

# Livelihoods and Food Security Programme

## Agriculture Productivity and Nutrition

### Environment and Social Management Framework



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## Acronyms

|          |  |
|----------|--|
| AGRITEX  | Agricultural Research and Extension Department                   |
| APN      | Agricultural Production and Nutrition                            |
| DA       | District Administrator   |
| DRSS     | Department of Research and Specialist Services                   |
| FAO      | Food and Agriculture Organization to the UN                      |
| EIA      | Environment Impact Assessment                                    |
| ESMF     | Environment and Social Management Framework                      |
| EMA      | Environment Management Agency(                                   |
| GDP      | Gross Domestic Product (GDP)                                     |
| HIV/AIDS | Human immunodeficiency virus/acquired immune deficiency syndrome |
| LFSP     | Livelihoods and Food Security Programme                          |
| NGO      | Non-governmental organization                                    |
| RDC      | Rural District Council   |

## Acknowledgement

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## 1 Introduction

At the time that APN project document was drafted in 2013, per the FAO environmental impacts assessment screening guidelines, the APN was classified as category C. This suggests that the project will not require additional environmental analysis. In the course of the inception process, it was recommended that this be verified with more in-depth study, and that this be confirmed against the Zimbabwean Environment Impact Assessment guidelines, to ensure that the project is consistent with the local Environment Impact Assessment requirements. Based on the analysis summarized here, the project proposal was reviewed using the national EIA guidelines, was determined to be not listed for compulsory EIA and is therefore exempt from the EIA requirements.

### 1.1 Overview of the social, economic and environmental context of the APN.

Zimbabwe's economy has been rebounding since 2009, following a decade-long crisis during the period 2000 to 2008, when annual economic output declined by 45 percent. Agriculture continues to contribute a significant share to the national economy, with more than 15 percent to the national Gross Domestic Product (GDP) derived from agriculture. In addition, more than 70 percent of the population derive their livelihoods from the sector.

However, food and nutrition insecurity, the negative impact of HIV and AIDS, and poverty remain critical challenges in the country. Seventy six percent of rural households were found to be poor in 2012 and 32 percent of the children under five are stunted. Challenges facing small holder farmers in Zimbabwe are multi-faceted. Low smallholder agricultural productivity is caused by, *inter alia*, reliance on rain-fed systems, poor input/output markets, low soil fertility, lack of draught power, lack of smallholder-oriented credit support systems and weak agricultural extension service delivery systems.

The situation is compounded by the effects of climate change and the prevalence of HIV and AIDS. The adult HIV prevalence is currently 15 percent. Regarding nutrition, the causes of malnutrition include poor household dietary diversity due to a lack of access to a diverse and nutritious food, a lack of applied knowledge on how to diversify the diet using the locally available food, poor child care practices due to increased workload on women as a result of poverty, seasonal food shortages, and poor health of mothers and children due to HIV. The APN is designed to improve food, nutrition and income security among small holder households. In the service of this outcome, the APN will generate and communicate evidence to influence policy and public/private sector investments.

## 2 ESMF Methodology

In formulating this Environment and Social Management Framework (ESMF), research focused on desk review of project documents, secondary data and literature from related agricultural projects, and a parallel review of FAO environmental impact assessment guidelines and the Zimbabwe environment legislation. Stakeholder consultation and field work was not inapplicable for this review since the project locations are not yet specified. Impact identification was done using checklist approach and lessons from past related projects. Impact analysis was conducted using an impact matrix that considers a number of parameters as indicated in Annex I.

## 3 Strategic Opportunities: Learning from other projects

The sustainable implementation of the APN component largely depends on the existing environment and social practices in the targeted project areas. Though there are still some undesirable farming behaviors within some communities (tree cutting, stream bank cultivation and veldt fires), the general trend in terms of environmentally-aware behavior change is positive due to the punitive environmental penalties established by EMA and environmental awareness programs by NGOs. This context presents a good opportunity to ensure that the APN activities are correctly configured for effective identification and management of negative environmental and social impacts that may result from the project. The following practices, already in place in various locations in Zimbabwe, provide a conducive operating environment for environmentally and socially sound programming.

Conservation Agriculture: The benefits of CA include higher crop yields and soil fertility improvement. In a study conducted across 15 districts with conservation farming projects underway, farmers were shown to have higher

yields on conservation agriculture plots than on non-conservation agriculture ones (Chamisa, 2013). The mean maize yield on conservation agriculture was 1.54MT/ha compared to 0.97MT/ha for non-conventional draft tillage plots. On the whole, the uptake of CA is on the increase. The environmental and social benefits of CA are demonstrable, and such practices can be an effective mitigation of potential negative impacts of expanded agricultural activities.

Environmental Awareness: Since the operationalization of the Environment Management Agency (EMA) in 2006, there has been an increase in the level of environmental awareness amongst communities in Zimbabwe. There is a general appreciation among the Zimbabwean public on the need to minimize land degradation, deforestation and veldt fires. The high awareness will certainly create a solid platform for mitigation of any negative environmental impacts of APN activities, but the project should nonetheless work to ensure that this environmental awareness is incorporated into design and implementation.

Environmental Enforcement Structures: The Environment Management Agency has structures that span from Harare to Provincial to District to Ward and Village level. At the community level, there are EMA volunteers that ensure enforcement of endeavors to minimize deforestation, veldt fires and land degradation, among other issues. These structures are augmented by the empowerment of the local traditional leaders to oversee these environmental issues and impose penalties under the Traditional Leaders Act. The structures are responsible for coordination of local issues like meetings and wild fire fighting. The successful implementation of the environmental and social management measures for the APN activities is contingent on the integration within these established structures and systems.

Agricultural Research and Extension Officers and Veterinary Services: The potential negative environmental impacts of this project are most likely to derive from poor agricultural practices by the targeted farming communities. Extension services are available to the farming communities at the Ward level. Impacts of soil erosion or eutrophication should be identified and mitigated effectively since there is ready technical advice from extension services. The above extension services should not only be focused on increasing productivity, but should also advise on environmentally sustainable farming options.

Environmental Legislation: The country has developed legislation that will facilitate the implementation of the APN activities without any challenges. The constitution empowers women to own land so the targeted women beneficiaries of the APN component are as secure on the land as the men counterparts.

Awareness on climate change and willingness to adapt. In the Murova farming community in Zvishavane, the majority of farmers indicated that prolonged wet, hot, and dry weather conditions affect the efficient use of their resources and investment decisions. Some specific impacts of these conditions include, among others, crop damage, death of livestock, soil erosion, bush fires, poor plant germination and pest invasion (Mutekwa, 2009). Some farmers professed ignorance about climate change and how it will affect their future farming activities. Other farmers pointed out high frequency and severity of drought, excessive precipitation, drying up of rivers, dams and wells, and changes in timing and pattern of seasons as evidence of climate change. Over the year the Government of Zimbabwe through the then Ministry of Environment and Natural Resources Management, NGOs and the Metrological Department has been raising awareness on the effects of climate change and farmers were advised to adopt climate friendly farming methods through CA. The level of awareness and the willingness to adapt to climate change creates a fertile ground for the implementation of the proposed APN project.

#### **4 Environmental and Socioeconomic issues in the APN**

The likelihood and significance of positive benefits through implementing the APN project far outweigh the potential significance and likelihood of negative impacts. Based on the analysis summarized here, there are 15 positive and 6 possible negative impacts of implementing the project, listed in Annex I below.

The impacts were analyzed based on nature, magnitude, timing, permanence, likelihood and significance. The analysis results indicated that of the six negative impacts, if what is stipulated in the project objectives is reflected during the implementation of the program, all the six possible negative impacts, will have low to no impact

during and after the project. Conversely, the positive impacts have high, strong potential during and after program implementation.

The potential negative impacts of the project are already factored in the design of the APN project. The project document clearly articulates strategies for strengthening gender mainstreaming, climate smart agriculture (itself the subject of a separate inception phase paper) and training across all the project issues in order to address poverty and increase income and food security. The project design recognizes possible challenges of creating divisions in communities and this is directly and indirectly addressed through investing in community groups and need for effective stakeholder engagement and dialogue.

## 5 Strategic Partnerships

The implementation of mitigation measures required for environmental and social sustainability requires engagement with a number of key partners. The following key stakeholders will have to be involved in the review and implementation of the project. It should be noted that only stakeholders relevant for the management of negative environmental and social impacts are listed here.

**Rural District Council.** Rural lands fall under the jurisdiction of the RDCs and farmers are issued with permits from the RDC authorizing them to undertake farming operations. The RDC is essential in the identification of land suitable for project activities. They work in collaboration with the DA's office and Ministry of Lands.

**Environmental Management Agency.** EMA is the regulatory authority in the environment sector. EMA has enforcement structures at village level, so issues to do with tree cutting and veldt fire are managed at community level using the EMA Village committee. At the appropriate time, the aspirations of the project should be presented to the EMA committee so that project mitigation measures are integrated and consistent with ongoing environment protection endeavors.

**Zimbabwe National Water Authority:** ZINWA is the regulatory authority for the water sector. In the event that the project involves extraction or diversion of water for irrigation, there will be a need to get the necessary permits as required by the Water Act. Where there is abstraction from boreholes, the borehole should be registered with ZINWA for monitoring of groundwater resources.

**District Administrator:** The DA is in charge of all activities within the district and it will not be possible to access communities without the express authority from the DA. The local traditional leadership is accountable to the DA and the participation of the community and its leadership will need authorization from the DA's office. The office is therefore important for community mobilization and conflict resolution.

**Forestry Commission:** This is a department in the Ministry of Environment, Water and Climate responsible for the preservation of natural forests. If for any reason there is need for land clearance for irrigation (taken as an example only), the FC participates in the impact assessment and recommends how to deal with the specific tree species and ecology within the targeted area. They would also have a role for provision of extension services to farmers in the event that woodlots are created.

**Veterinary Services Department:** Mitigation and response measures relating to animal diseases and their control fall under the jurisdiction of this department. Some of the community infrastructure like dip tanks and their management will fall under its jurisdiction and will need to be incorporated at an early stage. The department also has representation at the village level.

**Agricultural Research and Extension Officers:** Environmental impacts relating to poor farming practices are best mitigated through this department. Their support will be essential when dealing with environmental challenges like drainage, soil fertility and use of inorganic fertilizers and agrochemicals.

**NGOs in Livelihoods support and conservation farming:** As FAO will not be directly implementing this project, it is assumed that it will engage NGO partners for implementation. Some NGOs may have interest and experience in environmental and social impacts, while others will specialize in conservation farming, others may want to

specialize on gender mainstreaming. It will therefore be necessary to have a wide spectrum of engaged partners to ensure that implementation is undertaken in a holistic manner.

Traditional leader: Traditional leaders have jurisdiction over the land and the farmers. The traditional leaders are also essential for mobilization of the community and monitoring some environmental and social practices. Traditional leaders may be essential in conflict resolution within the community. There are cultural norms that may need to be discussed with traditional leaders especially when farmers take farming as a business. Sacred days pronounced by chiefs are to be considered as official holidays, as there is a heavy penalty associated with disregarding the sacred days, so there is need to liaise with the local leaders on such sensitive issues.

Agrochemicals suppliers: The agrochemical suppliers are important in the safe transportation, storage, use and disposal of the chemicals. They can provide an effective collection system for old chemicals and containers for safe disposal of such.

## Annex 1: References

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## Annex 2: Potential negative impact analysis and proposed mitigation measures

|  |          |   |   |   |                                      |   |
|--|----------|---|---|---|--------------------------------------|---|
| <b>1. Intensification of agriculture resulting in increased demand for women and children labour.</b>                            | Negative | Directly affects the forests in project areas.                                | Occurs continuously in the post implementation phase. | Medium term and reversible with woodlots approach and natural revegetation. | Probable and significant.            | Training and effective gender and age mainstreaming |
| <b>2. Soil erosion and siltation (linked to overgrazing, road construction activities, tree cutting, poor drainage infields)</b> | Negative | Directly affects the soil quality.  | Occurs intermittently in the implementation phase.    | Long term and reversible with conservation works.                           | High probability. High significance. | Conservation agriculture                            |
| <b>3. Increased eutrophication and chemical pollution from inorganic fertilizers and agrochemicals.</b>                          | Negative | Directly affects receiving water quality                                      | Occurs intermittently in the implementation phase.    | Medium term and reversible with natural cleansing.                          | High probability. High significance. | Training  |
| <b>4. Increased occupational safety and health risks.</b>  | Negative | Directly affects farmers using agrochemicals and consumers of farm produce.   | Occurs intermittently in the implementation phase.    | Permanent and irreversible.   | Highly probable. Highly significant. | Training  |
| <b>5. Potential for increased family strife deriving from shift of decision making to empowered women.</b>                       | Negative | Low magnitude. Directly affects some male headed families of empowered women. | Occurs intermittently in the implementation phase.    | Temporal and reversible after adaptation.                                   | Highly probable. Highly significant. | Effective gender mainstreaming,                     |
| <b>6. Division of community members into those participating and those not participating.</b>                                    | Negative | Community wide impact.  | Occurs continuously in the implementation phase.      | Temporal and reversible after integration.                                  | Probable and highly significant.     | Group dynamics                                      |

