMBABWE

Background

1. At its thirtieth meeting, having considered document AFB/B.30/5/Rev.1, the Adaptation Fund Board decided:

> *(a) To adopt the medium-term strategy as amended by the Board, as contained in the Annex 1 of the document AFB/B.30/5/Rev.1 (the MTS); and*
>
> *(b) To request the secretariat:*
>
> *(i) To broadly disseminate the MTS and work with key stakeholders to build understanding and support;*
>
> *(ii) To prepare, under the supervision of the MTS task force, a draft implementation plan for operationalizing the MTS, containing a draft budget and addressing key assumptions and risks, including but not limited to funding and political risks, for consideration by the Board at its thirty-first meeting; and*
>
> *(iii) To draft, as part of the implementation plan, the updates/modifications to the operational policies and guidelines of the Adaptation Fund needed to facilitate implementation of the MTS, for consideration by the Board at its thirty-first meeting.*
>
> *(Decision B.30/42)*

2. Pursuant to decision B.30/42, subparagraph b (ii), the secretariat prepared a draft implementation plan for the MTS, including an assessment of assumptions and risks. The secretariat shared a version of the draft with the MTS task force for comments.

3. The draft implementation plan also contains suggestions for specific funding windows that might be opened under the MTS in complement of the Fund's existing funding windows for single-country and regional adaptation projects and readiness support projects. Following the approval of the implementation plan, the secretariat would present specific proposed details for each new funding window at subsequent meetings of the Board for its consideration, in accordance with the timeline contained in the implementation plan.

4. At its thirty-first meeting, the Adaptation Fund Board discussed the draft implementation plan for the MTS, and members of the Board proposed amendments to the document. The secretariat then presented a revised draft, in document AFB/B.31/5/Rev.1. Having considered that document, the Board decided:

> *(a) To approve the implementation plan for the medium-term strategy for the Fund for 2018–2022 contained in the Annex I to document AFB/B.31/5/Rev.1 (the plan);*
>
> *(b) To request the secretariat:*
>
> *[…]*

(iii) To prepare, for each proposed new type of grant and funding window, a specific document containing objectives, review criteria, expected grant sizes, implementation modalities, review process and other relevant features and submit it to the Board for its consideration in accordance with the tentative timeline contained in Annex I to document AFB/B.31/5/Rev.1, with input from the Board's committees;

(iv) Following consideration of the new types of support mentioned in subparagraph (b)(iii), to propose, as necessary, amendments to the Fund's operational policies and guidelines Fund to better facilitate the implementation of such new types of support; and

[…]

(Decision B.31/32)

5. At its thirty-second meeting, the Board considered document AFB/PPRC.23/4/Rev.2, *Program on Innovation: Small Grants Projects through Direct Access Modality,* and the Board decided:

(a) To approve the process for providing funding for innovation through small grants to National Implementing Entities (NIEs), as described in document AFB/PPRC.23/4/Rev.2, including the proposed objectives, review criteria, expected grant sizes, implementation modalities, review process and other relevant features as described in the document; and

(b) To request the secretariat to prepare the first request for proposals to NIEs for US$ 2 million, to be launched at the twenty-fourth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change in December 2018.

(Decision B.32/4)

6. Subsequently, the first request for proposals to NIEs for US$ 2 million was launched at the UNFCCC Conference of the Parties in December 2018.

7. The secretariat is submitting to the PPRC the summary and, pursuant to decision B.17/15, the final technical review of the project, both prepared by the secretariat, along with the final submission of the proposal in the following section. In accordance with decision B.25.15, the proposal is submitted with changes between the initial submission and the revised version highlighted or with track changes.

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Innovation Small Grant

Country/Region: **Zimbabwe**
Project Title: **Accelerating Climate Change Resilience through Climate Smart Agriculture and Landscape Management Project in Matobo District, Zimbabwe**
Thematic Focal Area: **Innovation**
Implementing Entity: **Environmental Management Agency (EMA)**
AF Project ID: **AFRDG00057**
IE Project ID:
Requested Financing from Adaptation Fund (US Dollars): **249,970**
Reviewer and contact person: **Alyssa Gomes**
Co-reviewer(s): **Eleanor Saunders, Claudia Lasprilla**
IE Contact Person:

Technical Summary	The project on Climate Smart Agriculture (CSA) and Landscape Management under the Pfumvudza (new season) concept in Zimbabwe aims to foster mechanisms that help communities in the Matobo District to cope with the impacts of droughts in their agriculture productivity, food security and that promote poverty reduction. CSA leads to improve crop yields while preserving the soil, reducing water consumption and maximizing nutrients retention. The project will also count with knowledge learning and sharing activities through trainings and awareness materials. Project/Programme Background and Context: The project will be developed in 4 wards in the Matobo district, providing demonstration sites all related to CSA best practices, encouraging to stimulate its implementation by other farmers in the region. The project aims to achieve its objectives through 3 main components: Component 1: Climate proofing livelihood sources (USD 106,000) Component 2: Landscape management and ecosystem restoration (USD 64,400) Component 3: Knowledge management and strengthening of institutions (USD 40,000) Requested financing overview:

	Project/Programme Execution Cost: USD 19,988 Total Project/Programme Cost: USD 230,388 Implementing Fee: USD 19,582 Financing Requested: USD 249,970 The initial technical review found that with a stronger focus on highlighting the locally developed solutions, developed alongside land and biodiversity reclamation and management, and using community-driven involvement, this proposal could show a strong low tech system innovation landscape that would act as a demonstration of multiple solutions allowing knowledge transfer that can be adapted as needed. A number of clarification requests (CRs) and a couple of corrective action requests (CARs) had been raised by the technical review. The final technical review finds that the proposal needs to justify the innovation rationale of the proposed mechanised solutions, further clarifying the interlinkages between the components and the enhanced systemic adaptive nature of the project. Considering learning dissemination, it is also still unclear how exactly the communities will develop and build up a portfolio of the best solutions needed and trail and develop these.
Date:	02/28/2021

Review Criteria	Questions	Comments Initial Technical Review	Comments Final Technical Review
Country Eligibility	1. Is the country party to the Kyoto Protocol?	**Yes.**	-
Project Eligibility	1. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	**Yes.**	-
	2. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?[1]	**Yes.** This project highlights the limiting factors of agricultural production in Zimbabwe caused by frequency and severity of droughts and extreme	-

[1] *A concrete adaptation project/programme is defined as a set of activities aimed at addressing the adverse impacts of and risks posed by climate change. The activities shall aim at producing visible and tangible results on the ground by reducing vulnerability and increasing the adaptive capacity of human and natural*

		flood events and presents conservation agriculture principles as a potential solution to address many of these challenges. The problem analysis is clearly defined, and the problem statement is split into three identifiable areas. (p.6). One of Zimbabwe's major socio-economic activities is centered on small scale crop production. The project aims to promote climate smart agriculture to restore wetlands and increase water retention in soil, improve soil fertility, ensure food security and generally improve the livelihood of farmers. The project is specifically targeting farmers in four wards in the Matobo district which is prone to periodic climate related hazards, environmental degradation, human and wildlife conflicts and veld fires. The proposal offers a system innovation using (amongst other methods) low tech and ecosystem-based solutions. The approach highlights the interrelated nature of problems faced and provides focal areas for applying innovation	

systems to respond to the impacts of climate change, including climate variability. Adaptation projects/programmes can be implemented at the community, national, regional and transboundary level. Projects/programmes concern activities with a specific objective(s) and concrete outcome(s) and output(s) that are measurable, monitorable, and verifiable. (Source: Operational Policies and Guidelines, amended October 2017

		methodologies to seek solutions. It also acknowledges that the proposed solution area (climate smart agriculture) can only partially solve the problems, acknowledging the opportunities for other solutions as well.	
	3. Does the project encourage or accelerate development of innovative adaptation practices, tools and technologies?	**Unclear.** Climate Smart Agriculture (CSA) as a climate change adaptive solution is justified. However, overall, the proposal needs to more clearly justify the innovation rationale for a number of the proposed solutions. Climate Smart Agriculture programmes have been present in Zimbabwe since 2009 and are being promoted and financed by different international organisations. The proposal should, therefore, strengthen some sections to further inform its innovation potential, in relation to the past and on-going initiatives in the same focus area. **CR1:** Please justify the innovation rationale of the proposed solution (CSA) in Zimbabwe. There are currently some technologies and/or processes that are lightly mentioned in the proposal but not expanded upon. E.g. Page 8 mentions a number of solutions that	**CR1: Not clear** The project proposes to introduce mechanised conservation agriculture by virtue of introducing labour saving hydraulic augers for land preparation in the target wards. The proposed approach is justified from a climate change adaptation perspective. However, the innovation rationale needs to be strengthened. From an innovation perspective, a technology transfer of an adaptive technology that has already been widely applied and understood, would not count as innovation. However, bringing an existing technology and adapting it to new location and context may count as innovation. Innovation might also be in the form of low-tech revival i.e. repurposing traditional tools/approaches. **CR2: Not clear,** as per details provided on page 8.

		can benefit vulnerable communities, including the use of energy efficient stoves, and biological pathogen control. **CR2:** Please elaborate upon these in the proposal. Although they could form part of a systems solution, it is unclear how the small grant project would achieve all these elements without a clear plan for multi focal project actions. In the project components, elements 1 and 2 (climate proofing livelihood sources and landscape management) do not appear to have a clear link between them. **CR3:** The need to shift framing practices from fragile ecosystems, to prevent degradation of habitats is clear. However, please clarify in the proposal the process for how the land maybe reclaimed from farmers who have already started to utilise these areas. Component 2 related to landscape management and ecosystem restoration, is not well integrated throughout the proposal, but it is part of the same solution to manage agriculture and biodiversity together. **CR4:** Please elaborate on this	The component on energy saving stoves has been removed. The project is scaling up the conservation farming method locally called *Pfumvudza* that would allow rural households to produce enough to feed themselves through small lands. The proposed landscape approach to conservation agriculture treats conservation farming in an integrated approach. However, the proposal needs to clearly link the outcomes of the project components 1 and 2, to enhance the systemic adaptive nature of the project, which would, in turn, allow more possibilities for micro innovations to occur in both areas, and also on the interfaces between the two components. Note: The energy efficient stoves and the biological pathogen control are still mentioned under Part II section B. Kindly delete all references to the now eliminated activities. **CR3: Not clear,** as per details provided on page 10. The project anticipates behavioural change among farmers, once they see that the same conditions (such as in wetlands and stream banks)

		linkage and how the component will enhance the systemic adaptive nature of the project, allowing more possibilities for micro innovations to occur in both areas, and on the interfaces between the two. The conservation agriculture methods of 'minimum tillage to avoid soil disturbance, maintenance of organic mulch, and crop rotations' (p.12) can all be considered low tech innovations or nature-based solutions. **CR5:** Please clarify the innovation process used to ensure their uptake in the short term, especially since they can create more labour-intensive practices that some 'technology' solutions avoid. **CR6:** Please clarify what technological solutions will be introduced within the demonstration plots. **CR7:** The proposal needs to strengthen the cost-effectiveness justification of the chosen interventions (solar powered boreholes, contour ridges etc). **CR8:** Please describe the main features of 'climate smart innovative seedbanks. How will the technology-	may be created in their fields through conservation agriculture principles (i.e. applying mulch and minimizing soil disturbance). However, these methods of 'minimum tillage to avoid soil disturbance, maintenance of organic mulch, and crop rotations', take a long time to show results. To facilitate the desired behavioural change in the short term, this will be accompanied by awareness and education on ecosystem management. This approach, however, makes it difficult to assess its effectiveness in the short to medium term (i.e. the 2-year duration of the project). Lastly, once farmers voluntarily agreed to move, what measures will be in place to ensure that the areas remain protected from unsustainable farming practices, is still unclear. **CR4**: **Unclear,** please refer to CR 1& CR2. The transformational impact of the Pfumvudza concept that has gained rapid adoption and success in Zimbabwe is the small size of the plot and the high standards of farming that it both demands and enables. However, please describe

		based seed banks work in practice, how will they be managed and how will they be sustainable in the long-term. **CR9:** The learning elements eluded to on page 11 are good, but kindly further explain in the proposal how the champion farmers will be selected (selection criteria), how will learning be implemented back into the project itself (Selection of interventions for example), and how will the community be truly engaged. **CR10:** In light of learning dissemination, please clarify how exactly the communities will develop and build up a portfolio of the best solutions needed and, test and develop these. Outcome 2 of the project will be executed by the Sothern Alliance for Indigenous Resources (SAFIRE). **CR11:** What kinds of indigenous farming methods similar to CA technologies have been identified? How will the project ensure integration of traditional knowledge in conservation practices? **CR12:** Please clarify how the project will ensure the active involvement of local leadership to develop, test,	how the approach is different from a technology transfer of an adaptive technology. **CR5: Addressed,** as per details provided on pages 10 and 11. Assuming that the innovation rationale is clearly justified under CR1 , the proposed intervention seeks to improve farming practices on a small scale of 1/16th of a Hectare to feed a family of 6 for a year, thus reducing labour intensity and ensuring food security in the short term and ensuring long term ecological integrity on a microlevel. **CR6: Not clear**. Additional information has been provided on pages 10 and 11. Technologies to be acquired are hydraulic soil augers for preparation of planting stations, water harvesting systems and integrated soil fertility techniques. The project will also introduce a mobile app that would allow farmers to access online training videos, step-by-step implementation guidelines, homemade remedies for pest and diseases prevention, and farmer-to-farmer discussion forums. Please clarify why these are considered innovative practices

		manage proposed solutions, also to ensure sustainability?	and provide more details on the soil fertility techniques. **CR7: Not clear.** Cost-effectiveness of solar boreholes and mechanised tool have not been sufficiently explained on page 14. **CR8: No longer relevant.** Activity on seedbanks has been eliminated. The component has been replaced by a mobile application for knowledge sharing. **CR9: Unclear,** as per details provided on page 12. The proposal aims to ensure the participation of women through consultation with local leadership government extension workers and farmer representatives. However, the selection criteria and how will learning be implemented back into the project itself are yet unspecified. **CR10: Needs further clarification,** as per details provided on page 14. The project will make a deliberate effort to establish a knowledge exchange platform within the project area, through several types of learning material such as

			documentation and reporting of good and success stories, learning tours, field days. It is unclear how exactly the communities will develop and build up a portfolio of the best solutions needed and, test and develop these. **CR11: Not clear.** Please include details of traditional knowledge mentioned in the response sheet, in the proposal main text. **CR12: Addressed,** as per additional information on page 15. Demonstration plots and training will be delivered to and through local leadership structures to ensure understanding and adoption of proposed practices. Moreover, participatory consultation methods will be applied during engagements with communities.
	4. Does the project help generate evidence base of effective, efficient adaptation practices, products or technologies, as a basis for potential scaling up?	**Unclear.** The establishment of demonstration sites promotes peer learning and allows for scaling -up the practice of climate smart agriculture. Yet, it seems that CSA has already been promoted in the target areas but has not been adopted fully by farmers. **CR13:** Please clarify how the project intends to ensure community buy-in	**CR13: Addressed,** as per detailed on page 13. The project aims to ensure community buy-in by involving women, youth, and leaders in designing, implementation, monitoring and evaluation of the projects. Incentives such as boreholes will be availed to attract community members away from degraded wetlands and this will be

		and encourage a full-adoption of the proposed mechanisms by the farmers? **CR14:** The project aims to establish 500 demonstration plots (p.14). Please clarify how the project aims to acquire these plots and what regime of project rights will be employed? **CR15:** Please clarify the innovative elements related to the establishment of 'innovative smart community seed banks'. **CR16:** Under component two, the project has an activity focused on invasive species removal. Please clarify what invasive species, what biological control measure will be used and how the project will ensure native species will not be negatively impacted? **CR17:** Related to the activity on drilling boreholes specifically, please clarify whether an environmental assessment or hydrological study has been conducted to ascertain that there will be no environmental impacts/ potential risks to aquifers. **CR18:** Please describe the community-based models for management of concrete	accompanied by awareness and education on ecosystem management. **CR14: Needs further clarification.** The project aims to acquire plots through voluntary contributions. Please clarify if 500 plots have already been secured. **CR15: Clear.** The comment is no longer relevant as the component on seed banks has been replaced by knowledge management mobile application. **CR16: Needs further clarification.** In the project area, the invasive species sought to be removed is *lantana camara*. The *lantana camara* will not be removed by biological control measures but rather by mechanical means. Please provide more details on this approach and how this is linked with the landscape approach of the project. **CR17: Not clear.** Preliminary assessments during the baseline, indicated that the northern part of the district has surface water, hence the proposed implementation of wetland

		interventions that will be established to ensure sustainability of interventions.	management activities. Hydrological studies will be conducted prior to borehole drilling. Please include these details in the proposal main text. In this context, please also update the ESP compliance section. **CR18: Addressed,** as per information provided on page 15. The project aims to involve the local authority and ward development committees, including training and capacity building and engagement of local service providers.
	5. Does the project engage, empower and/or benefit the most vulnerable communities and social groups?	**Not clear.** The proposal highlights the fact that project beneficiaries live in a precarious situation and are vulnerable to climate change. **CR19:** Please clarify what type of mechanized conservation agriculture systems will be promoted to overcome the current labor-intensive activities required within CSA projects. **CR20**: Further describe the type of mechanised equipment that will be purchased, its utility and sustainability. **CR21:** Please clarify what	**CR19: Addressed,** as per information supplied on page 9. The concept being proposed involves farming only 1/16th of a Hectare to a high standard. The plot being so small, can be mulched by hand and compost can be applied to every planting station. Furthermore, it can be kept weed-free and watered by hand if necessary. This makes the process inclusive as even the elderly can practice it. The project proposes to use hydraulic augers to drill boreholes. **CR20: Not clear,** as per information provided on page 19. Local youth will be trained to

		considerations would be made to include women, the elderly, child-headed households, people living with disabilities, and people living with HIV/AIDS. (p.12). **CR22:** Please clarify how the project will incentivize youth to join and contribute to conservation agriculture. **CR23:** Please clarify how conflicts between livestock farmers and cropping farmers over grass mulch will be mitigated. How will the project ensure that human-wildlife conflicts resulting in killing of animals and birds (baboons, bush pigs, guinea fowls) is mitigated? (p.23)	service and engineer some of the implements. However, the project needs to provide some details of longer-term operation and maintenance costs. **CR21: Addressed,** as per information supplied on page 13. The project will focus its activities on the 50% of food insecure female headed households. The other 50% will be male and child headed households as well as those with disabilities and living with HIV/AIDS. **CR22: Needs further clarification.** A deliberate effort will be made to encourage young agriculture entrepreneurs to participate in conservation agriculture which applies a business model approach. Please provide details on the proposed business model and how does the effort "to work closely with schools" fits under this component. **CR23: Addressed,** as per information supplied on pages 14, 20 and 31. The livestock farmers will be integrated in the project. Fodder banks will be introduced as a

			coping strategy in times of drought to maintain the breeding herd for cattle. With good harvest, farmers will have their crop residue as mulch. Reduction in veld fires will also mean that there is excess biomass reducing conflict over mulch for cropping and livestock. Due to the small size of the plot, farmers can build protective barriers, fences and even grow living fences. Related to this, please clarify the target beneficiaries that are livestock farmers. A grievance mechanism could also be useful to monitor and address any issues that may arise.
	6. Does the project advance gender equality and the empowerment of women and girls?	**Not clear.** According to the proposal, women make up most farmers in the country and are exposed to gender-specific vulnerabilities due to their household role in ensuring food production and food/nutrition security, despite their unequal access to land, information and inputs. The project makes references to the fact that women constitute more than half of the target population and female headed households are	**CR24: Addressed,** as per information provided on page 13. The project will take into account gender considerations to enhance women's participation in project activities. **CR25: Addressed**, as per information provided on page 16. Community Based Knowledge management systems will deliberately target women. **CAR1:** Addressed on pages 16 –

		disproportionately impacted by climate vulnerabilities because access to livelihood opportunities by women is severely constrained by cultural, socio-economic and political factors, thereby increasing their vulnerability to food insecurity. (P.3,6, 10,12). However, it is unclear whether there will be a gender balance within the target beneficiary groups. Furthermore, gender-responsive indicators are missing. **CR24:** Please describe how the project will ensure equal participation. How are different gender groups affected differently by climate change impacts and water scarcity? With agriculture being a male-dominated sector, how would women and girls benefit from enhanced water availability? **CR25:** How will different gender groups be included in community and stakeholder consultations related to developing solutions and trainings? **CAR1:** Please provide gender-disaggregated indicators. **CR26:** Clarify the number of direct beneficiaries, disaggregated by gender.	18. Gender Disaggregated indicators are included in the Fund's Results framework. **CR26: Addressed,** as per information supplied on page 16. Direct beneficiaries will be 500 comprising 200 females, 200 males and 100 young people.

Resource Availability	1. Is the requested project funding within the parameters for small grants set by the Board?	**Yes** (249,970 USD). **CAR2:** Please clarify where it is included in the budget and in which component of the project - purchase and distribution of energy efficient stoves.	**CAR2: Clear.** The comment is no longer relevant as the activity has been eliminated.
	2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project budget before the fee?	**Yes** (19,582 USD equivalent to 8.50% of the project total budget). However, there are typos in the IE fee amount in tables under section F on p. 17-18. **CAR 3:** Please amend the IE fee amount in the above-mentioned tables.	**CAR3: Addressed.** IE fee amended on page 20.
Implementation Arrangements	1. Is the project submitted through a National Implementing Entity accredited by the Board?	**Yes.**	**-**
	2. Is the timeframe for the proposed activities adequate?	**Yes.**	**-**
	3. Is a summary breakdown of the budget for the proposed activities included?	**Yes.**	**-**

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Innovation Small Grant

Country/Region: **Zimbabwe**
Project Title: **Accelerating Climate Change Resilience through Climate Smart Agriculture and Landscape Management Project in Matobo District, Zimbabwe**
Thematic Focal Area: **Innovation**
Implementing Entity: **Environmental Management Agency (EMA)**
AF Project ID: **AFRDG00057**
IE Project ID:
Requested Financing from Adaptation Fund (US Dollars): **249,970**
Reviewer and contact person: **Alyssa Gomes**
Co-reviewer(s): **Eleanor Saunders, Claudia Lasprilla**
IE Contact Person: Steady Kangata

Technical Summary	The project on Climate Smart Agriculture (CSA) and Landscape Management in Zimbabwe aims to foster mechanisms that help communities in the Matobo District to cope with the impacts of droughts in their agriculture productivity, food security and that promote poverty reduction. CSA leads to improve crop yields while preserving the soil, reducing water consumption and maximizing nutrients retention. The project will also count with knowledge learning and sharing activities through trainings and awareness materials. Project/Programme Background and Context: The project will be developed in 4 wards in the Matobo district, providing demonstration sites all related to CSA best practices, encouraging to stimulate its implementation by other farmers in the region. The project aims to achieve its objectives through 3 main components: Component 1: Climate proofing livelihood sources (USD 106,000) Component 2: Landscape management and ecosystem restoration (USD 64,400) Component 3: Knowledge management and strengthening of institutions (USD 40,000) Requested financing overview: Project/Programme Execution Cost: USD 19,988 Total Project/Programme Cost: USD 230,388

	Implementing Fee: USD 19,852 Financing Requested: USD 249,970 The initial technical review finds that with a stronger focus on highlighting the locally developed solutions, developed alongside land and biodiversity reclamation and management, and using community-driven involvement, this proposal could show a strong low tech system innovation landscape that would act as a demonstration of multiple solutions allowing knowledge transfer that can be adapted as needed. A number of clarification requests (CRs) and a couple of corrective action requests (CARs) have been raised by the technical review.
Date:	02/04/2021

Review Criteria	Questions	Comments	Response
Country Eligibility	2. Is the country party to the Kyoto Protocol?	**Yes.**	
Project Eligibility	7. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	**Yes.**	
	8. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?[2]	**Yes.** This project highlights the limiting factors of agricultural production in Zimbabwe caused by frequency and severity of droughts and extreme flood events, and presents conservation agriculture principles as a potential solution to address many of these challenges. The problem analysis is clearly	

[2] *A concrete adaptation project/programme is defined as a set of activities aimed at addressing the adverse impacts of and risks posed by climate change. The activities shall aim at producing visible and tangible results on the ground by reducing vulnerability and increasing the adaptive capacity of human and natural*

		defined and the problem statement is split into three identifiable areas. (p.6). One of Zimbabwe's major socio-economic activities is centered on small scale crop production. The project aims to promote climate smart agriculture to restore wetlands and increase water retention in soil, improve soil fertility, ensure food security and generally improve the livelihood of farmers. The project is specifically targeting farmers in four wards in the Matobo district which is prone to periodic climate related hazards, environmental degradation, human and wildlife conflicts and veld fires. The proposal offers a system innovation using (amongst other methods) low tech and ecosystem-based solutions. The approach highlights the interrelated nature of problems faced and provides focal areas for applying innovation methodologies to seek solutions. It also acknowledges that the proposed solution area (climate smart agriculture) can only partially solve the problems, acknowledging the opportunities for other solutions as well.	
	9. Does the project encourage or accelerate	**Unclear.** Climate Smart Agriculture (CSA) as a	

systems to respond to the impacts of climate change, including climate variability. Adaptation projects/programmes can be implemented at the community, national, regional and transboundary level. Projects/programmes concern activities with a specific objective(s) and concrete outcome(s) and output(s) that are measurable, monitorable, and verifiable. (Source: Operational Policies and Guidelines, amended October 2017

	development of innovative adaptation practices, tools and technologies?	climate change adaptive solution is justified. However, overall, the proposal needs to more clearly justify the innovation rationale for a number of the proposed solutions. Climate Smart Agriculture programmes have been present in Zimbabwe since 2009 and are being promoted and financed by different international organisations. The proposal should, therefore, strengthen some sections to further inform its innovation potential, in relation to the past and on-going initiatives in the same focus area. **CR1:** Please justify the innovation rationale of the proposed solution (CSA) in Zimbabwe. There are currently some technologies and/or processes that are lightly mentioned in the proposal but not expanded upon. E.g. Page 8 mentions a number of solutions that can benefit vulnerable communities, including the use of energy efficient stoves, and biological pathogen control. **CR2:** Please elaborate upon these in the proposal. Although they could form part of a systems solution, it is unclear how the small grant project would achieve all of these elements without a clear plan for multi focal project actions.	The project proposes to introduce hydraulic augers in land preparation to complement the use of hand held hoes in the demonstration plots to feed a family of 6 on 1/16th of a Ha. This innovation combines good agronomic principles with precision agriculture, high management and sustainable ecological processes that have proven to concurrently create household food security and improve soil fertility. There will be use of a mobile application for information sharing among farmers. Sustained adoption of conservation agriculture within the targeted wards is being limited by availability of labour saving technologies for land preparation, planting, weeding and harvesting. Therefore the project proposes piloting mechanised CA through provision of CA farming implements. The component of energy saving stoves has been removed. **Page 10** Proper landscape management supports livelihoods. The Pfumvudza (new season) concept is a landscape approach to conservation agriculture, that treats conservation farming in a holistic way with a myriad of desirable outcomes that include, compost making, crop rotation, high

		In the project components, elements 1 and 2 (climate proofing livelihood sources and landscape management) do not appear to have a clear link between them.	management, minimal soil disturbance, thick mulch cover and agroforestry are achieved. By adopting these principles the farmer is able to increase crop diversity and unlock new revenue streams. Practiced in concert by an entire community the range management changes required (no burning to protect grasses and crop residues for mulch, firebreaks to protect trees) increases farm profitability through better crops and simultaneously improves micro-climate and landscape management (more trees results in greater transpiration and precipitation, less runoff and erosion results in higher water table, greater biodiversity, improved soil health, higher yields). **Page 8.**
		CR3: The need to shift framing practices from fragile ecosystems, to prevent degradation of habitats is clear. However, please clarify in the proposal the process for how the land maybe reclaimed from farmers who have already started to utilise these areas. Component 2 related to landscape management and ecosystem restoration, is not well integrated throughout the proposal, but it is part of the same solution to manage agriculture and biodiversity together.	In the targeted project area. The project concept enables a family to meet its food requirements on a much smaller area applying less pressure on available land. Fragile ecosystems which include wetlands and stream banks have been targeted for farming by vulnerable communities due to conducive conditions including water availability. Once farmers learn that the same conditions may be created in their fields simply by adding mulch and minimizing soil disturbance they will voluntarily move away from the wetlands and stream banks because most rural farmers understand that farming these marshy areas impacts on their own access to fresh water for household and livestock requirements. There will be no involuntary movements in the project

			execution. Incentives such as boreholes will be availed to attract community members to sustainable areas and this will be accompanied by awareness and education on ecosystem management. **Page 10**
		CR4: Please elaborate on this linkage and how the component will enhance the systemic adaptive nature of the project, allowing more possibilities for micro innovations to occur in both areas, and also on the interfaces between the two.	In our experience with small-scale rural farmers in Africa simplicity is the key to ensure widespread implementation and project success. The low-tech innovations are readily available, historic, culturally relevant, sustainable and proven. The transformational impact of the Pfumvudza concept that has gained such rapid adoption and success is the small size of the plot and the high standards of farming that it both demands and enables. **Page 11**
		The conservation agriculture methods of 'minimum tillage to avoid soil disturbance, maintenance of organic mulch, and crop rotations' (p.12) can all be considered low tech innovations or nature-based solutions.	
		CR5: Please clarify the innovation process used to ensure their uptake in the short term, especially since they can create more labour-intensive practices that some 'technology' solutions avoid.	The proposed intervention seeks to improve farming practices on a small scale of 1/16th of a Hectare to feed a family of 6 for a year thus reducing labour intensity and ensuring food security in the short term and ensuring long term ecological integrity on a microlevel. **Pages 10 - 11**
		CR6: Please clarify what technological solutions will be introduced within the demonstration plots.	Hydraulic soil auger for preparation of planting stations. Water harvesting systems and integrated soil fertility techniques will be used. Alternative crop species with specific

			spacings will ensure one-week's food supply for each crop in one row of the plot. The farmers in the targeted project area will employ plant species such as black jack, marigold and chowa (*daturas tramonium*) as well as ashes to control pests and diseases such as termites, aphids, cut worms. Also a mobile app that allows farmers to access online training videos, step-by-step implementation guidelines, homemade remedies for pest and diseases and also to market crops and access and post farm data, questions, innovations and farmer-to-farmer discussion forums. **Pages 10 -11**
		CR7: The proposal needs to strengthen the cost-effectiveness justification of the chosen interventions (solar powered boreholes, contour ridges etc).	The minimal mechanization tools involved and solar boreholes are long term investments with multiple benefits that will contribute to food security and water provision for domestic and agricultural purposes. **Page 14**
		CR8: Please describe the main features of 'climate smart innovative seedbanks. How will the technology-based seed banks work in practice, how will they be managed and how will they be sustainable in the long-term.	The component has been replaced by a mobile application for knowledge sharing. **Page 14**
		CR9: The learning elements eluded to on page 11 are good, but kindly further explain in the proposal how the champion farmers will be selected (selection criteria), how will learning be implemented back into the	Selection of the champion farmers or demo sites will be conducted through consultation with local leadership government extension workers and farmer representatives. The selection criteria targets progressive farmers that is a farmer who is innovative and whom people consider to be the best in the village.

		project itself (Selection of interventions for example), and how will the community be truly engaged.	An effort will be made to strike a balance between male and female farmers as well as youths and child headed households. The champion farmers must be willing to teach others with strong pedagogical. Farmers will organise themselves such that there will be a mother farmer who is the champion farmer who will have baby farmers. More training is going to be given to the mother farmers so that they can impart to the baby farmers giving rise to farmer field schools. competitions will be done between villages. Farmers in Matobo are keen on competitions, successful groups will have field days. Furthermore data will be conducted and analysed in the project area with results being feedback into the project. **Page 12.**
		CR10: In light of learning dissemination, please clarify how exactly the communities will develop and build up a portfolio of the best solutions needed and, test and develop these.	A deliberate effort will be made to establish a platform for knowledge exchange within the project area, through several types of learning events such as documentation and reporting of good and success stories, learning tours, field days. A field day will provide a learning ground for farmers where they learn and improve production strategies on the CA plots. When farmers are made aware that the project will end with a field day. Farmers will participate with full commitment so that they become successful. Filed days encourage farmers to compete and succeed, which makes them very important in project implementation. This will

			enable the project results to be more widely applicable. **Page 14**
		Outcome 2 of the project will be executed by the Southern Alliance for Indigenous Resources (SAFIRE). **CR11:** What kinds of indigenous farming methods similar to CA technologies have been identified? How will the project ensure integration of traditional knowledge in conservation practices?	Indigenous farming methods similar to CA technologies that have been identified include agroforestry, use of ant-heap soil, vermiculture water harvesting, crop rotation as well as mixed and intercropping and contour ridging are all traditional technologies of sustainable agriculture that are present in our culture. Participatory Rural Appraisal (PRAs) techniques which emphasizes traditional knowledge will be used to identify and prioritize conservation practices to be adopted under the landscape management practices.
		CR12: Please clarify how the project will ensure the active involvement of local leadership to develop, test, manage proposed solutions, also to ensure sustainability?	The local leadership in the project area was actively involved in designing the innovation grant project proposal. Through their participation and consultation meetings and communities participated through the PRAs. Furthermore the participation of local leadership in the project will be enabled through selecting some of the leaders to host the demonstration plots and training will be delivered to and through local leadership structures to ensure understanding and adoption. **Page 15**

	10. Does the project help generate evidence base of effective, efficient adaptation practices, products or technologies, as a basis for potential scaling up?	**Unclear.** The establishment of demonstration sites promotes peer learning and allows for scaling -up the practice of climate smart agriculture. Yet, it seems that CSA has already been promoted in the target areas but has not been adopted fully by farmers. **CR13:** Please clarify how the project intends to ensure community buy-in and encourage a full-adoption of the proposed mechanisms by the farmers? **CR14:** The project aims to establish 500 demonstration plots (p.14). Please clarify how the project aims to acquire these plots and what regime of project rights will be employed? **CR15:** Please clarify the innovative elements related to the establishment of 'innovative smart community seed banks'. **CR16:** Under component two, the project has an activity focused on invasive species removal. Please clarify what Invasive	The targeted beneficiaries will be actively involved in all project activities including designing, implementation, monitoring and evaluation. The project will involve labour saving technologies such as soil augers for digging the seed stations. Since the majority of the farmers are women a deliberate effort will be made to take care of the gender issues. women will be targeted not just for participation but for identifying priorities .**Page 13** Farmers volunteering their existing fields, to start the process working with champion farmers no land acquisition to be made Component replaced by knowledge management mobile application.

		species, what biological control measure will be used and how the project will ensure native species will not be negatively impacted? **CR17:** Related to the activity on drilling boreholes specifically, please clarify whether an environmental assessment or hydrological study has been conducted to ascertain that there will be no environmental impacts/ potential risks to aquifers. **CR18:** Please describe the community-based models for management of concrete interventions that will be established to ensure sustainability of interventions.	In the project landscape the invasive species sought to be removed is *lantana camara*. The *lantana camara* will not be removed by biological control measures but rather by mechanical means. Native species will not be affected by the removal of the *lantana camara.* Preliminary assessments during the baseline indicated that the northern part of the district has surface water hence the proposed implementation of wetland management activities. Hydrological studies yet to be conducted prior to borehole drilling. Existing institutions and committees will be capacitated to continue giving training and repair infrastructure if it malfunctions. Involvement of the local authority and ward development committees will be promoted as well as continuous training and capacity building and engagement of local service providers
	11. Does the project engage, empower and/or benefit the most vulnerable communities and social groups?	**Not clear.** The proposal highlights the fact that project beneficiaries live in a precarious situation and are vulnerable to climate change. **CR19:** Please clarify what type of mechanized conservation agriculture	The concept is not labor intensive as it

		systems will be promoted to overcome the current labor-intensive activities required within CSA projects.	involves farming only 1/16th of a Hectare to a high standard. The key to the success of this innovation is that the plot is so small that it can be mulched by hand, compost can be applied to every planting station, it can be kept weed-free and watered by hand if necessary. This makes the process inclusive as even the elderly can practice it. User friendly implements such as hydraulic augers will be used. **Page 9.**
		CR20: Further describe the type of mechanised equipment that will be purchased, its utility and sustainability.	Hand held hydraulic soil augers for digging holes and solar boreholes water provision. Local youths will be trained to service and engineer some of the implements. **Page 19**
		CR21: Please clarify what considerations would be made to include women, the elderly, child-headed households, people living with disabilities, and people living with HIV/AIDS. (p.12).	Social groups of vulnerable and marginalised households established by national assessments such as the ZIMVAC will be used for targeting beneficiaries. The rapid assessment conducted in the project area revealed that women, child-headed households are among the most with climate change. Therefore this project will focus its activities on the 50% of food insecure female headed households (Zimvac,2019 rural livelihoods assessment about 34% of household s are female headed.) The other 50% will be male and child headed households as well as those with disabilities and living with HIV/AIDS women and children. **Page 13.**
		CR22: Please clarify how the project will incentivize youth to join and contribute to	

		conservation agriculture. **CR23:** Please clarify how conflicts between livestock farmers and cropping farmers over grass mulch will be mitigated. How will the project ensure that human-wildlife conflicts resulting in killing of animals and birds (baboons, bush pigs, guinea fowls) is mitigated? (p.23)	A business model approach on the supply of equipment will be implemented to attract the youth in the project. A deliberate effort will be made to encourage young agriculture entrepreneurs to participate in conservation agriculture which applies a business model approach. Furthermore deliberate efforts will be made to capacitate the youths on CA in youth clubs, drama groups etc. also an effort to work closely with schools to teach conservation agriculture as a catch them young program will be made. **Page 14.** Fodder banks will be introduced as a coping strategy in times of drought to maintain the breeding herd for cattle. With good harvest, farmers will have their crop residue as mulch. Reduction in veld fires will also mean that there is excess biomas reducing conflict for mulch for cropping and livestock. The livestock farmers will also be intergrated in the project. Education and awareness campaigns, involve community leaders to live in harmony with nature. **Page 8** The plot will be so small that it can be done close to a homestead where wild animals are unlikely to venture. Due to the small size of the plot it is much easier for farmers to build protective barriers, fences and even grow living fences. **Page 31**

	12. Does the project advance gender equality and the empowerment of women and girls?	**Not clear.** According to the proposal, women make up most farmers in the country and are exposed to gender-specific vulnerabilities due to their household role in ensuring food production and food/nutrition security, despite their unequal access to land, information and inputs. The project makes references to the fact that women constitute more than half of the target population and female headed households are disproportionately impacted by climate vulnerabilities because access to livelihood opportunities by women is severely constrained by cultural, socio-economic and political factors, thereby increasing their vulnerability to food insecurity. (P.3,6, 10,12). However, it is unclear whether there will be a gender balance within the target beneficiary groups. Furthermore, gender-responsive indicators are missing. **CR24:** Please describe how the project will ensure equal participation. How are different gender groups affected differently by climate change impacts and water scarcity? With agriculture being a male-dominated sector, how would women and girls benefit from enhanced water availability?	The social groups of vulnerable and marginalised households established by the national vulnerability assessment will be used for targeting beneficiaries. The rapid assessment conducted in the project area revealed that women, child-headed households are among the most with climate change. Therefore this project will focus its activities on the 50% of food insecure female headed households (Zimvac,2019 rural livelihoods assessment about 34% of household s are female headed.) The other 50% will be male and child headed households as well as those with disabilities and living with HIV/AIDS women and children. A deliberate effort will be made to include to include women, youths in technical and leadership training so that they have leadership skills and become technically sound enabling them to participate in decision making processes. A deliberate effort to encourage women participation inclusion in the various committees.**Page 13** A deliberate effort will be made to ensure that the equipment will be user friendly to women. In planning trainings setting times for meetings and place for meetings should be accessible to women. The rapid assessment conducted in the project area revealed that women, child-headed

		CR25: How will different gender groups be included in community and stakeholder consultations related to developing solutions and trainings? **CAR1:** Please provide gender-disaggregated indicators. **CR26:** Clarify the number of direct beneficiaries, disaggregated by gender.	households are among the most affectedwith climate change. Women and girls will benefit from enhanced water availability through saving their energy, time, distance travelled, labour and allowing them to have time for other income generating activities thus diversifying their livelihood option. Community Based Knowledge based management systems deliberately targeting the different gender ground will be used during consultations related to developing solutions and trainings Gender Disaggregated indicators included in the Results framework**. Pages 16 - 18** Direct beneficiaries will be 500 comprising 200 females, 200males and 100youths. **Page 16**
Resource Availability	3. Is the requested project funding within the parameters for small grants set by the Board?	**Yes** (249,970 USD). **CAR2:** Please clarify where it is included in the budget and in which component of the project - purchase and distribution of energy efficient stoves.	Component has been removed.
	4. Is the Implementing Entity Management Fee at or below 8.5	**Yes** (19,582 USD equivalent to 8.50% of the project total budget). However, there are typos in the IE fee amount in tables	

	per cent of the total project budget before the fee?	under section F on p. 17-18. CAR 3: Please amend the IE fee amount in the above mentioned tables.	Implementing Entity fee amended. **Page 20**
Implementation Arrangements	4. Is the project submitted through a National Implementing Entity accredited by the Board?	**Yes.**	
	5. Is the timeframe for the proposed activities adequate?	**Yes.**	
	6. Is a summary breakdown of the budget for the proposed activities included?	**Yes.**	

December 2018

ADAPTATION FUND

PROGRAMME ON INNOVATION:
SMALL GRANTS PROJECTS THROUGH DIRECT ACCESS MODALITY

REQUEST FOR PROJECT FUNDING FROM THE ADAPTATION FUND

The annexed form should be completed and transmitted to the Adaptation Fund Board Secretariat by email or fax.

Please type in the responses using the template provided. The instructions attached to the form provide guidance to filling out the template.

Please note that a project must be fully prepared when the request is submitted.

Complete documentation should be sent to:

The Adaptation Fund Board Secretariat
1818 H Street NW
MSN P4-400
Washington, D.C., 20433
U.S.A
Fax: +1 (202) 522-3240/5
Email: afbsec@adaptation-fund.org

ADAPTATION FUND

PROGRAMME ON INNOVATION: SMALL GRANT PROJECT PROPOSAL

PART I: PROJECT INFORMATION

Country: **Zimbabwe**
Title of Project: **Accelerating Climate Change Resilience through Climate Smart Agriculture and Landscape Management Project in Matobo District, Zimbabwe**
National Implementing Entity: **Environmental Management Agency (EMA)**
Executing Entity/Ies: **Foundations for Farming (FFF) /Southern Alliance for Indigenous Resources (SAFIRE)**
Amount of Financing Requested: **249 970.00 (In U.S Dollars Equivalent)**

Project Background and Context:

Provide brief information on the problem the proposed project is aiming to solve. Outline the economic social, development and environmental context in which the project would operate.

Zimbabwe has very high level of biodiversity which plays a critical role in improving the human wellbeing of its people. However, despite this rich biodiversity, the country faces multiple challenges for sustainable development associated with biodiversity loss, ecosystem degradation, and climate change consequences. Ecosystem degradation in the country is largely caused by a complex and dynamic mix of driving forces and resultant pressures. The three major driving forces, of pressures/threats to the ecosystem are (a) poverty, (b) population pressure, c) climate change.

The country faces a number of climate related risks. Vulnerable rural communities, particularly women and children in arid and semi-arid regions are the worst affected as climate hazards such as drought, floods, heavy rainfall events, storms and prolonged dry spells often exacerbate poverty, food insecurity, child malnutrition, water stress, environmental degradation and health problems. Climate change is expected to worsen these already existing challenges. The irony of climate change in Zimbabwe and other developing countries is that while they are the least contributors to the cause of climate change, they are bearing its negative impacts. Zimbabwe has recently exhibited signs of climate change, such as severe droughts, flooding in low-lying areas and shifts in seasons. Climate change and variability has forced people to open new areas in sensitive ecosystems for cultivation such as river banks and wetlands. This has sharply increased total land area of wetland loss and general environmental degradation affecting the vulnerable communities' livelihoods and income generation opportunities. As a result poverty continues to be one of the major underlying causes of vulnerability to food and nutrition insecurity for most rural population in Zimbabwe. According to the ZIMSTAT Poverty, Income, Consumption and Expenditure Survey 2017 Report, 70.5% of the population were poor whilst 29.3% were deemed extremely poor. *Figure 1 below shows the poor food consumption pattern of the project area in relation to the country.*

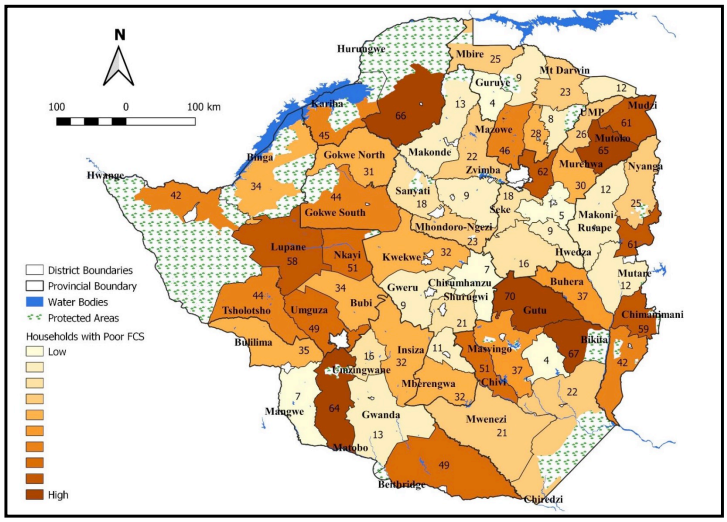

Figure 1: Poor food consumption patterns per district (ZIMVAC:2020)

Rising temperatures and rainfall variability have caused an increase in the frequency and severity of droughts and extreme flood events, significantly impacting Zimbabwe's economy and the livelihoods of vulnerable farmers. For example the GDP of Zimbabwe dropped by 3% and 8% after the 1983 and 1992 droughts and by an estimated 5% in 2016, due to a high dependence on rainfed agriculture. Coupled with the enormous burden of a declining economy, Zimbabwe's poorest rural communities in drier areas in the south have been directly exposed to climate induced gross water and food deficits. Women have been disproportionately affected. This is because the majority of farmers are women and are exposed to gender-specific vulnerabilities due to their household role in ensuring food production and food/nutrition security, despite their unequal access to land, information and inputs. Increasing climate variability has year on year rendered 3 million rural farming population food and water insecure. The World Bank (2015) estimated a decline in maize (Zimbabwe's staple food) yields of between 2% and 15% due to climate change. Several studies on smallholder irrigation schemes and rain fed agriculture reveal that maize yields have dropped from an average 5t/ha to as low as 0.8t/ha and 0.1t/ha respectively as a result of climate induced water supply deficit and temperature stress.

Therefore unless mechanisms are carefully and systematically put in place to ensure resilience in development and reduce vulnerability, climate change and climate variability may pose serious challenges to national development. In response to the above stated developmental challenges the EMA is proposing to scale-up implementation of climate smart agriculture as a climate change adaptation strategy in order to build ecosystem and community resilience. Specifically the project will be implemented in Matobo district which is a semi-arid district located in Matabeleland South province.

Matobo District

The proposed project will be implemented in Matobo which is situated in agro-ecological region iv and v. Matobo district is one of the seven districts in Matabeleland South Province. The district covers an area of 7 220 square kilometres bordering Gwanda district in the East, Botswana in the South, Mangwe and Bulilima in the West and North-West respectively, Umguza District in the North-West, Bulawayo in the North and Umzingwane district in the North-East. Administratively, the district is composed of 25 wards which compose of 19 communal wards, 5 resettlement wards and 1 grazing land. The project is specifically targeted at farmers in four wards namely ward 9, 10, 15 and 16. The district is prone to periodic climate related hazards, environmental degradation, human and wildlife conflicts and veld fires summarized in Table 1. Matobo district is also home to the Matobo research station which is a strategic partner for research, innovation and information dissemination.

Table 1: Major environment and climate change issues in Matobo district (EMA, 2020)

Type of hazard/disaster	**Drivers**	**Severity**	**Location**
Drought	Climate change, Deforestation,	Very severe	Wards 1-25
Veld fires	Poaching, Acts of sabotage, Negligence, Honey gatherers, Illegal miners	Very severe	Ward 16, 17, 18, 24 and 25
Hail storms/whirl winds	Climate change	Severe	Ward 5-7, 11-14 and 19
Wetland degradation	Cultivation Overstocking	Severe	Ward 9, 10, 15, 16, 14
Environmental Degradation	Artisanal Mining, Overstocking, Streambanks cultivation Deforestation, Invasive alien species	Severe	Ward 2, 4, 9, 10, 19, 22 and 25.
Human wildlife conflicts	Drought shortage of forage/	Severe	Ward 1, 2, 4, 5, 6, 12, 15, 16,17,18, 19, 21 and 23

Plate 1 &2: Gully erosion and siltation of rivers in ward 16 of Matobo district

Matobo district is 7 220km^2 insize with a population of 93 940 of which 47.8 are males and 52.2 are females as per the census of 2012. The district lies mainly in the Agro-ecological region iv and v characterized by low erratic rainfall ranging between (450mm-600mm) annually, interspersed with long dry spells. The temperature average is around +28ºC. The area experiences a semi-arid climate as it is subject to periodic seasonal droughts and severe dry spells during the rainy season. The rainy season occurs from November to March. Most of the wards in the district have wetlands which sustain community gardens during the dry season. However, cultivation of these sensitive ecosystem is threatening their existence with the majority of these wetlands facing severe degradation due to unsustainable agricultural practices.

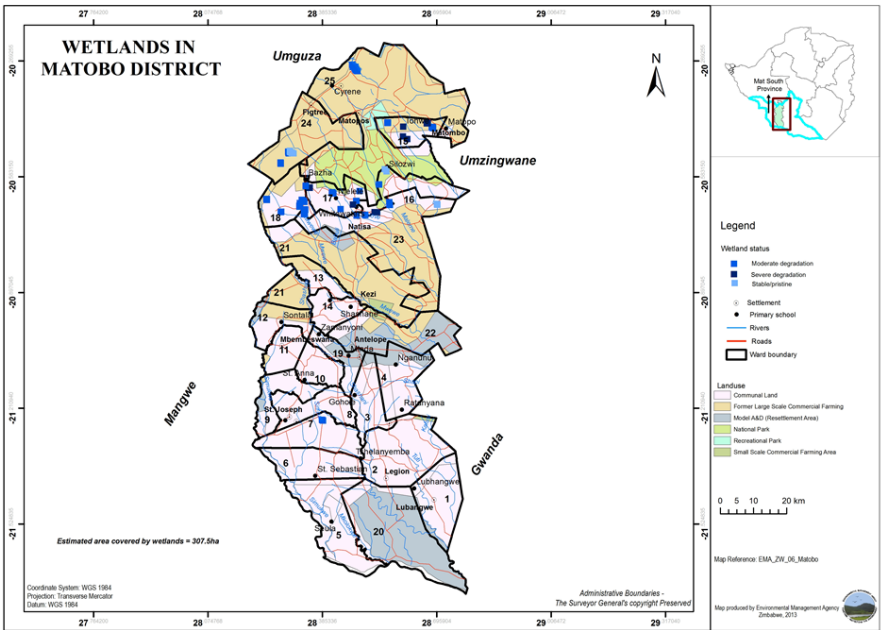

Figure 2: Wetlands distribution in Matobo district

Vegetation is dominated by *Acacia fleckii*, commonly known as black thorn; mopane (*Colophospermum mopane*) and this ecosystem is being threatened by increased frequency of veldfire incidences and area burnt.

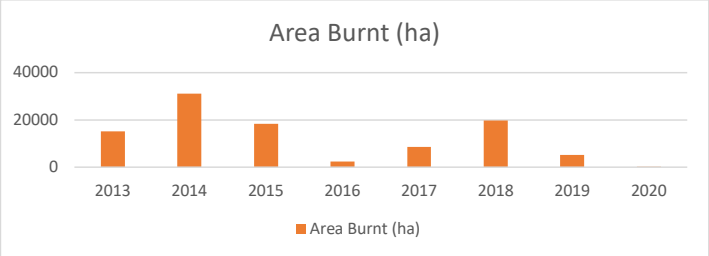

Figure 3:Veld Fire Trends in Matobo district

Most of the households in Matobo rely on rain-fed agriculture which is very vulnerable to droughts. Successive droughts in the area have greatly impacted on agricultural productivity with severe environmental degradation being experienced during drought periods as communities find mechanisms to cope with the impacts of droughts. Vulnerability to food security continues to recur and increase during extended periods of drought. Households headed by women tend to be more vulnerable because access to livelihood opportunities by women is severely constrained by cultural, socio-economic and political factors, thereby increasing their vulnerability to food insecurity.

A problem analysis in the district revealed many inter-related constraints to food production and resilience. First, farmers are locked in subsistence farming characterized by low productivity and use of traditional farming methods resulting in little or no marketable surplus produced. Secondly, climate change in particular droughts has affected the food production potential in the district. Recurrent droughts and mid-season dry spells have had the effects of reducing the amount of food produced by the farmers and the income realised through sale of surplus. Thirdly the farming practices are affected by poor environmental management. These problems can be partly solved by climate smart agriculture which will lead to improved yields. Climate smart agriculture is a climate change adaptation strategy to increase crop yield per hectare and reduce the communities' direct dependence for food on natural capital during drought situations. Climate Smart Agriculture uses less water and traps most of the received water by mulch in the form of grass or leaves. Climate smart agriculture ensure maximum nutrient retention by applying manure or fertilizer directly on the hole to be planted seed. Furthermore, farmers will be capacitated to market their produce to lucrative markets.

Project Objectives:

List the main objectives of the project.

1.0 To climate proof livelihood sources in Matobo district for increased production and income for 30% of vulnerable households communities in wards 9, 10, 15 and 16 by February 2023.
2.0 To promote ecosystem resilience on 15 000 Ha through landscape management approach of land by February 2023.
3.0 To generate and share knowledge and experiences on smart agriculture practices and promote a holistic approach to building adaptation amongst 1 000 households by February 2023.

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Project Components and Financing:

Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the INSTRUCTIONS FOR PREPARING A REQUEST FOR PROGRAMME ON INNOVATION: SMALL GRANTS PROJECTS THROUGH DIRECT ACCESS for a detailed description of each term.

Project Components	***Expected Concrete Outputs***	***Expected Outcomes***	***Amount (US$)***
1. Climate proofing livelihood sources	*Climate smart farming demonstration plots established.* *Solar powered boreholes.* *Mechanised equipment.*	*Improved climate change resilience*	*106 000.00*
2. Landscape management and ecosystem restoration	*Wetlands restored* *Woodlots established* *Woodlands managed* *Conservation works* *Fodder banks*	*Improved ecosystem health*	*64 400.00*
3. Knowledge management and strengthening of institutions	*Ecosystems health indicators* *Water table monitoring* *Training manuals developed.* *Trained and equipped personnel.* *Farmers trained*	*Increased knowledge on climate change adaptation*	*40 000.00*
6. Project Execution cost – FfF & SAFIRE			*19 988.00*
7. Total Project Cost			*230 388.00*
8. Project Cycle Management Fee charged by the Implementing Entity (if applicable)			*19 582.00*
Amount of Financing Requested			***249 970.00***

Deleted: *Smart community seed banks*

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Milestones	**Expected Dates**
Start of Project Implementation	June 2021
Project Closing	November 2022
Terminal Evaluation	February 2023

PART II: PROJECT JUSTIFICATION [1]

A. Describe the project components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience.

The project has three main components which include climate proofing livelihood sources, landscape management and ecosystem restoration and knowledge sharing and management. Matobo District is prone to droughts, high temperatures, hailstorms and windstorms. Climate proofing of livelihood sources will be achieved through climate smart agricultural practices under the Pfumvudza (new season) concept which is a landscape approach to conservation agriculture, conservation agriculture is treated in a holistic way with a myriad of desirable outcomes that include, compost making, crop rotation, high management, minimal soil disturbance, thick mulch cover and agroforestry are achieved. By adopting these principles the farmer is able to increase crop diversity, unlock new revenue streams for example from tree products due to agroforestry and unlock more land for alternative crops or livestock. The small size of the Pfumvudza plot that contains 52 rows of maize or soya or sugar beans or sun flowers or sorghum or ground nuts provides 52-weeks' worth of food and ensures high adoption, high management, minimal wastage, high yields and even allows farmers to water by hand in the event of drought. Practiced in concert by an entire community the range management changes required (no burning to protect grasses and crop residues for mulch, firebreaks to protect trees) increases farm profitability through better crops and simultaneously improves micro-climate and landscape management (more trees results in greater transpiration and precipitation, less runoff and erosion results in higher water table, greater biodiversity, improved soil health, higher yields. Cattle condition in the area often deteriorates during the dry season therefore group feedlots/fodder banks will also be introduced as a coping strategy in times of drought to maintain the breeding herd for cattle. Landscape management and ecosystem restoration will include wetland restoration for water resilience during droughts and establishment of woodlots and woodland management for catchment management with livelihood co-benefits. Knowledge management will be through, development of training manuals and communication, education and public awareness material and strengthening of local institutions such as farmer field schools.

The vulnerable communities targeted by this project are currently unable to feed themselves. These same communities have had access to the plough for more than half a century and yet they are poorer today than their ancestors were, farming the same land a century ago. The technological solutions championed for decades have locked African farmers into a cycle of diminishing returns; in a simplified explanation the deeper one ploughs each season, the deeper one has to plough each subsequent season to achieve the same perceived benefits. The more synthetic fertilizers applied the lower the natural fertility of the soil becomes and the more synthetic fertilizer required to achieve the same yield each subsequent season. The laws of diminishing return ensure that these same farmers concurrently experience rising inputs costs and diminishing yields, profits and viability. The result is perennial hunger as in the target communities targeted under this project. The answer is to restore the natural fertility of the soil by mimicking nature. By improving farming practices on a small scale and ensuring food security in the short term this innovation ensures long-term ecological stewardship on a

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Deleted: that include construction of conservation works such as contour ridges in fields to encourage moisture retention and conservation of the soil, wetland protection; crop diversity and provision of water to prevent wilting of crops and for livestock through drilling of solar powered boreholes. …

Deleted: establishment of innovative smart community seed banks

[1] Parts II and III should jointly not exceed 10 pages.

macro-level. Food security is the foundation upon which all other initiatives can be built. In other communities that are a few years down this path we have seen the spontaneous evolution of cash crops, fodder crops, wood lots, pig and poultry projects. These initiatives could all only succeed once the foundation of household food security had been secured.

B. Describe how the project provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project will avoid or mitigate negative impacts, in line with the Environmental and Social Policy of the Adaptation Fund.

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Implementation of the project will be beneficial to the vulnerable communities as adoption of climate smart agriculture will provide protection of the soil from erosion due to soil cover, high plant yield with limited resources used which will translate to higher profits for the farmers, reduction in fossil fuel usage by using energy efficient stoves thereby reduction of greenhouse gases, efficient usage of resources, reduced use of chemicals due to adoption of biological mode of pathogen control, water conservation, less time spent in the fields so women can attend to other duties at home and incorporation of nitrogen fixing legume crops. Production will be increased from an average of 0.5t/Ha to an average of 0.9t/Ha. The increased production will lead to reduced stream bank cultivation which is prevalent.

Plate 3: Streambank cultivation in Mtshabezi river, ward 15, Matobo district

Implementation of the project will adhere to Adaptation Fund aligned Environmental and Social Safeguards Policy. The project will minimise negative effects to the environment by ensuring best possible agriculture conservation practices are adopted, reduction of pollution that is air, land and surface and groundwater, avoidance of ecological sensitive areas as well as avoidance of land degradation. Negative environmental practises such as stream bank cultivation will be reduced as communities will realise higher yields and establish small gardens near homesteads to get water from the boreholes. Wetland restoration will improve ecosystem health of ecologically sensitive ecosystems. The project will also protect selected wetlands. Wetland protection will result in improved water discharge and biodiversity richness in the project area. Veld fires will be reduced from an average of 10 000 hectares burnt to about 6 000 hectares.

Plate 4: *Wetland degradation in ward 16 of Matobo district, Matabeleland South*

Traditionally fragile ecosystems have been targeted for farming because they are generally wetlands and the last remaining points of assured access to soil moisture. Once farmers learn that the same conditions may be created in their fields simply by adding mulch and minimizing soil disturbance they will gladly move away from the wetlands because most rural farmers understand that farming these marshy areas impacts on their own access to fresh water for household and livestock requirements. Incentives such as boreholes will be availed to attract community members to sustainable areas and this will be accompanied by awareness and education on ecosystem management.

C. Describe how the project encourages or accelerates development of innovative adaptation practices, tools or technologies and/or describe how the project helps generate evidence base of effective, efficient adaptation practices, products or technologies, as a basis for potential scaling up.

The project is being promoted as a measure to address the problem of low productivity and production which continues to negatively affect food security in the country. The low productivity and production has led the country to be a perennial net importer of cereal grains. Foundations for Farming, the implementers of component 1 are the pioneers of the localised conservation farming locally known as *Pfumvudza* (meaning new season). The concept feeds a family of 6 on 1/16th of a Ha. Additionally, the concept provides for alternative crop species with specific spacings to ensure one-week's food supply for each crop in one row of the Pfumvudza plot. Use of the *badza* (hand-held hoe), ant-heap, vermiculture and contour ridging are all traditional technologies of sustainable agriculture that are present in our culture. This innovation combines good agronomic principles with precision agriculture, high management and sustainable ecological processes that have proven to concurrently create household food security, improve soil fertility, reduce veld fires, reduce runoff and erosion and increase farm profitability.

Project will introduce appropriate technologies that will be shared through demonstration plots and champion farmers. The mechanisation of the project will increase uptake of the project and its appeal to the local communities. This project will see an increase in maize production levels from <0.5t/Ha to 0.9t/Ha.

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Plate 5&6 Climate smart agriculture planting stations already having manure

General experience with small-scale rural farmers in Africa is that simplicity is the key to ensure widespread implementation and project success. The low-tech innovations are readily available, historic, culturally relevant, sustainable and proven. The transformational impact of the Pfumvudza concept that has gained such rapid adoption and success is the small size of the plot and the high standards of farming that it both demands and enables.

The project will introduce a mobile app that allows farmers to access online training videos, step-by-step implementation guidelines, homemade remedies for pest and diseases and also to market crops and access and post farm data, questions, innovations and farmer-to-farmer discussion forums.

D. Please confirm whether the project meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and is in line with the Environmental and Social Policy of the Adaptation Fund. Yes check on the key components of AF POLICY

Implementation of the project will comply with all environmental statutes that include EIA and Ecosystems regulations whereby if there is a project that is prescribed in terms of the First Schedule of EM Act CAP 20:27 and EIA and an Environmental Management Plan will be compiled in accordance. Adherence of EMA statutes (air, water, hazardous substances) will be maintained and any other statutory requirements that maybe applicable including the Adaptation Fund Policies throughout project implementation.
In terms of the Environmental Management Act the activities outlined do not require an Environmental Impact Assessment report to be done but will however require to comply with SI 7 of 2007 regulations, Section 20 on the protection of wetlands, where a wetland is to be utilised,

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The project will ensure greater soil moisture-holding capacity allowing crops to continue towards maturity for longer than those under conventional tillage. This will result in healthy plants as the period in which available nutrients can be taken up by plants is extended, increasing the efficiency of use. Innovative energy efficient stoves will also be introduced to champion households. The stoves made of clay and those made of metal will lead to reduced deforestation and also reduce the workload of women collecting firewood.¶

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The project will introduce technology based seed banks at community level. The seed banks will have a facility to indicate the levels of stocks by seed variety. This innovation will improve food security and enhance planning.¶

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a licence should be obtained from the Agency. All activities will be done at least 30m away from naturally defined banks of a stream or 30 m away from the highest flood level of a water body. This will therefore ensure the sensitive ecosystems are protected and siltation avoided. There will be no involuntary displacements as the communities will utilise their already existing arable land. There will not be clearing of forest cover is establishment of woodlots and communities will not be displaced or other sources of their livelihood compromised. No invasive alien species will be introduced.
Borehole drilling will be done after obtaining a permit from ZINWA and in accordance with their regulations as well as guidance to ensure compliance. Adherence to the Agriculture Policy will be ensured.

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

The project will document the information generated in Matobo and share it in workshops with those that will not be able to participate in the project. Climate smart agriculture information will be shared in the project area. The information will be disseminated using road show campaigns, meetings, workshops and most importantly demonstration plots. Champion farmers selected based on productivity and their adoption of climate smart technologies will be strategically located in the four wards and will pioneer the climate smart agriculture. Their selection will also be based on their ability to show case production, capacitate other farmers and social software sharing. these Champion farmers will be used to educate other new project participants through farmer visits, sharing of experiences, field days and innovation labs. Research has shown that peer to peer learning is essential in communities.

Training manuals, brochures, posters and booklets unpacking the project goals and project components will be developed for distribution to all relevant stakeholders.
Progress monitoring reports, reviews and lessons learnt during the project will be documented on print and electronic platforms producing documentaries. Information Communication and Education material produced will be used to educate project beneficiaries and other communities to enable learning.

F. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project. Describe how the project will engage, empower and/or benefit the most vulnerable communities and social groups, including gender considerations, in line with the Environmental and Social Policy of the Adaptation Fund.

The project shall undertake a screening of environmental and social risks and demonstrate compliance with the environmental and social principles as outlined in the Environmental and Social Policy for the Agency. Table 2 identifies potential environmental and social impacts and risks and the mitigation approaches that have been put to manage the risks.

Table 2: Risks and Mitigation Matrix

Impact / Risk Description	Severity	Mitigation

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Deleted: The communities will also be taught how to manage their seeds and will be assisted to set up seed banks. The reserves in the seed banks will be tracked online for ease of monitoring. The seed banks will be used as vehicles of teaching about different types of crops and their care.¶

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Reluctance of some community members and stakeholders to cooperate among themselves.	Medium	Engagement of stakeholders and getting by in from opinion leaders
Low rate of adoption if plot sizes are too big	Medium	Optimise plot sizes to 16m by 39m
Child Labour	Low	Observe labour rights and laws

The project is designed and will be implemented in a way that promotes soil conservation and avoids degradation, ensuring that the land which provides valuable ecosystem services is not disturbed. Due care shall be put to avoid imposing any disproportionate adverse impacts on marginalized and vulnerable groups. The executing entity for component 1 has witnessed the basic elements of its innovation was being misinterpreted. For example issues of minimal soil disturbance and the digging of "holes" or "planting stations," in which to place compost and/or fertilizer and seed. What has been taught widely by well-meaning so-called CA training agencies is a "planting basin." This new name and misguided teaching infers that the hole is a water capture mechanism. It is not and actually increased soil disturbance that increases the surface area of the soil and increases evaporation and moisture loss as well as labor. The involvement of Foundations for Farming as the lead training organization on this project ensures that the correct information is taught to farmers. The corrupted version requires large holes or basins that led to CA being known as labour intensive in many drier regions of the country. The actual hole requirement disturbs only 5% of the area , and 10cm depth every 60cm in row and 75cm inter-row).

Considerations shall be made to include women, the elderly, child headed households, people living with disabilities, and people living with HIV/AIDS. The concept is not labor intensive as it involves farming only 1/16th of a Hectare to a high standard. The key to the success of this innovation is that the plot is so small that it can be mulched by hand, compost can be applied to every planting station, it can be kept weed-free and watered by hand if necessary. This makes the process inclusive as even the elderly can practice it. Taking care of gender issues in planning and the provision of solar boreholes will contribute to community buy in. There will be a balanced deliberate selection of project beneficiaries to include women, men, youth, the disabled and elderly. Equipment proposed will be user friendly (light) and meetings will be held at conducive venues and times to incorporate other chores that women, men and the youth have to do. The project is being developed in the purview of Adaptation Fund Aligned gender frameworks. A business model approach on the supply of equipment will be implemented to attract the youth in the project.

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

Funding requested will contribute to reduced climate change vulnerability and exposure through the use of locally available resources, renewable energy sources, sustainable water management and capacity building of local communities to promote sustainability of the project.

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Project component 1: Climate proofing livelihood sources ($106 000.00) will include sustainable ways of crop production that promote soil moisture retention and intensification of land to ensure that higher yields from smaller plot sizes. Farmers will concentrate their resources on smaller pieces of land reducing labour demands and resulting in higher productivity from lower investment and consequently higher profit margins. The three key basic principles of conservation farming to be employed will include use of minimum tillage to avoid soil disturbance, maintenance of organic mulch to cut on inorganic fertilisers and crop rotations and interactions for diversification of livelihoods. Solar boreholes will be introduced to supplement the rainfed agriculture and water provision for livestock during the drier season. Without the above intervention's communities will continue to be vulnerable to the effects of climate change. The Pfumvudza concept is not labor intensive as it involves farming only 1/16th of a Hectare to a high standard. The key to the success of this innovation is that the plot is so small that it can be mulched by hand, compost can be applied to every planting station, it can be kept weed-free and watered by hand if necessary. The fact that it is so small and consistently supplies a year's worth of food for consumption by a family brings joy, hope and teaches good agronomic principles that can then easily be expanded into other farming practices. The minimal mechanization tools involved and solar boreholes are investments with multiple benefits that will contribute to food security and water provision for domestic and agricultural purposes.

Project component 2: Landscape management and ecosystem restoration ($64 400. 00) will involve wetland restoration activities to secure water for recharge of natural water sources especially during seasons. Woodland management and woodlot establishment will contribute to catchment management that will promote ecosystem resilience to support the agricultural interventions. Livestock within the project landscape is a huge indicator of wealth and safeguarding the livestock through establishment of fodder banks will increase resilience of the community.

Project Component 3: Knowledge Management and strengthening of institutions (40 000.00). The component includes development of information, communication and education materials that will help in increasing the adoption of climate smart agricultural practices and better understanding of the project. Farmer and institutional capacity building will ensure sustainability of interventions. Community Based Knowledge based management systems, establishment of information centres on with information in local languages will contribute to the build up a community portfolio of the best solutions.

Demonstration plots and training will be delivered to and through local leadership structures to ensure understanding and adoption. The traditional leadership structures are an extension of government and the Government of Zimbabwe has embraced and partnered with the Foundations for Farming to adopt this innovation. The Agency closely works with local authorities and their structures that include Ward Development Committees and Village development committees. Participatory consultation methods will be applied during engagements with communities.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project / programme implementation.

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Designated authority will provide an oversight role as per Adaptation Fund
The project will be implemented by the Environmental Management Agency (EMA) as the National Implementing Entity. The Agency has identified 2 executing entities that will be responsible for delivering on the program outcomes.
Outcome 1 will be executed by Foundations for Farming (FfF).
Outcome 2 will be executed by Sothern Alliance for Indigenous Resources (SAFIRE).
Outcome 3 will be executed by both partners with direction from EMA to ensure that the information and knowledge that is generated from the project is packaged and disseminated to meet the requirements of the Adaptation Fund.
A Project Management Unit (PMU) comprising a Project Coordinator, Project Assistant(s), Project Accounting Assistant and M & E Specialist, Gender specialist, Safeguards Specialist, will be housed at EMA to coordinate the different activities as they are implemented by the different organisations. The Project Management Unit will be guided by the Project Board (PB), which will be constituted of members from relevant ministries and departments and a project technical committee to run the project with the PMU.

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

The M & E activities will include routine monitoring, meetings, midterm and final evaluation as well as project reporting. The Monitoring and Evaluation Learning system will be responsive and adaptive to needs of the project as such adjustments will be made on focus and content according to experiences. Safeguards and ethical issues such as confidentiality and anonymity amongst others will be adequately addressed and adhered to.

Table 3: M&E activities, responsibilities, time frame and budget.

M & E Activity	Responsibility	Timeframe	Budget
Inception meeting & report	M & E Manager	Within 1 month of inception	US$2 000.00
Routine monitoring, feedback meetings and project reports	M & E officers	Quarterly	US$4 000.00
Midterm Evaluation	M & E Manager	Mid-term	US$1 000.00
Final evaluation report	M & E Manager	3 months before the end of project implementation	US$2 000.00
Project Closure Meeting	M & E Manager	End of project	US$2 000.00
External Audit reports	Audit & Risk Manager	Annual	US$1 000.00
Total			**US$12 000.00**

C. Include a simple results framework for the project proposal, including milestones, targets and indicators.

The project aims at enhancing food and nutrition security through promoting sustainable ecosystems management. The project will have three major components which are:

EXPECTED RESULTS	INDICATORS	BASELINE	TARGETS	MOV	MILESTONE
Impact: Enhanced food security through sustainable ecosystems management.	Number of men, women and youth that are food secure.	1500 food insecure households	At least additional 500 beneficiaries are food secure at the end of the project. 200 females, 200males and 100youths.	M&E reports	Feb 2023
Outcome 1 Improved Climate Resilience	1. Number of climate smart farming demonstration plots established. 2. Number of solar powered boreholes. 3. Number of mechanized equipment	1. 50 plots 2. No solar powered boreholes. 3. No mechanised equipment	1. 500 climate smart farming plots established. 2. 4 solar powered boreholes.	M&E reports	Feb 2023
Outcome 2 Improved Ecosystem Health	1. Hectares of land under sustainable practices.	7 000Ha	15 000Ha		Feb 2023
Outcome 3 Increased knowledge on climate change adaptation	1. Number of knowledge products developed 2. Number of people trained. 3. Number of people reached out to	1. No modern communication technologies 2. No ecosystem health indicators research. 3. 8 officers Trained 4. 100 households	1. 1 mobile application for sharing information. 2. Ecosystem health indicators research report 3. 30 officers, 500 beneficiaries (200 males, 200 females, 100 youths) trained. 4. 1000 households	M&E Reports	Feb 2023

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

The project fits well with the adaptation fund focus areas as indicated by the outcomes below.

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Project Objective(s)[2]	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
To climate proof livelihood sources in Matobo District for increased production and income for 30% of vulnerable households communities in wards 9, 10, 15 and 16 by February 2023.	Number of households with improved livelihoods and resilient to climate change.	Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	6.1Percentage of men, women and youths having more secure access to livelihoods. 6.2 Percentage of men, women and youth with sustained climate-resilient livelihoods	**106 000**
To promote ecosystem resilience on 15 000 Ha through landscape management by Feb 2023	Area of land under sustainable management.	Outcome 5: Increased ecosystem resilience in response to climate change and variability induced stresses	5. Ecosystem services and natural resource assets maintained or improved under climate change and variability induced stress.	**64 400**
To generate and share knowledge and experiences on smart agriculture practices and promote a holistic approach to building adaptation amongst 1 000 households by February 2023.	Number of knowledge products developed and people capacitated.	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level 8. Support the development and diffusion of innovative adaptation practices, tools and technologies.	3.1 Percentage of men, women and youth aware of predicted adverse impacts of climate change, and of appropriate responses 3.2 Percentage of men, women and youth applying appropriate adaptation responses. 8.Innovation adaptation practices are rolled out, scaled up, encouraged and / or accelerated at regional, national and/or subnational level	**40 000**
Project Outcome(s)	**Project Outcome**	**Fund Output**	**Fund Output**	**Grant**

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

	Indicator(s)		Indicator	Amount (USD)
Improved Climate Resilience	1. Number of climate smart farming plots established. 2. Number of solar powered boreholes. 3. Number of mechanized equipment	Output 6 Targeted individual and community livelihood strategies strengthened in relation to climate change impact, including variability.	6.1.1Number and type of adaptation assets (tangible and intangible) created or strengthened in support of individual community livelihood strategies. 6.2.1Type and income sources for households under climate change scenario.	**106 000**
Improved Ecosystem Health	1. Hectares of land under sustainable practices.	Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability.	5.1 Number of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type and scale)	**64 400**
Increased knowledge on climate change adaptation	2. Number of knowledge products developed 2. Number of people trained. 3. Number of people reached out to	3.1 Targeted population groups participating in adaptation and risk reduction awareness activities. 3.2Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning.	3.1.1 Number of news outlets in the local press and media that have covered the topic. 3.2.1 Number of technical committees/ associations formed to ensure transfer of knowledge 3.2.2 Number of tools and guidelines developed (thematic, sectoral, institutional) and shared with relevant stakeholders.	**40 000**

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E. Include a budget, including a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.

The total budget for the project is US$249 970.00. Implementing Entity management fee is US$19 582.00 apportioned as follows: Monitoring and Evaluation US$12 000.00, Administration and project oversight costs US$7 582.00. Project Execution Cost as US$19 988.00 for the two executing entities.

Project Components	**Activity**	**Amount (US$)**
1.Climate proofing livelihood sources	Establishment of 500 climate smart farming demonstration plots established.	75 000.00
	Drilling 4 solar powered boreholes.	20 000.00
	Mechanised equipment (hydraulic soil augers)	11 000.00
		106 000.00
2. Landscape management and ecosystem restoration	Wetlands restored – fencing, Invasive Alien Species removal	32 000.00
	Woodlots established	5 000.00
	Woodlands managed – fireguards, apiculture,	6 000.00
	Conservation works – food for assets, dead contours	11 400.00
	Fodder and mulch banks	10 000.00
		64 400.00
3. Knowledge management and strengthening of institutions	Farmer training Mobile Application	10 000.00
	Ecosystems health indicators	10 000.00
	Developing training manuals	5 000.00
	Training of farmers and officers, Accommodation, Transport, Food, Manuals	10 000.00
	Awareness material	5 000.00
		40 000.00
	Components totals	**210 400.00**
6. Project Execution cost –FfF	Staffing costs, Office facilities, equipment and communication, Travel related to project execution, Consultant services, M&E, Reporting	11 020.00
Project Execution cost -SAFIRE		8 968.00
		19 988.00
7. Total Project Cost		**230 388.00**
8. Project Cycle Management Fee charged by the Implementing Entity		**19 582.00**
Amount of Financing Requested		**249 970.00**

F. Include a disbursement schedule with time-bound milestones.

Description	**Upon Agreement Signature**
Date (Tentative)	June 2021
Project funds	210 400.00
Execution Entity Fee	19 988.00
Implementing Entity Fee	19 582
Totals	**249 970.00**

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Project Components	Milestone	Upon Agreement Signature Amount (US$)	Total Amount (US$)
1.Climate proofing livelihood sources	500 climate smart farming plots established.	75 000.00	75 000.00
	4 solar powered boreholes installed	20 000.00	20 000.00
	Mechanised equipment purchased	11 000.00	11 000.00
		106 000.00	**106 000.00**
2. Landscape management and ecosystem restoration	Wetlands core fencing, invasive alien species removed	32 000.00	32 000.00
	Woodlots established	5 000.00	5 000.00
	fireguards, apiculture established	6 000.00	6 000.00
	Conservation works	11 400.00	11 400.00
	Fodder and mulch banks	10 000.00	10 000.00
		64 400.00	**64 400.00**
3. Knowledge management and strengthening of institutions	Farmer training Mobile Application	10 000.00	10 000.00
	Ecosystems health indicators	10 000.00	10 000.00
	Training manuals developed	5 000.00	5 000.00
	Training of farmers and officers, Accommodation, Transport, Food, Manuals	10 000.00	10 000.00
	Awareness material	5 000.00	5 000.00
		40 000.00	**40 000.00**
	Components totals	**210 400.00**	**210 400.00**
4. Project Execution cost –FfF	Staffing costs, Office facilities, equipment and communication, Travel related to project execution, Consultant services, M&E, Reporting	11 020.00	11 020.00
Project Execution cost -SAFIRE		8 968.00	8 968.00
		19 988.00	**19 988.00**
5. Total Project Cost		**230 388.00**	**230 388.00**
6. Project Cycle Management Fee charged by the Implementing Entity		19 582.00	**19 582.00**
Amount of Financing Requested		**249 970.00**	**249 970.00**

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

A. Record of endorsement on behalf of the government[3] *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

Washington Zhakata Director Climate Change Management Ministry of Environment, Climate, Tourism and Hospitality Industry	Date: *December, ..., 2020*

B. Implementing Entity certification *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address*

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing *National Development and Adaptation Plans including National Development Plan 1(NDS1) (2020), Zimbabwe Agriculture Investment Plan (2017-21), Climate Change Response Strategy and Climate Change Policy* and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
Name & Signature Aaron Chigona Implementing Entity Coordinator	... Pp ...
Date: *December, ..., 2020*	Tel. and email: +2638677006244 aaron.chigona@ema.co.zw
Project Contact Person: Lioli Maguma	
Tel. And Email: +2638677006244 lioli.maguma@ema.co.zw	

[6] Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

All communications should be addressed, "The Secretary for Environment, Climate, Tourism and Hospitality Industry"

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

Your Ref.:
Our Ref:

ZIMBABWE

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

13 January 2021

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

Endorsement of the Adaptation Fund Innovation Grant Application for Proposed Project on Accelerating Climate Change Resilience through Climate Smart Agriculture and Landscape Management Project in Matobo District, Zimbabwe

In my capacity as the Designated National Authority for the Adaptation Fund in Zimbabwe, I confirm that the Innovation Grant Application for the Proposed Project on Accelerating Climate Change Resilience through Climate Smart Agriculture and Landscape Management Project in Matobo District, Zimbabwe is in accordance with the Government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the country. This will be achieved through innovation of adaptative practices and technologies ultimately building resilience.

Accordingly, I am pleased to endorse the above project concept titled: ***Innovation Grant Application for Proposed Project on Accelerating Climate Change Resilience through Climate Smart Agriculture and Landscape Management Project in Matobo District, Zimbabwe*** project concept to be funded by the Adaptation Fund. If approved, the project will be implemented by the Zimbabwe's Direct Access entity: Environmental Management Agency to the tune of USD249 970.00

MINISTRY OF ENVIRONMENT, TOURISM & HOSPITALITY INDUSTRY
11TH FL. KAGUVI BUILDING
18 JAN 2021
CNR CENTRAL AVENUE & FOURTH ST
P.O. BAG 7753 CAUSEWAY, HARARE
REGISTRY

W. Zhakata
Director, Climate Change Management Department/ UNFCCC/ Adaptation Fund/ GCF Focal Point
For Secretary for Environment, Climate, Tourism and Hospitality Industry

c/o afbsec@adaptation-fund.org

Annex 1: Matobo Baseline Report

RAPID ASSESSMENT REPORT FOR MATOBO DISTRICT

13-15 November 2020

Matabo District

Matabelelaland South Province

1.0 Introduction

This report presents findings from the Rapid Assessment conducted in Matobo District to assess current livelihoods, assessment of what has been done regarding conservation agriculture, what are the gaps and barriers and other conservation agriculture initiatives which are being implemented by various stakeholders which include the government departments, development partners and the private sector. Therefore the report provide insights into the findings of the rapid assessment with regards to (1) livelihoods, (2) current initiatives on conservation agriculture including gaps and barriers. To this end, the report is organised into these respective sections.

2.0 Overview of the District Situation

2.1 General background

Matobo district is one of the seven districts in Matabeleland South Province. The district covers an area of 7 220 square kilometres bordering Gwanda district in the East, Botswana in the South, Mangwe and Bulilima in the West and North –West respectively, Umguza district in the North-West, Bulawayo in the North and Umzingwane district in the North-East. Administratively, the district is composed of 25 wards which compose of 19 communal wards, 5 resettlement wards and 1 grazing land.

2.2 Climatic Environment

The district lies mainly in the Agro-ecological region iv and v characterized by low erratic rainfall ranging between (450mm-600mm) annually, interspersed with long dry spell. The temperature average is around +28ºC. The district is prone to periodic climate related hazards, environmental degradation, human and wildlife conflicts and veld fires. Drought is forecasted to further exacerbate the vulnerability and exposure of vulnerable groups in the district.

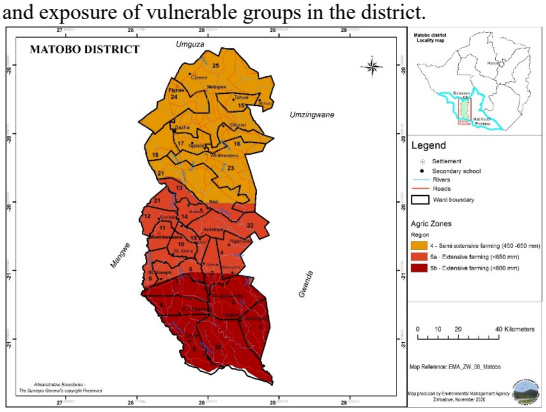

Fig 1: Map showing the Agro-ecological zones in Matobo District

2.3 Demography

According to 2012 census the district population stood at 113 676 most of the population being females in the middle age range.

2.4 Socio Economic Activities

The major socio-economic activities of the populace are centred on small scale crop production, livestock, remittances from neighbouring countries and gold mining.

2.5 Topography

Matobo district is plain land with the northern part predominantly mountainous. The district is a World Heritage site endowed with magnificent tourist attractions such as the Matopos National Park, Njelele National Shrine, Rhodes' grave, Ndebele Cultural village and Mzilikazi's Kraal and grave. It boasts of 3 big Rivers namely Tshatshane, Simukwe and Shashi. Big dams are as follows: Botela that also supplies Mangwe with water as well as Antelope and Valley dams. Established district Irrigation schemes include ARDA, Valley and Mambale.

2.6 Environment and climate change issues in the district

The district is predominantly exposed to environment and climate change issues which include drought, veldfires, hail stroms/Whirl winds, environmental degradation and human-wildlife conflict. Table 1 presents the major environment and climate change issues in the district.

Table 1: Major environment and climate change issues in Matobo district

Type of hazard/disaster	**Causes**	**Severity**	**Location**
Drought	Climate change Mismatch cropping Overstocking	Very severe	Wards 1-25
Veld fires	Poachers Acts of sabotage Negligence Honey gatherers Illegal miners	Very severe	Ward 16, 15, 17, 18, 24 and 25
Hail storms/whirl winds	Climate change Deforestation	Severe	Ward 5-7, 11-14 &19
Wetland degradation	Cultivation Overstocking	Severe	Ward 15, 16, 14
Environmental Degradation	Artisanal Mining activities, Overstocking, Streambanks cultivation, Deforestation, Invasive alien species	Severe	Ward 2, 4, 19, 22 and 25.
Human wildlife conflicts	Stray Elephants Baboons Hyenas Jackals.	Severe	Ward 1, 2, 4, 5, 6, 12, 15 16,17,18, 19, 21 and 23

3.0 Approach and Methodology

Data collection was conducted through the means of in-depth interviews, semi-structured questionnaires and focus group discussions with Matobo district stakeholders. The discussions with local stakeholders aimed at integrating local knowledge with empirical assessments in order to gain a better understanding of the present status of land degradation; biodiversity, and climate change in the target wards of Matobo district which are ward 9, 10, 15 and 16.

The in-depth interviews were carried out with key informants in Matobo district who included Agritex, the District Development Coordinator, the Chief Executive Officer for Matobo RDC, the lead farmers and trainers who practice Conservation Agriculture and local development partners who include CARITAS, Zimbabwe Humanitarian Livelihoods Development Trust and Sizimele. The interviews sought to find out how Conservation Agriculture is being practiced in Matobo and understand the current gaps and barriers and the factors that influence the adoption of CA, and the farmer's perceptions towards Conservation Agriculture especially on its contribution to food security and sustainable environmental management.

Furthermore a land degradation, biodiversity and climate change profiling for each of the targeted ward was conducted to have an in-depth knowledge on the problem to be addressed. A suite of tools and methods, largely drawn from the Land Degradation Assessment in Drylands (LADA) developed by the Food and Agriculture Organization of the United Nations (FAO), was employed in the rapid assessment across the 4 targeted wards. Furthermore, the screening process of the project for social and environmental safeguards was conducted.

Focus group discussions (FGDs) and key informant interviews were conducted within the targeted wards to elicit local knowledge on land degradation status. The focus groups comprised of community and farmer representatives with knowledge of the area (ward), local leadership (village heads, councillors), while the key informants included the local extension workers from AGRITEX.

Participatory transect visits were conducted to assess land degradation. Attributes of soil physical degradation included incidences of gullying, streambank cultivation, invasive alien species, degraded wetlands, siltation of water bodies or sediment loading in waterways (including location) and veldfires were being noted. The environmental issues mapped in the targeted wards included streambank cultivation, invasive alien species, gullies and degraded wetlands.

4.0 Rapid Assessment Findings

4.1 Livelihoods Assessment Findings

4.1.1 Livelihoods

The main livelihood strategies in wards 9, 10, 15 and 16 that provide the means to cash and food include (1) crop production (gardens and rain fed), (2) livestock rearing, (3) remittances from South Africa and Botswana, (4) selling forestry products (wild fruits and mopane worms), (5) village savings and lending associations and (6) casual labour in exchange for food and cash. The main livelihood strategies are specifically crop production and livestock rearing. However these two main livelihood strategies are under threat from the drying climatic conditions. In fact, results from the focus group discussions in the targeted wards indicated that the major climate hazard being experienced is drought and concerns of a shift in the rain season. There are also perceptions that the wet season is becoming shorter.

4.1.2 Climate hazards

The climate hazards that are being experienced in Matobo district are droughts, high temperature, hailstorms and windstorms however the main one is the erratic and uneven rain distribution pattern with drought periods and high temperatures particularly for Ward 9 and 10. Droughts experienced are of different severity. One type of drought is the one were rains come once at the beginning of the rainy season and ends there. The other type is where the rains come at the beginning of the rainy season then there is a long mid-season drought and the rains come back later again.

The participants indicated that they have observed seasonal rainfall changes. Before the rains started mid-October/early November up to end of April and were well distributed during the season. Now the season starts from end of November/early December to end of March/middle April.

4.1.3 Impacts of Previous Hazards and Coping Strategies

The major Climate hazard that were experienced in the target wards in Matobo is drought. The droughts were experienced in 1992, 2002, 2008, 2015, 2018 and 2019. The 1992 drought was the most severe in living memory of most participants. The drought of 2008 was exacerbated by very high inflation. The 2019 long mid-season drought affected even productivity of the drought resistant crops being grown such as pearl millet, finger millet, sorghum and cow peas.

1 4.1.4 Strategies for strengthening Resilience to climate hazards

This section presents suggestions that were made by participants and key informants on how their current livelihood strategies can be strengthened to help them to be more resilient to impending future droughts.

Crop production (rain fed)

i) Conservation Agriculture

The majority of the participants had the opinion that if farmers adopt mechanized conservation agriculture this can strengthen their resilience to droughts. They recommended the adoption of mechanized conservation agriculture as a climate change adaptation strategy which strengthen their livelihoods. Other farmers felt that there is need to keep on encouraging conservation agriculture both manual and mechanised.

ii) Construction of contour ridges in fields to encourage moisture retention and conservation of the soil.

iii) Set up irrigation using water from the rivers and drilling of boreholes for irrigation fed conservation agriculture.

iv) If government is going to give seed that seed should be provided on time so that farmers have the seed by October so that they can use the first rains. Also this will help farmers to plan as there is tendency to wait until they see what they get form government then start running around to get more seed when the season will have already advanced.

v) The retained seed is now mixed there is need to inject new seed from other areas. There is also need on training on how to prevent post-harvest losses through weevils particularly on seed.

vi) v) There is need to strengthen the processing side for small grains as it is cumbersome. There is need for research into machinery required for threshing, winnowing, dehulling and roasting the grain. There is need to also create a demand from urban areas for small grains so that they can grow into strong economic crops for the country. There is need to introduce varieties that are not affected by birds.

vii) There is need to introduce a short season sorghum variety that is true to type as the retained seed is now over used.

viii) Practice early planting; planting short season varieties and continue training in good farming practices

Livestock

i) There is need to provide water for livestock may be by scooping small dams and rivers and drilling of boreholes. There is need to drill boreholes that can be driven for example by solar power. The cattle condition deteriorates as from August to September until the rains come. During the dry period cattle travel some times as long as 10km to get to rivers for those in

Ward 9 and 10. When drilling boreholes there is need to consider the depth so that they do not dry in the most extreme drought events like the one that was experienced in 1992. There is need to strengthen governance structures around borehole maintenance to remove over reliance on external support to rehabilitate boreholes in future.

ii) Group Feed lots can be introduced so that once farmers are used to this system it can be used as a coping strategy in times of drought to maintain the breeding herd for cattle.

iii) There is need to promote commercial production of goats and indigenous poultry as there are best for coping with drought. Cattle in times of drought needs feeding and they die or they will not bear calves. The promotion should be targeted at the poor and moderate households who are most vulnerable in times of drought.

5.0 Conservation Agriculture Assessment Findings

In Matobo district the concept of conservation agriculture was first introduced by local development partners such as Caritas with the help of Agritex extension workers who are responsible for the training of lead farmers who then train other farmers in their wards. However, based on the responses obtained from farmers, in the district farmers have adapted conservation agriculture in the process of adopting the concept. The farmers are mainly practicing one principle that is minimum soil disturbance through digging holes.

Basin conservation agriculture in ward 10 of Matobo district

The conservation agriculture that is being practiced in the district and the target wards is non-mechanical, the farmers use hand hoes to dig basins. This is due to the fact that the majority of the farmers in the district and the target wards cannot afford to purchase mechanical equipment such as reapers and jab planters. During the assessment period it was observed that basin conservation agriculture increases the labour requirements for land preparation and weeding. Furthermore, although most of the farmers described the benefits of the Pfubvudza concept, there was little sign of adoption beyond the plots where the government provided inputs.

The use of much as permanent soil cover as dictated to by the principles of conservation agriculture are less applicable in Matobo district. Most of the farmers interviewed in the target wards reported that after harvesting the crop plant residue act as stock feed. Farmers pointed out that after harvesting livestock are allowed to feed in the fields thereby consuming the crop residue that would have acted as mulch. In ward 9 and 10 there is no grass so grass mulching is not an option while in ward 15 and 16 farmers highlighted that the cutting of grass for mulching is labour intensive. The few farmers who are using mulch as soil cover have resorted to live mulching through intercropping and the use of leaves. In ward 9 and 10 there

is a problem of termites which feds on mulch and farmers are using ash to control termites and the ash also acts as lime.

Farmers in ward 9 and 10 are mainly growing drought tolerant crops such as millet and sorghum while farmers in ward 15 and 16 mainly grow maize. It was highlighted by the farmers that the adoption of conservation agriculture in the district is being constrained by the fact that most farmers are practicing basin conservation agriculture which is labour intensive. They highlighted that the procedure is laborious and strenuous. Hence many farmers do not have access to labour requirements to cultivate larger pieces of land. Therefore the farmers are recommending the promotion of mechanized conservation agriculture.

In Matobo district, the youths are not actively participating in conservation agriculture with the average age of farmers practicing conservation above 45 years with over 80% being woman. It was highlighted by the farmers that most young people are preferring to venture into illegal gold mining in the northern part of the district which has better returns and other young people cross the border to Botswana and South Africa seeking better paying employment opportunities.

However, despite the barriers and challenges with farmers practicing conservation agriculture in the district, the community highlighted that the farmers who are practicing conservation agriculture are attaining high yields per plot. Above 75% of the interviewed farmers pointed out that they are harvesting more produce on conservation agriculture land as compared to conventional farming. They highlighted that although conservation agriculture is labour intensive, the yields are higher than on conventionally tilled land.

Selected wards for the project

The Matopo district stakeholders selected ward 9, 10, 15 and 16 as the target areas for the conservation agriculture project. The selection of the wards was influenced by the need for district balancing in the southern and northern part of the district, food insecurity and vulnerability to climate change for ward 9 and 10 and complementarity with Zimbabwe Humanitarian and Livelihoods Development Trust project in ward 15 and 16. Figure 4 shows the target wards for the conservation agriculture project

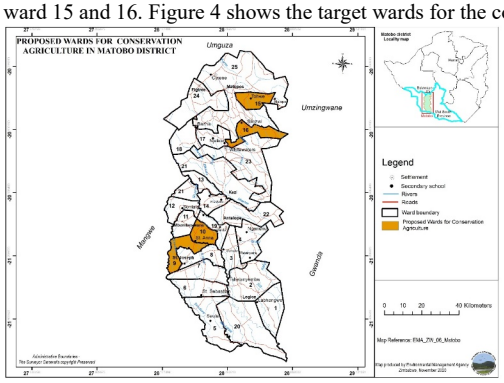

Figure 4: Target wards for the conservation agriculture project

6.0 Potential social and environmental impacts of conservation agriculture

As highlighted by farmers if conservation agriculture is not well implemented it is deemed to have some social and environmental impacts and measures need to be taken to mitigate these social and environmental hazards that may result from conservation agriculture project activities. The following are some of the potential social and environmental impacts of conservation agriculture identified by farmers:

- Women getting tired failing to perform their duties leading to Gender Based Violence.
- Conflicts between livestock farmers and cropping farmers over grass mulch.
- Soil erosion from where the dry leaves are being collected from.
- Increased human-wildlife conflicts resulting in killing of animals and birds (baboons, bush pigs, guinea fowls).
- Basin conservation agriculture being a labour intensive technology might have health related implications to the farmer's e.g backache problems.
- Time consuming. Conservation agriculture demand much of the household's time to be spent on the conservation agriculture plots preparing land for sowing and also weeding which might limit time for other activities.

7.0 Developments partners supporting Climate Change Adaptation

In Matobo district there are several development partners who are supporting climate change adaptation including Dabani Trust, Fambidzanai Permaculture, Caritus, Sizimele, Zimbabwe Humanitarian and Livelihoods Development Trust and Save the Children UK.

8.0 Conclusion and Recommendations

Conservation agriculture is contributing to food security and climate resilience in Matobo district. However, its major limitation as is currently practiced is non-mechanisation and shortage of water due to the erratic nature of rainfall in this semi-arid region. Therefore if conservation agriculture is to address food insecurity in the district, it is critical for the upcoming projects to address the problem of water shortages through borehole drilling as well as its labour intensiveness through promoting mechanized conservation agriculture and processing equipment for small grains. There is need to promote new technology such as rippers and threshers and as well as irrigation-fed conservation agriculture. There is also need to encourage men and youth to join conservation agriculture. The proposed Pfumvudza plot is so small that it can be done close to a homestead where wild animals are unlikely to venture. Due to the small size of the plot it is much easier for farmers to build protective barriers, fences and even grow living fences. The small area required to feed a family ensures that more land is available for grazing and the growing of cattle fodder, live mulch and leguminous species of cover crops and feed grasses.

Annex 2: List of stakeholders consulted during the Matopo Rapid Assessment and consultative process

Date	Full Name	Gender	Organisation	Designation	Telephone
13/11/2020	Jackson Nyamupfukudza	M	AGRITEX	Agronomist	0779300001
13/11/2020	Obey Chaputsira	M	LOCAL GVT	District Development Coordinator	0773895102
13/11/2020	Elvis Sibanda	M	MRDC	Chief Executive Officer	0715964153
13/11/2020	Sibongokuhle Siziba	F	Sizimele	District Field Coordinator	0712338525
13/11/2020	Mihlayenkosi Ncube	M	Sizimele	Field Officer	0714896918
13/11/2020	Nomvula Wooded	F	Sizimele	M & E Officer	0772756113

13/11/2020	Nkosinamandla Ndlovu	M	Sizimele	Field Officer	0773891002
13/11/2020	Angela Ndlovu	F	WOMEN AFFAIRS	BCDO	0777548680
13/11/2020	Loness	M	AGRITEX	AES	0775113882
13/11/2020	Francisca Ndlovu	F	AGRITEX	DAC	0772944431
13/11/2020	Thifelo Nyathi	F	Forestry commission	DFEO	0771436669
13/11/2020	Witness Tshuma	M	Matobo rural district council	N.R.O	0772420900
13/11/2020	Ottoe Dube	M	CIIR WARD 9	CIIR	0778624760
14/11/2020	Mxotshwa Moyo	M	AGRITEX	AEW	0772581619
14/11/2020	Miriam Khumalo	F	Farmer	Farmer	0779241648
14/11/2020	Consolata Ndebele	F	Farmer	Farmer	-
14/11/2020	Jennifer Moyo	F	Farmer	Farmer	0785948877
14/11/2020	Miriam Mpofu	F	Farmer	Farmer	0779245220
14/11/2020	Keslina Ncube	F	Farmer	Farmer	0714595460
14/11/2020	Patricia Ndebele	F	Farmer	Farmer	0772884284
14/11/2020	Michael Y Dube	M	Farmer	Farmer	0716320594
14/11/2020	Paulinos Ndlovu	M	Farmer	Farmer	0779386045
14/11/2020	Samukeliso Ncube	F	AGRITEX	AEW	0774320766
14/11/2020	Siphiliso Sibanda	F	Sigodini lead farmer	WARD 10 Lead farmer	0775043210
14/11/2020	Thabisa Moyo	M	MRDC	Ward 10 CLLR	0779664496
14/11/2020	Theodora T Khoza	F	Tjewondo	Farmer	0773666912
15/11/2020	Riflen Sibanda	M	Councillor MRDC	Councillor	0784278984
15/11/2020	Bongani Ndlovu	M	Lushumbe	Development committee	0786472814
15/11/12020	Anof Dube	M	Lushumbe	Development committee	0773603637
15/11/2020	Isaac Demba	M	Lushumbe	Development committee	0773275122
15/11/2020	Midiam Mabena	F	Lushumbe	Development committee	0786572164
15/11/2020	Lindiwe Ncube	F	Lushumbe	Development committee	0778182391
15/11/2020	Jenet Ndlovu	F	Lushumbe	Development committee	0779623539
15/11/2020	Logen Dube	M	Lushumbe	V/Head	0776282301
15/11/2020	Elephant Moyo	M	Lushumbe	V/Head	0785264331
15/11/2020	Nkosikhona Ntshali	M	Lushumbe	Farmer	078166993
15/11/2020	Norbert Dube	M	ZHLDT	Director	0776178099
15/11/2020	Sydney Moyo	M	WARD 15,16	Headman	0713996349
15/11/2020	Dickson Moyo	M	WARD 15	CLLR	0775403066
15/11/2020	Colly Mkwananzi	M	MKHOKHA	V/Head	0717610573

15/11/2020	Shadrack Ncube M	M	Nyumbane	V/Head	0717592848
15/11/2020	Prince Moyo	M	Mkhokha	VIDCO Member	0784087109
15/11/2020	Limoti Mhlope	M	Mkhokha	VIDCO	071344621
15/11/2020	Stanley Ncube	M	Nyumbane	VIDCO Committee	0716920250
15/11/2020	Butholezwe Thobela	M	Nyumbane	VIDCO	0784776696
15/11/2020	Robson Thambo	M	Mkhokha	VIDCO Committee	0715316139
15/11/2020	Algent Ncube	M	Nyumbane	VIDCO	0712442655
15/11/2020	Banon Ncube	M	Gwangwazila	Sec VIDCO	0716921127
15/11/2020	Agrippa Ndlovu	M	Gwangwazila	Chai VIDC	0713858819
15/11/2020	Thembelani Mhlope	F	Mkhokha	VIDCO Secretary	0714428766
15/11/2020	Zibusiso Tabeti	F	Nyumbane	Committee member	0784087011
15/11/2020	Silusiwe Ndlovu	F	Mkhokha	Committee member	-
15/11/2020	Samkeliso Mpofu	F	Mkhokha	Committee member	0714421819
15/11/2020	Beauty Chigonile	F	Nyumbane	Committee member	0712050853

Annex 3: Livelihood profiling template

DEMOGRAPHIC INFORMATION OF TARGET BENEFICIARIES

1. Name of respondent		
2. Age of the respondent	.....years	
3. Gender of the respondent	1 = Male	2 = Female
4.Highest level of education of the respondent	1 = Primary 3 = High School 5=Vocational	2 = Secondary 4=Tertiary 6= None
5. Do you have a member of your household who is living with disability	1=Yes	2=No
6. If yes, what is the gender of the people living with disabilities?	1= Male	2 = Female 99=N/A
6b. If yes state the type of disability?	1= Physical Disability, 2= Intellectual/ Learning Disabilities, 3= Psychiatric Disability, 4= Visual or Hearing Impairment, 5= Other Specify..... 99=N/A	
7. What are the types of interventions that exist at community level		

a. Water	1=Community borehole (drilled/rehabilitated) 2=Water point committee member 3=Rainwater harvesting structure at household 4=Rainwater harvesting structure at a nearby school 5=Other specify..... 99=N/A
b. Natural Ecosystem Management	1 = Gulley reclamation 2= Buffer strip establishment 3=Agro forestry Demo plot 4=Tsotso stove (energy saving) 5=Biogas digester 6=Planting of agro forestry and fodder at household 7=Rangeland reclamation in the village (planting grass species) 8=Fodder production at a demo plot 9=Wetland protection 10=Other specify..... 99=N/A
c. Agriculture	1= Community garden 2=Conservation Agriculture Demo Plot 3=Climate smart village 4= Field days (livestock crop, fodder, conservation agriculture) 5=Irrigation scheme rehabilitated 6=Owns a plot in the rehabilitated irrigation 7=Irrigating using water from a protected wetland 8=Other specify..... 99=N/A
d. Finance	1 = Village Savings and Lending Associations (Mukando) 2 = Other specify..... 99=N/A
e. Value chains and markets	1= Bee keeping 2= Livestock Feedlot 3=Member of a producer group (sorghum, cattle, goats, pearl millet, irrigation, Michigan bean) 4= Post harvest implements (threshers) 5=Honey processing centre 6=Other specify..... 99=N/A

8. What trainings have you participated in?	1=Fire management 2=Farming As A Business 3=Business Skills 4 = VSLA training 5=Wetland management 6= Fodder Production 7=Holistic land livestock management (rangeland, paddocks) 8 = Conservation Agriculture 9=Water harvesting techniques 10=Producer groups (market linkages) 11=Community Based Natural Resource Monitoring 12=Training For Transformation and Governance (e.g irrigation schemes) 13= Post harvest technologies 14=Garden Nutrition training 15=Beekeeping production training 16 = Water Point Committee training 17= Metal silo training 18= Other specify..... 19=Other specity.....

9. What are your sources of livelihood and average	**Source of Income**	**1=Yes 2= No**	**Average income in the past 12 months ($)**
	1.Beekeeping		

income? (***Probe for each source and indicate average income per year***	2.Crop production dry land		
	3. Crop production irrigation		
	4. Small livestock (e.g. goats)		
	5. Large livestock (e.g. cattle, donkeys)		
	6.Formal employment		
	7.Buying and selling		
	8.Gardening		
	9.Poultry farming		
	10.Selling forestry products(wood,wild fruits,crafts)		
	11.Remittances		
	12.Panning/mining		
	13.Brick Moulding		
	14.Beer brewing		
	15.Fishing		
	16.Casual labour		
	17.Poaching		
	18. Village Savings & Lending (VSLA)		
	19.Cash transfer from NGOs		
	20. Other specify.....		

10. Of the livelihood sources given above, please indicate the 3 most important ones for this household:	First Most Important ☐	Second Most Important ☐	Third Most Important ☐

HOUSEHOLD VULNERABILITY PERCEPTIONS

Questions	**2018/2019**	**2019/2020**
11. In the indicated agricultural seasons which CLIMATE RELATED SHOCK most affected your household? 1=Drought 2 = Floods 3= Intense thunderstorms and hail 4= Dust storm (chamupupuri) 5= Crop pests and diseases 6= Human disease outbreaks (cholera, typhoid, malaria) 7=Other specify.....		
12. To what extend did the climate related shock affect your overall household in the following seasons? 1=Extreme Vulnerability 2=High Vulnerability 3=Medium Vulnerability 4=Low Vulnerability 5=No Vulnerability		
13. To what extent did the climate risk mentioned above negatively affect your crops in the following seasons? 1=Extreme Vulnerability 2=High Vulnerability 3=Medium Vulnerability 4=Low Vulnerability 5=No Vulnerability		
14. To what extent did the climate risk mentioned above negatively affect your livestock in the following seasons?		

1=Extreme Vulnerability 2=High Vulnerability 3=Medium Vulnerability 4=Low Vulnerability 5=No Vulnerability		
15 .What was the most negative impact of [CLIMATE- CHANGE RELATED SHOCK]? 1=Crop Failure due to **wilting** 2=Crop failure due to **leaching** 3=Livestock Starvation 4=Livestock deaths 5=Soil erosion 6=Water shortage 7=Food Shortages 8= Veldt Fires 9=Household swept away 10=Other specify.....		
16 .How did your household respond to the impact of the climate related shock? 1=None 2=Received assistance from family/friends; 3=Received assistance from government 4=Received assistance from NGO/church/missions 5=Household members sought casual employment; 6=Sold household and agricultural assets/livestock; 7=Intensified garden activity; 8=Had planted drought-tolerant small grains; 9=Had crop diversification 10=Animal diversification; 11=Travelling long distances to collect water; 12=dug up water holes (mifuku); 13= Evacuated area; 14=Sought areas with higher elevation (e.g. hills) 15= Other (specify).....		

Annex 4: Key informant Guide

BASELINE DATA COLLECTION

DATE: ……

PARTICIPANT DETAILS:

……

RESEARCH TEAM MEMBER:

……

SEX OF RESPONDENTS: MALE = ……FEMALE =

- How appropriate/suitable is conservation agriculture to the local context/situation as an adaptation strategy?
- Who mostly participates in conservation agriculture at community level including land planting, harvesting, labour, and plot maintenance?
- What are the current average size of conservation agriculture plots in most communities?
- In your own opinion do you think conservation agriculture is addressing the needs of the community in particular food security and environmental benefits?

- Are there any gaps that needs to be addressed in the current conservation agriculture based on your experience in the district?
- Based on your experience what are the current constraints in undertaking conservation agriculture?
- List the common resources that the farmers are using as mulch in conservation agriculture?
- Are the farmers practicing all the 3 principles of conservation agriculture?
- What lessons have you learned that can guide the programming for future conservation agriculture practices?
- In your opinion do the current conservation agriculture practices reflect the priorities of women?
- If yes which priorities of women are reflected?
- Approximately what percentage of woman are participating in conservation agriculture?
- What are the major environmental issues in the district/ward?
- Can some of these challenges be addressed through adoption of conservation agriculture and how can they be integrated in CA?
- What do you consider to be the potential negative social and environmental effects/impacts of conservation agriculture?
- Do communities have secure access to viable food markets? If yes, which ones are these
- Do you have any comments or questions for me?

Annex 5: Focus Group Discussion Guide

Focus Group Discussion Guide

- How appropriate/suitable is the conservation agriculture to the local context/situation?
- How did the community participate in the design of the current conservation agriculture intervention?
- In your own opinion do you think conservation agriculture is addressing the needs of the community?
- Are there any gaps that needs to be addressed in the current conservation agriculture based on your experience with the practice?
- Based on your experience what are the constraints in undertaking conservation agriculture?
- List the common resources that you have in your community that you are using as mulch in conservation agriculture?
- Are you practicing all the 3 principles of conservation agriculture?
- What lessons have you learned that can guide the programming for future conservation agriculture practices?
- In your opinion do the current conservation agriculture practices reflect the priorities of women?
- If yes which priorities of women are reflected?
- Approximately what percentage of woman are participating in conservation agriculture?
- What are the major environmental issues in your community?
- Can some of these challenges be addressed through adoption of conservation agriculture and how can they be integrated in CA?
- Are there any negative social and environmental impacts of conservation agriculture in the district? If yes, what are the top 3 negative impacts
- Do you have any comments or questions for me?