

# PROJECT REPORT



## COMMUNITY ADAPTATION TO CLIMATE CHANGE THROUGH DIVERSE AND SUSTAINABLE LIVELIHOOD PORTFOLIOS OF NATURE-BASED ENTERPRISES (NBEs)

Key results, reflections and lessons learnt from the ARA micro-grant.



Date: January 2024

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## 1. BRIEF BACKGROUND ON THE ARA MICRO-GRANT

The Adaptation Research Alliance's (ARA) Grassroots Action Research Micro-grants targets action and research entities collaborating to unearth knowledge, ideas, and opportunities for climate change adaptation in the Global South. As PadUp Zimbabwe we were selected as recipients of this grant to carry out a baseline study in order to understand how communities in Matebeleland North, Zimbabwe are coping with the impacts of climate change through nature-based enterprises (NBEs). The evidence generated from the micro-grant activities will continue to feed into ongoing research on diversifying livelihood strategies for individuals and households through sustainable natural resource harvesting and utilisation, thereby strengthening resilience building especially for women engaged in nature based enterprises (NBEs). Planned activities included training meetings/workshops and a survey to understand the role of NBEs in coping with climate change. The need for sustainable harvesting of natural resources; forest protection and enhancement practices cannot be overemphasized and this can be achieved through various approaches including strengthening the local institutional capacities. Strengthening value chains is also part of the vision as this will enhance income from the NBEs and will be achieved through activities that focus on capacity building and activities such as linking to the market, thereby decreasing the vulnerability of these local communities.

## 2. INTRODUCTION

Nature-based enterprises typically refer to businesses and economic activities that harness the sustainable use of natural resources, ecosystems, and biodiversity to generate goods and services (McQuaid et al. 2021, Anyonge-Bashir & Udoto, 2012). These businesses frequently strive to conserve and protect the environment while simultaneously being typified by their reliance on nature (<https://connectingnature.eu/innovations/nature-based-enterprises>). NBEs seek to create jobs and revenue while protecting and preserving the environment by striking a balance between economic activity and environmental management. These businesses are essential to the advancement of biodiversity preservation, sustainable development, and the wise use of natural resources (McQuaid et al. 2021). NBEs can play a significant role in improving adaptation to climate change through various mechanisms and approaches listed below.

- **Ecosystem Resilience:** NBEs frequently take part in initiatives that support the development and upkeep of resilient ecosystems. For instance, agroforestry and sustainable forestry techniques can improve a landscape's and forest's ability to withstand the effects of climate change, including extreme weather events and altered precipitation patterns.
- **Biodiversity Conservation:** Businesses rooted in the natural world help to preserve a variety of healthy ecosystems by funding initiatives aimed at restoring and conserving biodiversity. Ecosystems that are rich in biodiversity are often more able to tolerate shocks and the effects of climate change.
- **Better access to services and resources for adapting to climate change:** Women frequently encounter obstacles when trying to get the resources and assistance required for adapting to climate change. By granting women better access to the capital, infrastructure, and technology required for efficient adaptation to climate change, the grant project aims to reduce these gaps.
- **Women's empowerment and involvement in decision-making processes:** The project might provide special attention to involving women in decision-making about adaptation to climate change. This can entail giving women a forum on which to express their issues, assisting them in participating in regional and national policy debates, and making sure they are represented in community-based adaptation projects.

## 3. PROBLEM STATEMENT (ISSUE EXPLORED)

Nature-based enterprises (NBEs), mostly in the informal sector, are an important part of the local micro-economy and rural communities' livelihood strategies with the potential to unlock their adaptive capacity to building climate resilience. Women, in particular, are often the key driving force behind these enterprises, but they face a wide array of barriers that include: equitable access to land and natural



resources, limited access to climate information and limited access to finances to diversify livelihood strategies. Therefore, there is a need for knowledge co-production with rural communities involved in NBEs who are affected by climate change (female-headed households in particular), to co-develop strategies to effectively break the poverty cycles and increase livelihood sustainability. Thus, the main objective of this research project was to co-produce knowledge with rural communities involved in NBEs affected by climate change especially female-headed households and to co-develop strategies to effectively strengthen and build resilience of their livelihood actions. The specific objectives were to: (1) identify more sustainable and diverse livelihood portfolio of NBEs in the face of climate change and (2) foster motivation for ecosystem stewardship through learning, participatory and financial and non-financial incentives.

### 3.1 PROJECT THEORY OF CHANGE

The Theory of Change model emphasizes the project’s objective to promote nature based enterprises in Lupane District that benefits people and strengthens climate change adaptation and livelihood diversification. The key drivers, assumptions and risks, described below, and the results framework provide the key ingredients for the TOC.

Currently, for local people in Matebeleland North, the benefits that accrue from NBEs are very low. Additionally, the district's ability to protect natural areas effectively is weak, there is inadequate knowledge sharing platforms. Therefore, to close the gap and solve the problem, two impact pathways were recognized (i) Promoting sustainable and inclusive NBEs for improved community livelihoods and strengthening adaptation to climate change and (ii) Gender Mainstreaming. Therefore, to augment the strategic pathways to ensure long term goals are attained the following intervention methods will be put in place: (i) to support NBEs that are sustainable, (ii) shares community benefits fairly, and builds management capacity for climate change adaptation and best practice documentation, knowledge management, workshops.

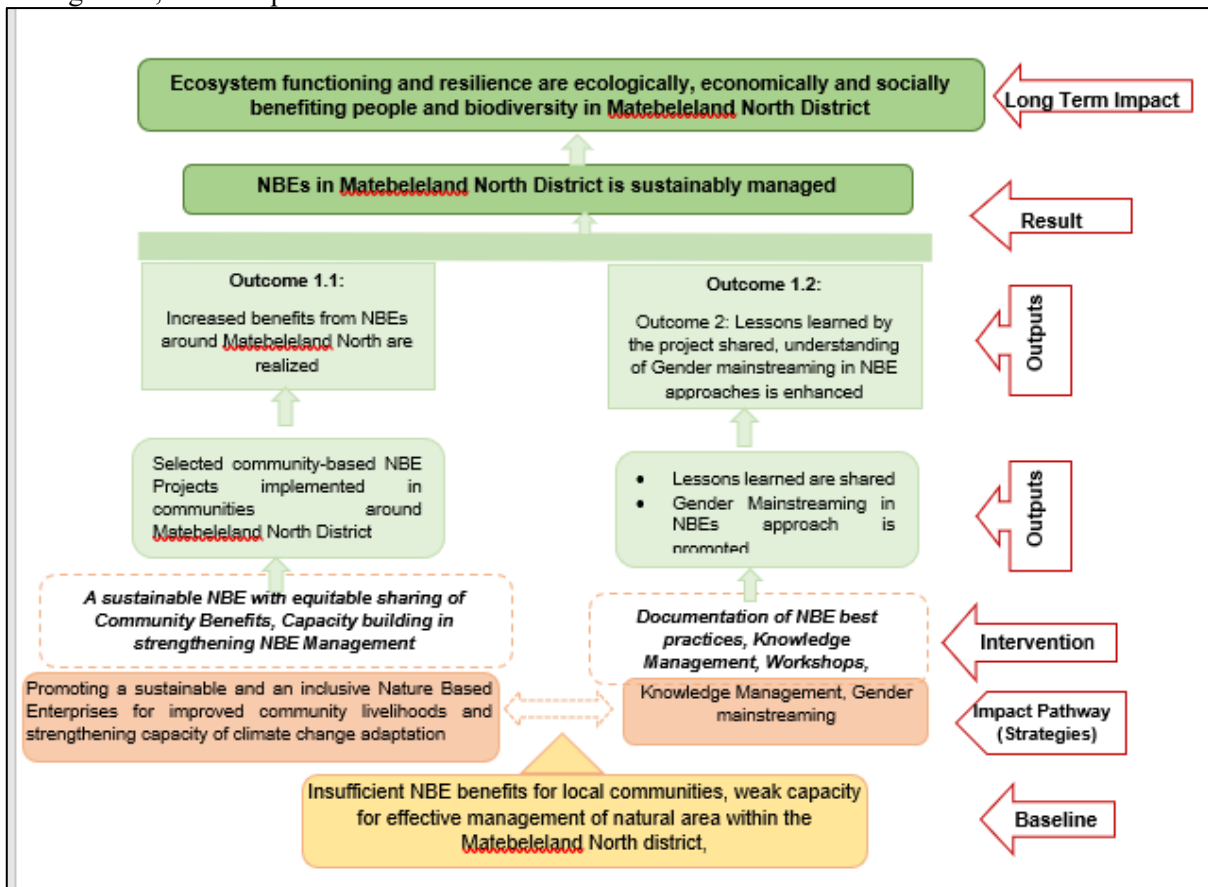


Figure 1 Theory of change for the project



Knowledge co-production and co-creation is embedded in practice with climate-vulnerable female-headed households involved in NBEs enhances their capacities to effectively overcome poverty traps, diversify livelihood options and sustainably manage ecosystem services. This aligns well with Zimbabwe's revised Nationally Determined Contributions (NDCs) to increase the country's ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production.

### 3.2 RESEARCH FOR IMPACT PRINCIPLES ADDRESSED

In this research we aim to find practical and implementable strategies that the communities in Matabeleland North have used and can use to adapt to climate change for positive and sustainable impact. This will be done through a transdisciplinary approach fostering inclusive and active participation of the communities involved to foster transparency, build trust, and build room for flexibility, and experimentation. Further, to ensure diverse contributions of varying voices and to foster border thinking, our research team is drawn from varying disciplines which draw from (sociology, ecology, and environmental sciences). We also intend to draw on internal knowledge by including some key stakeholders from the local communities in developing our research processes. By doing so, we will co-create and co-produce knowledge that is authentic and at the same time do away with topdown approaches.

## 4. RESULTS

### 4.1. Demographic information

Of the 57 respondents (see Figure 2) that were included in the research, 68% (n=39) were women compared to male counterparts with 32%. With regards to education attainment, results show that many respondents had completed secondary education (40%), followed by 29% who had completed tertiary education, while a mere 9% had attained primary education and 22% identified their education as other.

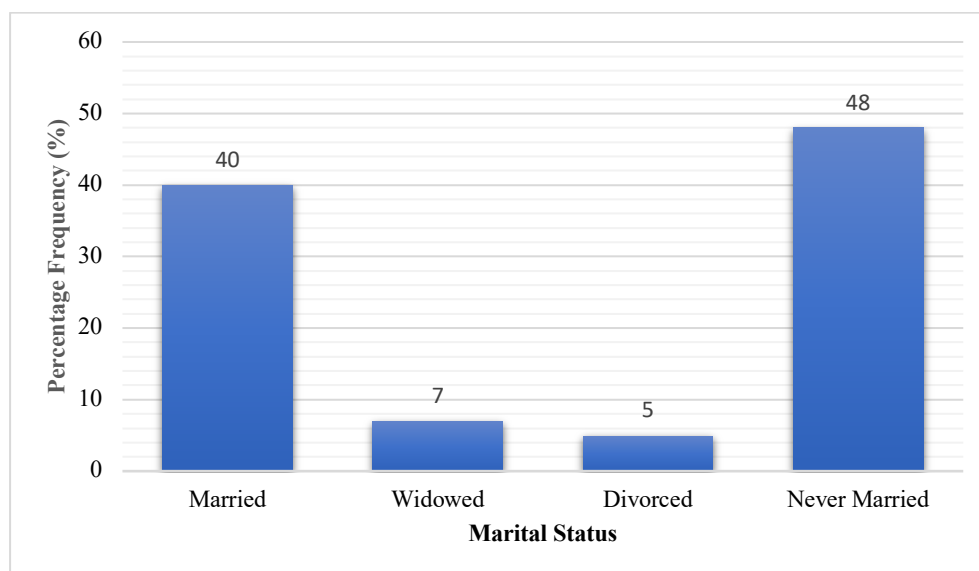


Figure 2. Marital status of the respondents

### 4.2. The concept of Nature-Based Enterprises (NBEs)

The concept of NBEs is well apprehended in the area, with the majority of the respondents (83%) expressing extensive knowledge of what nature-based enterprises (NBEs) were while only 17% did not know NBEs.



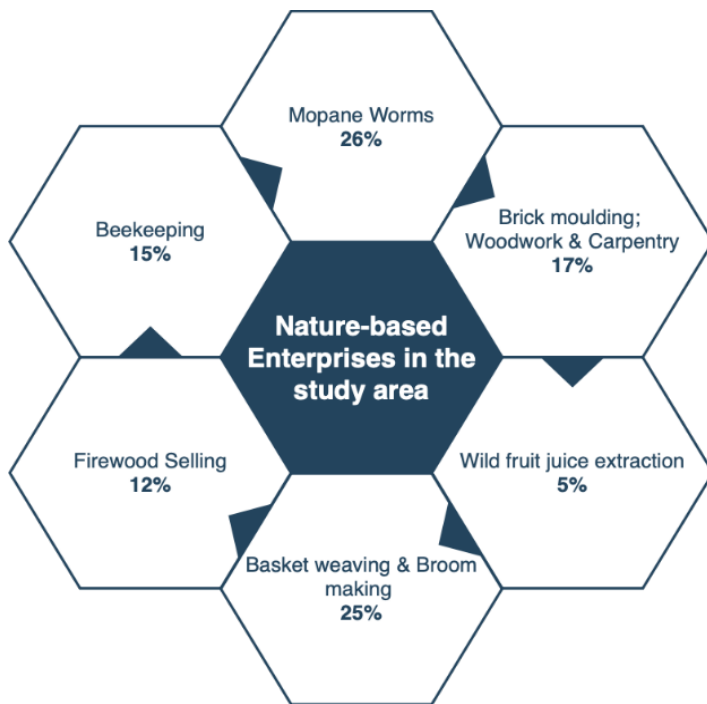


Figure 3 NBEs in the study area

For the respondents who expressed knowledge of what NBEs were, they identified NBEs as the use of naturally sourced raw materials, that's is the use of natural resources, businesses based on natural resources such as mats, firewood, bricklaying to make a living, business enterprises based on selling natural resources found in the environment, projects that depend on natural resources to make profits with minimal processing required such as Mopani worms, carpentry, bricklaying. The majority of the respondents (95%) noted that there were NBEs within the areas they were inhabiting pointing to potential utilisation or overexploitation depending on governance frameworks at play in those contexts (Figure 3 and Figure 4).



Figure 4 Examples of nature products: mangeti oil, handbags, reed mat and pottery products from clay

Results indicate that respondents had varied connections or involvement in the different NBEs at their disposal with 23% of respondents directly involved whereas 27% were indirect beneficiaries and half of respondents (50%) were not involved in NBEs at all. Respondents with connection to NBEs had different connections to the NBEs and this included: 20% for mopane worms, 16% selling firewood and separate 8% making brooms and another 8% making juice from fruit trees (Figure 5).

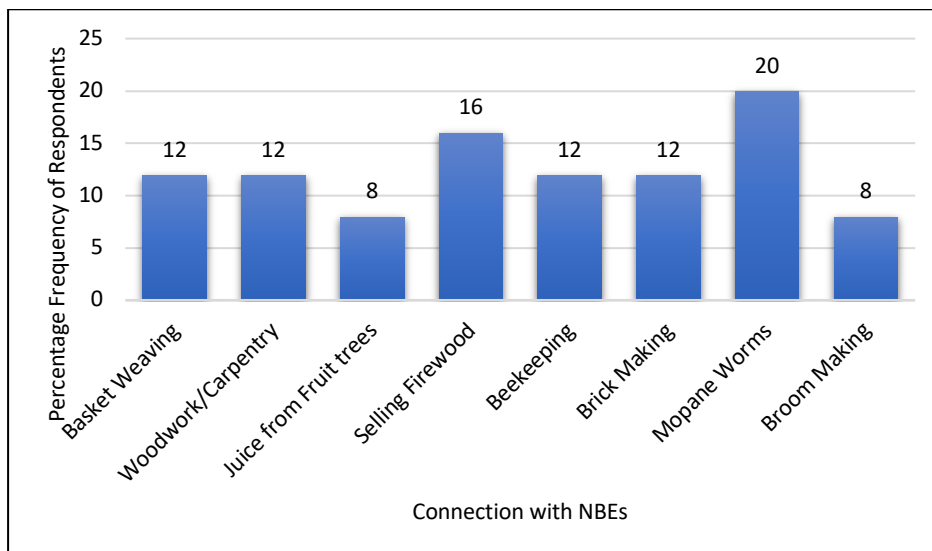


Figure 5 Respondent's connection with NBE's

The study further sought the duration in which the respondents had been involved in NBEs and 50% had been involved for less than 5 years compared to 18% who had been involved with NBEs for more than 10 years. The majority of the respondents (75%) who indicated that NBEs were not their main source of income had varied jobs ranging from formal employment to non-formal employment. While the 25% of the respondents whose main source of income was NBEs used the income for different uses indicated in Figure 4.

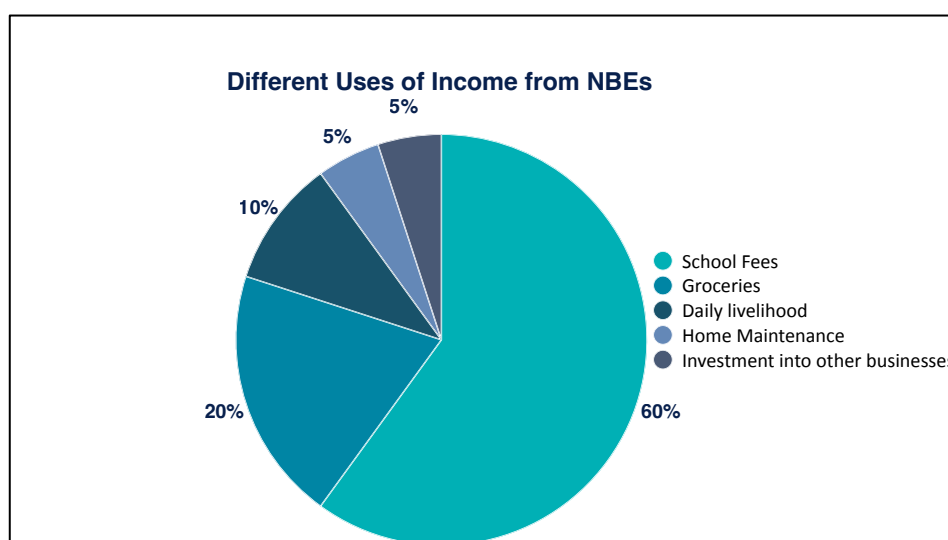


Figure 6 Different uses of income from NBEs

Knowledge levels on climate change amongst the respondents were assessed and results indicated that 93% of respondents have heard of climate change and associated impacts; 86% of respondents know the meaning of climate change and defined it with shifts in weather patterns such as rainfall and



temperature; 74% indicated that they were affected by climate impacts and 26% did not know whether they were affected by climate change or not. The various climate change impacts as envisaged by respondents are shown in Figure 7. As already alluded to some of the livelihood activities by local members is through selling artefacts made from water reeds, selling fruit juices and mopane worms. Therefore, the above-mentioned effects of climate change have a devastating effect on their livelihoods. Some of the affected fruits included mnyi (*Birchemia discolor*) and baobab (*Adansonia digitata*).

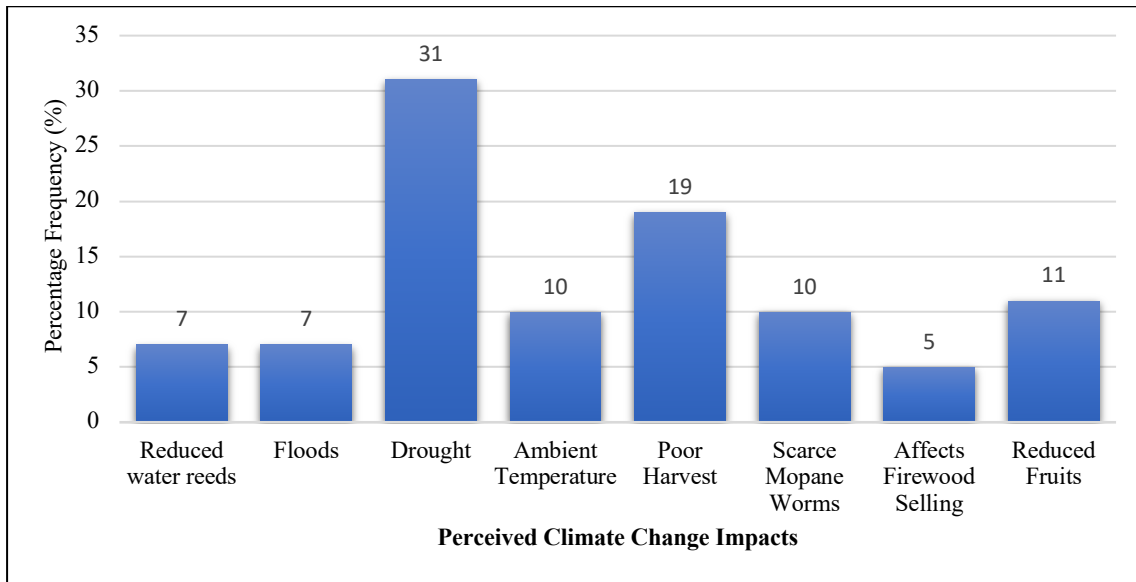


Figure 7 Climate change impacts as envisaged by respondents

Half of the respondents (50%) expressed knowledge of what climate adaptation is and the most common response to climate change was changing ways of living/business in line with climate variability and change and putting in place measures to protect oneself from the effects of climate change through planting drought-resistant crops. To sustain their livelihoods local communities have to adapt to climate variability and change, the respondents indicated to have employed various strategies (Figure 8) and these include:

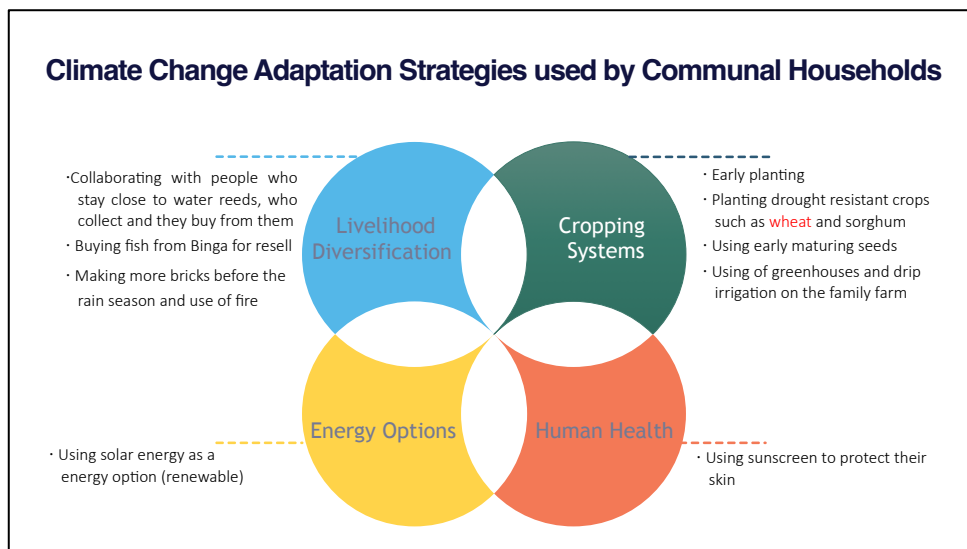


Figure 8 Climate adaptation strategies used by communal households

#### 4.4. Capacity building on climate change adaptation



A small percentage of respondents confirmed on capacity building initiatives in their communities through attending a workshops or training on climate change adaptation strategies. The respondents indicated to have attended the following workshops:

- Workshop on mnyi (*Birchemia Discolour*) juice making.
- Workshop on water reeds upskilled on how to work with them.
- A Climate Change Adaptation Workshop by Ministry of Environment, Climate & Wildlife.
- Brick moulding and layering.
- Workshop climate adaptation and forestry facilitated by EMA and Forestry Commission in 2022.
- Training on bee keeping practices.

Almost all respondents confirmed that they had not received enough training or engagement for capacity building on climate change adaptation. In this regard, the respondents noted that they required capacity building on various topics of climate change adaptation (Figure 9).

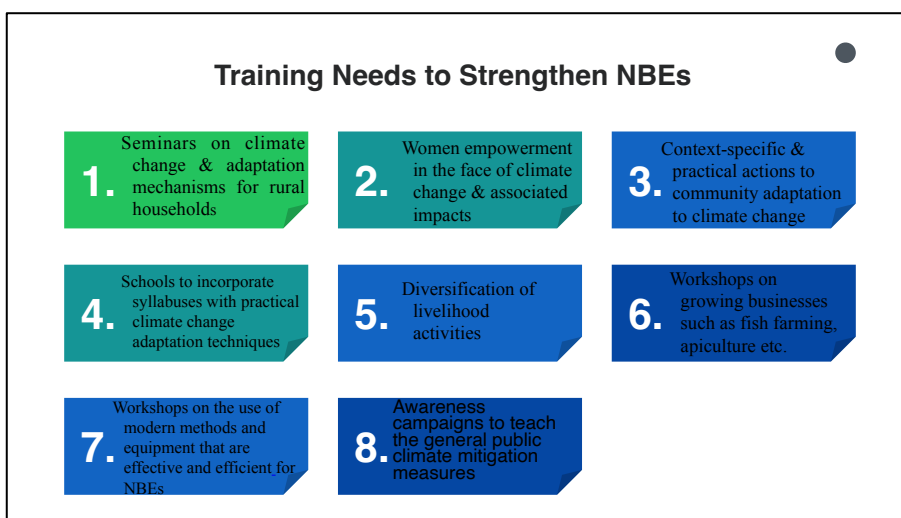


Figure 9 Training needs on NBEs for rural households

The majority of the respondents (72%) believed there was a link between climate change adaptation and sustainable nature-based enterprises (Figure 9).

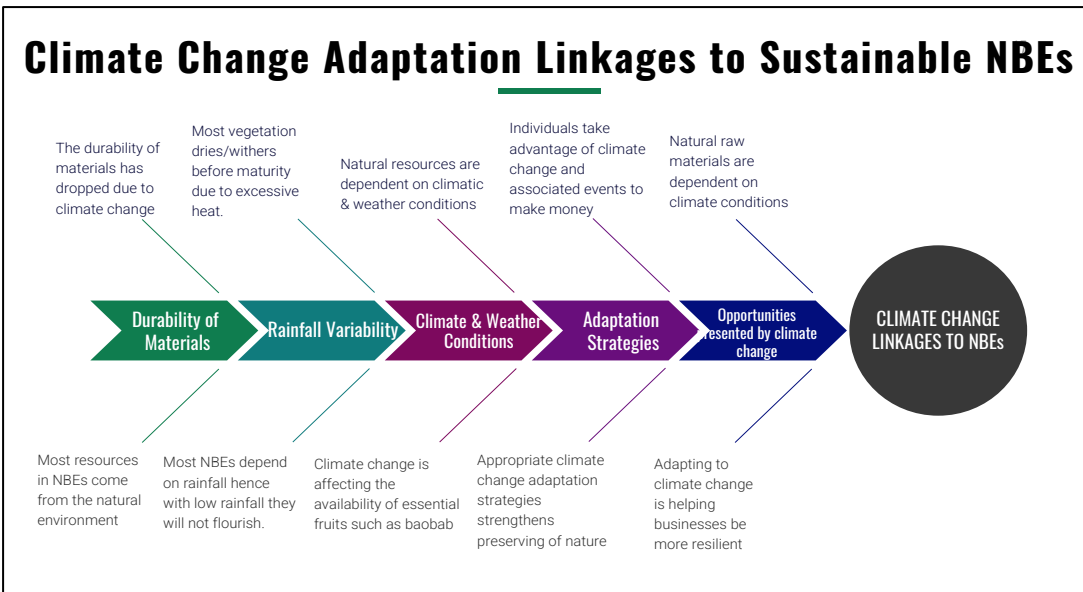


Figure 10 Climate change adaptation linkages to sustainable NBEs

### 4.5 Livelihood diversification

A significant number of the respondents (96%) believed NBEs contributed to diversifying household livelihood options and also improving their livelihoods while a mere 4% indicated otherwise. Respondents confirmed that the NBEs had improved various aspects of their lives with 44% acknowledging that their household diet had been improved through NBEs contribution (Figure 11). Another fraction of the respondents (31%) confirmed that NBEs had improved their access to education at household level and 9% indicating improvement on their clothing (Figure 11).

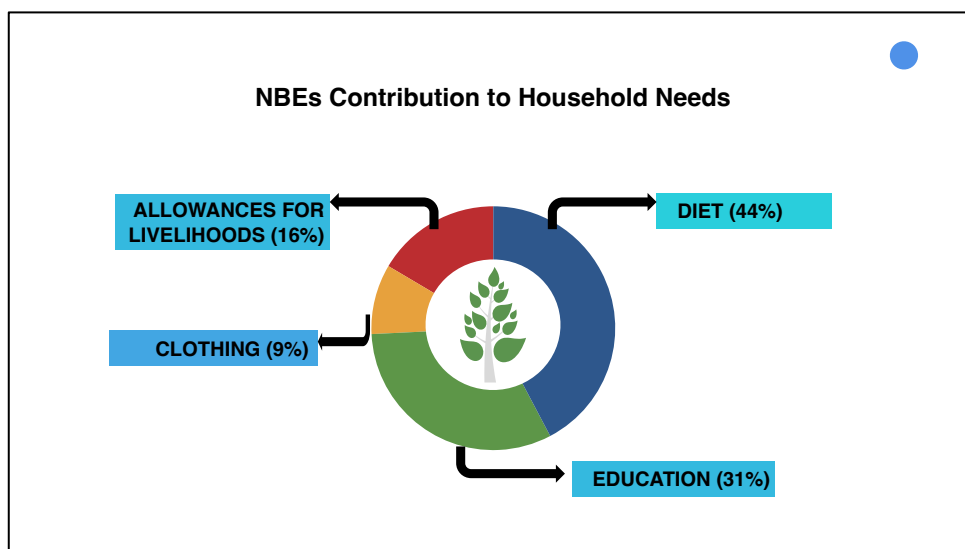


Figure 11 NBEs contribution to household needs

The majority of the respondents (79%) reiterated they had not received support in establishing and strengthening NBEs, while 21% of respondents received support to establish and strengthen their NBEs from various sources (Figure 12).

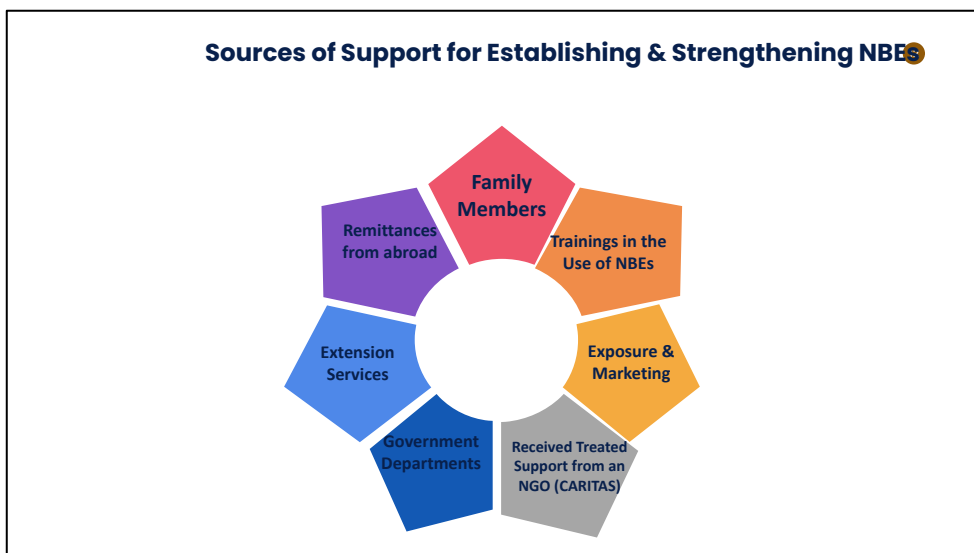


Figure 12 Sources of support for establishing and strengthening NBEs

Therefore, to ensure the use NBEs to ensure sustainable livelihoods. The respondents identified a plethora of gaps that existed in improving livelihood strategies through engaging in NBEs in their area (Figure 13). Therefore, to ameliorate the aforementioned gaps and ensure sustainable livelihoods and sustainability from NBEs. The local communities identified various opportunities of fostering sustainability of NBEs (Figure 13).

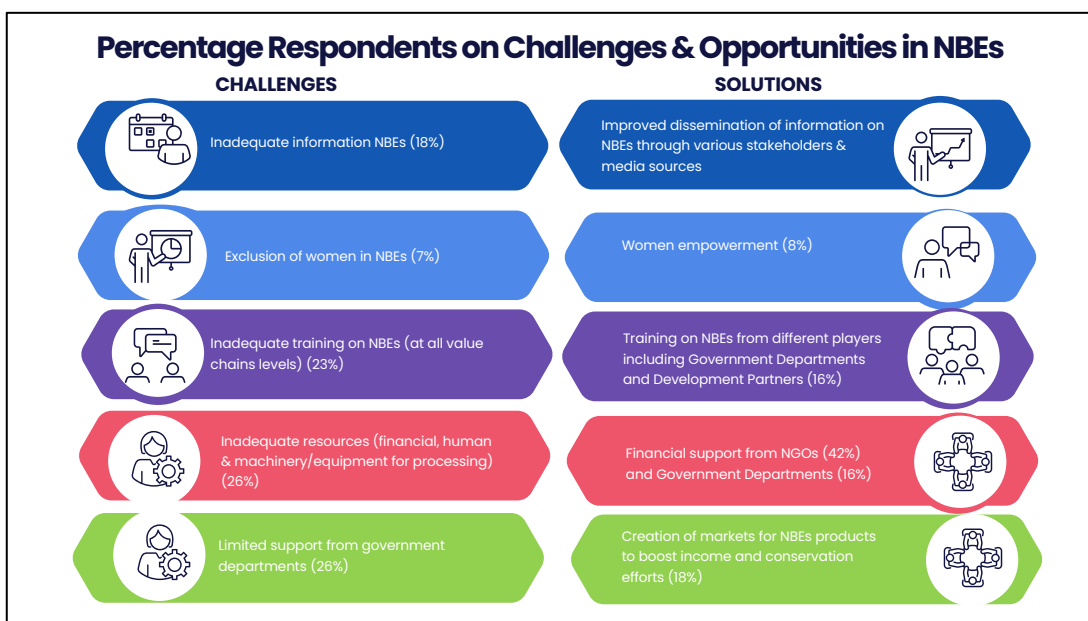


Figure 13: Challenges and Opportunities for Fostering Sustainable NBEs

#### 4.6 Gender related research findings

From our research findings, it is evident that women have a significant influence in the dynamics of rural areas. With primary responsibilities encompassing household activities, water and fuelwood collection, food production, and natural resource management, their close connection to the environment positions them as key stakeholders in the successful adoption of nature-based solutions.

The predominant presence of women in our research sample, constituting 68% (Figure 14), highlights the vital role of their perspectives and contributions in shaping strategies related to climate-smart and nature-based solutions. In the context of rural Zimbabwe, women emerge as primary users of ecosystem



services and the first witnesses to environmental changes, making it imperative to understand and incorporate their knowledge and experiences for the development of sustainable solutions.

The 68% representation of women in our research highlights a clear need for gender-sensitive policies and programs concerning nature-based solutions in Zimbabwe. This necessitates fostering inclusive decision-making processes that actively involve women and provide them with enhanced access to resources and information. Such initiatives are not only integral for elevating the success and longevity of nature-based endeavors but also contribute to fostering more equitable and resilient development solutions. Recognizing and addressing the gender dimension in nature-based solutions goes beyond social justice — it becomes a strategic imperative for sustainable development in rural Zimbabwe, benefiting both women and the broader community.



Figure 14 Showcasing of nature products which make up the NBEs (source: Workshop, January 2024)

## 5. KEY CHALLENGES IN THE UPTAKE OF NBEs

From our research study, these were key challenges mentioned by our participants in the uptake of nature-based enterprises:

- ❖ **Market Challenges:** Restricted market access and a lack of product recognition pose significant impediments to the growth of nature-based enterprises. Overcoming these barriers

necessitates establishing robust market connections and raising awareness about the value of nature-based goods and services.

- ❖ **Financial Hurdles:** Nature-based enterprises in our study areas frequently face financial limitations, struggling to access capital and secure funding. To address these challenges, innovative financial solutions and targeted support systems tailored to the unique needs of such enterprises are essential.
- ❖ **Skills and Knowledge Gaps:** Many nature-based enterprises in our study areas encountered skills and knowledge gaps. To enhance the effectiveness and sustainability of these ventures, it becomes imperative to implement training programs and capacity-building initiatives.
- ❖ **Climate Change and Environmental Risks:** The vulnerability of nature-based enterprises to climate change and environmental threats presents a significant challenge. By developing resilience and adaptive capacities to cope with these evolving challenges, our research participants are hoping to ensure their long-term viability.
- ❖ **Limited Technology Access:** Limited access to technology and innovation hampers the competitiveness of nature-based enterprises in our research study areas. Facilitating the adoption of sustainable and efficient technologies is essential to enhance productivity and competitiveness in the market.
- ❖ **Community Involvement:** The success and sustainability of nature-based enterprises heavily rely on strong community support and engagement. Establishing trust, promoting inclusivity, and actively involving the community are pivotal factors for the prosperity of these ventures.

## 6. REFLECTIONS AND LESSONS LEARNT

From our research study, we found that nature-based enterprises serve as a compelling example of the interconnectedness among sustainable development, economic empowerment, and environmental conservation. These enterprises not only generate livelihood opportunities but also enhance the resilience of local ecosystems. For instance, in our research, our participants highlighted a keen awareness of the need to harvest resources responsibly, ensuring long-term benefits without depleting natural ecosystems. The success of these enterprises highlights the significance of community-led initiatives, fostering local ownership and participation in decision-making processes. For example, initiatives like mopani worm harvesting, basket weaving and broom making and brick moulding, woodwork and capntry empower local communities to actively engage in shaping their developmental trajectories while promoting environmental sustainability.

However, our study identified challenges, such as the need for capacity building and improved market access. For instance, artisanal producers of nature-based products face challenges in reaching broader markets. Insights from these enterprises underscore the importance of targeted support mechanisms, including training programs and market linkages, to enhance their effectiveness and ensure long-term sustainability. By addressing these challenges, there is an opportunity to further amplify the positive impact of nature-based enterprises on both local communities and the environment.

Women will benefit directly and indirectly from the project that benefits people and strengthens nature based enterprises to enable climate change adaptation and enhanced livelihoods in Lupane district area. These will enhance economic empowerment and livelihood diversification beyond subsistence agriculture which women are largely are confined to as a livelihood strategy. Women and men differ in how they use and depend on natural resources, which influences the benefits they derive. Recognising the different roles that women and men play in the use of natural resources is essential in initiatives that promote nature based enterprises as it allows for their differentiated inputs and promotes specific responses that women and men could and should undertake. This project therefore considers gender equity and mainstreaming as fundamental. In recognition of this, a rights-based approach is applied to empower women and youth and other vulnerable groups to equitably participate in and benefit from the project interventions.

By creating an enabling environment for capacity development, knowledge sharing, and the project will be pro-actively implementing gender responsive interventions that create opportunities for improving



gender equality and strengthening empowerment of women in decision making as well as implementation and benefit sharing from project interventions. This includes for example equitable participation by women in increasing benefits from nature based enterprises and adapting to climate change consequently enhancing livelihood opportunities. Women will also be empowered to effectively and equitably participate in training and awareness-raising programmes on nature based enterprises and climate change adaptation.

## 6.1 LESSONS LEARNED

- **Recognizing Women's Central Role:** Our study emphasizes the pivotal role of women in nature-based activities, illustrating the need to acknowledge and integrate their perspectives. For instance, initiatives promoting sustainable agriculture recognize women as key contributors, incorporating their traditional knowledge for improved agricultural practices.
- **Community Engagement and Participation:** As pointed out by our key informants, successful nature-based solutions hinge on active community involvement. Engaging local communities in decision-making processes ensures that initiatives align with their needs and realities.
- **Ecosystem Services Awareness:** Building awareness about the value of ecosystem services is crucial for the success of nature-based activities. Our research participants who went through training workshops were aware of the need to shift towards responsible harvesting, showcasing increased stewardship.
- **Adaptation to Environmental Changes:** Our research underscores the importance of adaptability in the face of environmental changes. Some of our participants exhibited knowledge and active practice of climate-smart agriculture techniques that demonstrate flexibility and resilience, ensuring sustained productivity despite changing ecological conditions.
- **Inclusive Policies and Programs:** Most of our participants were female which underscores the significance of gender-sensitive policies and programs. Inclusive approaches that empower women contribute to the success and longevity of nature-based initiatives.
- **Local Knowledge Integration:** Our key informants highlighted from their experience that incorporating local knowledge and traditional practices into nature-based solutions enhances their effectiveness. Respecting and integrating indigenous wisdom leads to more culturally relevant and sustainable outcomes.
- **Access to Resources:** One of the major constraints in expanding nature-based enterprises in our research areas was limited access to finance. Ensuring equitable access to resources, including information and education, is vital for empowering rural communities. Initiatives that provide resources such as training in sustainable farming practices empower communities, enabling them to engage in nature-based activities more effectively.

Collaboration and Partnerships: as pointed out by some of the key stakeholders in nature-based enterprises in or research study, building collaborative partnerships between government, NGOs, and local communities is crucial for the success of nature-based initiatives. Projects where there is shared responsibility and resources, contribute to more comprehensive and impactful solutions that benefit both the environment and local communities.

## 6.2 ENABLERS OF SUCCESS

Several key enablers can contribute to the success of sustainable nature-based enterprises projects.

Here are some important factors to consider:

- **Stakeholder Engagement:** For nature-based businesses to succeed, it is essential to involve and engage pertinent stakeholders, such as local communities, indigenous groups, governmental and non-governmental organizations, and partners in the commercial sector. Collaborative decision-making and engagement in project planning and implementation can build community ownership and long-term sustainability.



- **Capacity Building:** To guarantee the efficient administration and running of nature-based businesses, it is crucial to offer local stakeholders training and chances for capacity-building. This include instruction in corporate management, the transfer of information about sustainable practices and conservation concepts, and training in technical skills.
- **Sustainable Business Models:** The long-term success of nature-based businesses depends on the creation and application of sustainable business models that incorporate social, environmental, and economic factors. This could entail instituting fair trade standards, diversifying sources of income, and looking at cutting-edge finance options.
- **Access to Markets:** The success of nature-based businesses depends on facilitating their access to markets for goods and services. This may entail forging alliances with purchasers, creating marketing plans, and guaranteeing reasonable market rates for goods obtained responsibly.
- **Policy and Regulatory Support:** Successful nature-based businesses depend on favorable legislative and regulatory frameworks at the local, state, and federal levels. This could involve supporting regulatory compliance, providing incentives for sustainable practices, and securing land tenure.

