

Evaluation
Report
Kufandada &
Bindangombe
Irrigation
Schemes

1

Purpose &
structure of the
evaluation

2

Project
background

3

Key findings

4

Learnings &
recommendations

5

To read more:
[www.cridf.net/
livelihoods-
projects](http://www.cridf.net/livelihoods-projects)

CRIDF 



UKaid
from the British people

List of Acronyms

CBMP	Community Based Management Project
CRIDF	Climate Resilient Infrastructure Development Facility
DAC	Development Assistance Criteria
DFID	Department for International Development
FGD	Focus Group Discussion
KII	Key Informant Interview
LSSCC	Lower Save Sub-Catchment Council
MDPI	Multi Dimensional Poverty Index
OECD	Organisation for Economic Cooperation and Development
SADC	Southern African Development Community
SCC	Sub-Catchment Council
USD	US Dollar
VIP	Ventilated Improved Pit Latrine
WASH	Water, Sanitation and Hygiene
ZINWA	Zimbabwe National Water Authority
ZSS	Zimbabwe Super Seeds

Contents

I Introduction	4
1.1 Purpose of the evaluation	4
1.2 Structure of the evaluation report	4
2 Project background	5
2.1 Kufandada irrigation scheme	5
2.2 Bindangombe irrigation scheme	5
2.3 Sustainability plan to foster intended livelihoods	5
3 Key findings	6
3.1 Relevance	6
3.2 Effectiveness	6
3.3 Sustainability	8
3.4 Impact	9
4 Learnings and recommendations	10

“Thanks to CRIDF and DFID staff as well as Communication for Development Ltd for the photographs”.

I Introduction

The Climate Resilient Infrastructure Development Facility (CRIDF) is a water infrastructure programme for southern Africa, funded by the United Kingdom's Department for International Development (DFID). The programme operates across 11 Southern African Development Community (SADC) countries.

As part of its overall strategy, CRIDF prepares small-scale water infrastructure projects as pilots to provide an entry point and platform for CRIDF to engage with, support and influence key SADC interventions, river basin organisations and national stakeholders. One of these pilots during the first iteration of CRIDF was establishing abstraction, pumping and irrigation infrastructure for two rural communities in Zimbabwe. During CRIDF's second iteration the evidence and learning team returned to site to determine what worked well and where lessons could be learned.

This evaluation activity was conducted from March to April 2018 on the two irrigation scheme projects. The evaluation team chose to use the OECD DAC criteria as a framework to collect data and present the findings.



1.1 Purpose of the evaluation

The purpose of this evaluation is programme accountability – to determine to what extent the projects have achieved their anticipated outcomes and impact, and programme learning and to determine where improvements might be made in future, similar projects.

The primary user of the evaluation is CRIDF. Secondary audiences include DFID, SADC and other southern African institutions involved in similar fields.

1.2 Structure of the evaluation report

There are 4 sections to this report. Section 2 provides a brief summary of the Kufandada and Bindangombe irrigation schemes followed by the findings of the study in section 3. These findings are translated into lessons learned and recommendations which are presented in section 4.

2 Project background

The Kufandada and Bindangombe irrigation schemes were infrastructure projects funded under the original CRIDF programme (CRIDF 1). Both projects fall within the Lower Save Catchment Basin and are located within the Masvingo province of Zimbabwe. Masvingo is a deprived area of the country, with a Multi Dimensional Poverty Index (MDPI) deprivation rating of 0.198 in comparison to a country rating of 0.172. Estimates are that about 44% of the population in this province have no access to electricity, 29% have no access to potable drinking water and 36% lack access to improved sanitation.

2.1 Kufandada irrigation scheme

The Kufandada irrigation scheme is located in Bikita District, approximately 95 km east of Masvingo. The project was identified from the Joint Basin Strategy between Mozambique and Zimbabwe, which identified Community Based Management Projects (CBMPs). The scheme aimed to benefit about 120 subsistence farmers in Wards 10 and 13 of the District as well as Bikita Rural hospital. The scheme was implemented as a proof of concept to demonstrate relocation of subsistence farming from riverbanks and to demonstrate the effectiveness of a livelihoods project to pay for water and irrigation services.

Changing weather patterns have increased the number of failed harvests of rain fed crops, motivating farmers to practice riverbank cultivation, exacerbating riverbank erosion and increased siltation. The community used river water for bathing and general washing and also made use of the same water source for household consumption. The project also aimed to increase the community's access to clean water and improved sanitation services as well as providing irrigation infrastructure. These translated into the following project objectives:

- To reclaim some of the severely eroded sections of the river thereby contributing to more climate resilience.
- To contribute towards the alleviation of the current

- productive work.
- To reduce the spread of disease through the introduction of VIP latrines.

Options for the water supply were investigated as part of the Feasibility Study, including connection to the Zimbabwe National Water Authority (ZINWA) system and the provision of groundwater supplies.

2.2 Bindangombe irrigation scheme

The Bindangombe irrigation scheme is located in Chivi communal land, Chivi District, approximately 50 km south of Masvingo. The general climate is hot and dry, with below average rainfall. The scheme was intended to benefit 300 families (1,200 families with additional funding), in ward 18 and ward 20 of the District.

There was no nearby irrigation schemes in the area, with farmers relying on rain for irrigation. Subsistence cultivation of maize for food had exhausted the bulk of the land. As climate change impacted on rainfall patterns the number of crop failures increased. The low rainfall climate, coupled with a geology dominated by granite outcrops in most of the project area adversely affects the availability of safe drinking water. Communities were forced to draw water from unsafe sources including river beds, where there is a high risk of contamination. Most boreholes located in granitic formations had low yields and generally dried out during periods of drought. In addition to low agricultural yields, many livestock were dying as a result of extended drought spells. An upstream dam on the river running through the community was almost completely silted up. There was a need for the introduction of irrigation to improve food security. This project aimed to mitigate against the impact of these climate related changes and identified the following objectives:

- To address the inadequate supply of clean water.
- To address food insecurity and malnutrition.
- To reduce the spread of disease through the introduction of water, sanitation and hygiene (WASH) facilities.

The Feasibility Study indicated that the intention was to obtain funding from Government to extend the proof of concept (irrigation scheme) once the most feasible solution was identified. CRIDF provided irrigation by building a weir from which water was abstracted through a grid-powered irrigation scheme and stored in two purpose-built water tanks.

2.3 Sustainability plan to foster intended livelihoods

While capital expenditure could be raised to build these projects, a challenge to both projects was the ongoing funding of the water abstraction and maintenance of the irrigation infrastructure. As a solution to this challenge CRIDF looked to partner the communities with Zimbabwe Super Seeds, (ZSS), a local agricultural seed house. ZSS would provide the communities with

agricultural inputs and route to market for the first two crop cycles after the construction phase.

It was anticipated that this process would provide the communities with an ongoing source of income that could be used to contribute towards the costs of water abstraction and ongoing maintenance of the irrigation infrastructure.

endemic poverty bedeviling the community through increased food production and the generation of incomes arising from the sale of produce.

- To create employment for the youth during the construction phase.
- To provide additional sources of potable water and to reduce walking distances for mainly women to fetch water creating additional time for these individuals to partake in



3 Key findings

This section presents key findings according to the OECD DAC criteria.

3.1 Relevance

Both communities faced a number of common challenges; subsistence agriculture with a limited access to markets, a dependence on rainfall for crop irrigation, changing rainfall patterns leading to increased crop failure. Both communities had to walk considerable distances to access water sources, which in both communities could have been contaminated. WASH facilities in both communities was inadequate, increasing the likelihood of the spread of disease. In addition the Kufandada community faced ongoing riverbank erosion due to overuse.

To overcome these challenges, CRIDF designed projects that would provide the communities with ongoing access to a regular supply of water; abstraction and storage facilities and irrigation infrastructure. These were expected, in turn to increase yields, improve food security and in addition, decrease the spread of disease in the communities. This would lead through accessing markets, to an increase in income, improve livelihoods and contribute towards an alleviation of poverty in the communities.

Finding 1: Water is more readily available in the communities for consumption and irrigation.

In both communities the challenges relating to lack of water impacting on poor harvests were resolved. Before the irrigation scheme, because of drought and unpredictable rainfall patterns in the areas, harvests were poor. Both communities report increased harvest yields now that irrigation infrastructure is in place and that they can more readily access water for consumption no longer walking long distances to fetch water.

Finding 2: Regular access to clean water (and WASH facilities) has decreased the incidence of disease.

Before the irrigation scheme, both communities accessed water from shallow wells and the nearby river. The water was of poor quality, causing diseases. Kufandada beneficiaries highlighted that they had a challenge with diarrhoea within the community before the irrigation scheme. FGD respondents now report that they cannot remember the last time there was a case of diarrhoea in the community, but also point out that hospital staff trained the community in how to purify water before drinking. An additional challenge in Bindangombe was lack of toilets in the field. The Bindangombe community shared that the (WASH) facilities on their plots have resulted in improved hygiene and health.

Finding 3: Farmers report increased incomes as a result of market access for increased yields.

Through the support of Zimbabwe Super Seeds and the contract farming agreement in place, farmers in Kufandada report increased incomes. Their counterparts in Bindangombe report earning the same amount as last season, as a result of losing a growing season because of a late project start date.

Finding 4: River bank cultivation at Kufandada has stopped.

River bank cultivation in Kufandada was causing erosion and river siltation. One key focus of the project was to reclaim some of the severely eroded sections of the river bank thereby contributing to increased climate resilience. Kufandada

respondents reported that river bank cultivation within the community had stopped and this was confirmed through observation during a site visit. Further, the Lower Save Sub-Catchment Council officials also confirmed this and stated that the project helped to stop this. The evaluation could not confirm whether river bank cultivation was still continuing in surrounding communities and it is thus unclear to what extent the scheme has been relevant in preventing river bank cultivation in the wider area. Concern was raised by one focus group member that, "There is no river bank cultivation. But outside of the scheme, people still do cultivate at the river banks".



3.2 Effectiveness

The projects are implemented as a collaborative effort between a number of stakeholders; a regulatory authority responsible for monitoring water use, two private sector businesses, one responsible for agro processing input and advice and the second responsible for construction and initial maintenance, and two communities, each with their own set of participants and dynamics. While the implementation of the projects was project managed by CRIDF, the ongoing maintenance and operations of each project would fall to the other stakeholders. The relationships between these players is central to the effective ongoing implementation of the projects.

Finding 5: Communities have established management committees to represent their views.

Findings from focus groups held in both communities indicated that community interests in the two projects are managed respectively through community committees comprised of both men and women, where all scheme members have a say in how the scheme is managed.

In Kufandada, inclusive management appears to have more traction. In this instance, the beneficiaries have set up a 'maintenance fund' for the management of the scheme, which costs USD 5 per beneficiary per year. The Main Committee in Kufandada is made up of eight members of which three members are women. There are also block committees that represent the three farming blocks (A, B and C) and additional committees dealing with various aspects such as water, security, equipment, etc. All beneficiaries who provided feedback during the Kufandada focus groups were satisfied with the management arrangement.

“The system is fine and all beneficiaries are well represented and have the same rights. No one is left out”
(Men’s focus group discussion, Kufandada).

“No one is left out. We are happy with how things are run”
(Women’s focus group discussion, Kufandada).

In Bindangombe, the Main Committee has 11 members of which three members are women. The women and youth interviewed indicated that all beneficiaries have a say in how the scheme is managed and that they meet monthly to discuss everything pertaining to the scheme operations. Similar to Kufandada, there are also smaller committees dealing with aspects such as security, maintenance, etc. Bindangombe FGD respondents reported being satisfied with the management arrangements.

“We are happy with it – it works well because we are all involved”
(Women’s focus group discussion, Bindangombe).

“We are all free to participate. No one is left out”
(Youth focus group discussion, Bindangombe).

Finding 6: The community management committees are gender inclusive.

Research indicates that water communities managed by women are more effective than those managed by men. All focus groups in both communities shared that women are represented and free to participate.

Mommen, B., Humphries-Waa, K. and Gwavuya, S. 2017. Does women’s participation in water committees affect management and water system performance in rural Vanuatu? *Waterlines* 36(3). doi: 10.3362/1756-3488.16-00026

In Kufandada, three of eight members of the management committee (37.5%) are women. The men in Kufandada were able to indicate that a total of 66 women and 53 men are involved in the scheme. In Bindangombe, three of 11 members of the management committee (27%) are women. The following quotes illustrate gender inclusivity in both communities:

“Women are well represented and make their own inputs at meetings”
(Men’s focus group discussion, Bindangombe).



“So far we have not had any issues with participation... we have a lot of women in the scheme and they participate fully and don’t hold back”
(Youth focus group discussion, Bindangombe).

“We feel well represented in all the committees and we have no problems. We are free to participate and make inputs”
(Women’s focus group discussion, Kufandada).

Finding 7: A number of challenges impact on the effectiveness of the schemes.

Both communities highlighted a range of challenges when asked whether there are any challenges in running the irrigation system. While some relate to specific issues or complaints regarding the size of irrigation infrastructure, the challenges affecting the effectiveness of these schemes are outlined below.

In Bindangombe

- Electricity disruptions: The men’s focus group in Bindangombe highlighted the challenge relating to frequent electricity disruptions, which affects irrigation.
- Electricity bills are high: All three focus groups in Bindangombe shared that the electricity bill is too high and they cannot afford the bill.

In Kufandada

- Lack of funds for inputs during the second planting season: The beneficiaries are responsible to provide inputs such as fertiliser and fuel for the tractors. The women interviewed indicated that some of them had to take loans from AgriBank to fund fertiliser and fuel and that they are paying back the loan over two seasons. Other women indicated that they needed pesticides for the beans crop but could not afford it.
- Lack of storage facilities for harvested crops: A storage shed is still under construction, which is located in Block A. The men who were interviewed shared that the shed will not be easily accessed from other blocks and that ideally a shed is needed in each block.
- Silting of the weir: An unanticipated breakdown of the older weir has led to a silting of the new weir. Currently the community are manually unsilting the weir.

“The weir is badly silted from an old upstream weir that has given way”
(Men’s focus group discussion, Kufandada).

“If we don’t work together siltation of the weir may lead to drying up of the water source to the scheme”
(Men’s focus group discussion, Kufandada).

Finding 8: Riverbank erosion at the site appears to be stopped.

As evidenced in the Relevance section (Finding 4), riverbank cultivation by the participating community at Kufandada has stopped. This appears to have slowed or stopped the riverbank erosion at the site, with the evaluation team observing grass covering the river banks. The importance of this will be seen over the medium term as the siltation of the river decreases. However, it is not clear whether riverbank erosion has slowed or stopped in other communities both upstream and downstream from the Kufandada community. Given that respondents report that outside of the project communities continue to cultivate on the riverbank, it is unlikely that erosion will have been stopped or slowed, decreasing the effectiveness of this project as a standalone initiative.

Finding 9: Project management and quality assurance has been challenging.

CRIDF and Sesani, a local company in Zimbabwe, were responsible for management of the projects and faced a

number of challenges. The challenges resulted from a number of factors. Firstly, it is the nature of construction that there are technical issues; taking this into consideration a one-year warranty period was built into the contract. Secondly, the current economic situation in Zimbabwe creates challenges in sourcing equipment and parts. This is complicated by the cash flow situation of contractors as a result of national economic policies.

The projects have faced a number of challenges as a result of these more macro issues; all of which impact on the project effectiveness and, to some extent, on their sustainability. In Bindangombe, focus group respondents reported that, at the time of the evaluation, the constructed tanks were not functioning due to collapsed linings. They also reported leaking pipes between the tanks and the fields and that sprinkler nozzles were creating inadequate water pressure. Kufandada FGD respondents also reported leaking infrastructure in irrigation pipes and nozzles, and that one borehole pump was not working.

In relation to the project management of the linkage to the agro-processing company; as a result of a delayed decision, the Bindangombe community received agricultural inputs late in the season and missed one growing season.

Finding 10: There appears to be no clear guidance for communities re ongoing infrastructure maintenance.

Some of the issues outlined in Finding 9 are pertinent to the warranty period, while others are more applicable to ongoing maintenance. The evaluation team understands that communities were trained in basic maintenance and were provided with maintenance handbooks. However, given the list of equipment issues, it is not clear that the communities have a regular maintenance schedule or know enough about the equipment to develop such a schedule. Reinforcing this, the Kufandada men's FGD respondents reported that they do not have the equipment or the training to repair the non-functioning borehole, affecting the availability of drinking water:

3.3 Sustainability

The sustainability of the project is vital to the success of the project continuing to contribute to the climate resilience of the communities. The projects' sustainability is connected to the ongoing ability to abstract and store water; the ability of the communities to pay for this, the effectiveness of the irrigation infrastructure and the ongoing functioning relationship between all of the stakeholders.

Finding 11: Cash flow constraints may pose a risk to sustainability of the projects.

Both communities earn an income from the crops produced and need to ensure that they are able to purchase inputs and maintain the irrigation scheme to safeguard future income. However, findings from interviews with the ZSS and from focus group discussions with both communities suggest that the two communities may need additional financial support. ZSS was contracted to provide inputs for the communities in the first two growing cycles. However, it is not clear if this was sufficient to establish the smallholder farmers as contract farmers. A reversal of the communities' contract farming status, through inadequate quality of produce as a result of a lack of

inputs, might compromise the ability to fund the abstraction and irrigation scheme.

Kufandada members have overcome these cash flow constraints to some extent by applying for loans from an agricultural credit provider: "Some of us took loans from Agribank to buy inputs like fertiliser. You pay them back over two farming seasons".

Finding 12: Excessive electricity costs may pose a risk to sustainability of the projects.

While the Kufandada project is solar powered, the Bindangombe project is connected to the national grid and is thus dependent on the national electricity supplier for both ongoing supply and for invoicing and billing. At the time of the evaluation all of the FGDs in the Bindangombe community expressed concern about the cost of electricity. The men's and youth FGDs indicated that due to insufficient cash flow, they may be unable to afford future production cost because of



the high electricity bill and costs associated with running the equipment that they have.

Finding 13: Lack of capacity and planning might undermine the projects.

The Final Evaluation Report of the first iteration of CRIDF indicated that 'sustainability prospects depend very much on whether any capacity building is undertaken'. This need for capacity applies to all of the stakeholders, but it is perhaps most apparent in the lack of capacity in the communities. In the course of this evaluation it was apparent that there are several areas where community capacity could be enhanced including; maintenance, understanding payment and finances, financial planning for scheme maintenance and good agricultural practice. For example, in Bindangombe the community expressed concern that they would not be able to afford repairs to tanks if such repairs are required outside of the warranty in future. If either of the communities is unable to repair any essential part of the irrigation infrastructure, it is likely that they will move back to dryland farming and conventional farming methods.

Finding 14: A strong working relationship with ZSS or a similar partner is core to the ongoing success of the projects.

Zimbabwe Super Seeds (ZSS), has a contract farming agreement with the communities and all members of the Kufandada and Bindangombe FGDs indicated general satisfaction with ZSS and that their relationship was relatively good. The ZSS provides seeds and inputs and guides the communities through

the cropping and harvesting process by providing an agro-extension officer based at the scheme. ZSS then buy the produce for on selling. The benefits of this arrangement are clear to the community members, "We are happy we don't have to spend days at the market square trying to sell our produce, which is what used to happen before we got into the contract with ZSS".

FGD respondents in both communities did however, express concerns about a range of issues regarding ZSS from the late delivery of inputs, to issues relating to produce quality and the agreed selling price for produce.

3.4 Impact

The irrigation schemes only cover a small portion of community land - 20ha in Kufandada with a further 8ha located at the hospital and Agritex, a Field Farmer School; and 34ha in Bindangombe. The impact of the projects can be seen in the households of the participating communities. Findings from interviews and focus groups revealed that surrounding community members in both the Kufandada and Bindangombe communities who were not part of the initial project, have expressed an interest in joining the scheme. However plots had already been allocated, and although both projects have plans in place for possible expansion, no expansion of either project is currently underway.

Finding 15: The community no longer suffer from outbreaks such as cholera or diarrhoea.

All FGDs reported that the communities no longer suffered from outbreaks such as cholera or diarrhoea. None of those who were interviewed could remember when the last

2km to collect water before the irrigation scheme was in place, "Boreholes help us not to travel long distances to collect water, which was the case before".

Finding 17: Food security has improved in both communities.

Both communities now irrigate their land, replacing the practice of dryland farming. As a result respondents reported improved food security: Both communities have resolved their challenges relating to lack of water impacting on poor harvests. Both the Kufandada and Bindangombe communities indicated that they have better and improved diets.

"We have more food available to us and are now guaranteed of a good crop produce"

(Youth focus group discussion, Bindangombe).

"Our diet is also improved with some of the crops like sugar beans"

(Women's focus group discussion, Kufandada).

Finding 18: The Kufandada irrigation scheme has increased the income of the community and improved their livelihoods.

Findings from interviews and focus groups found that the Kufandada beneficiaries reported a greater income as a result of improved harvests. The community noted that they already have more income, which has led to diversified and improved livelihoods. Unlike before the project, beneficiaries are able to afford paying for basic necessities.

"We have more income. We have bought cows, land, farming equipment, renovated houses and been able to pay school and health fees"

(Men's focus group discussion, Kufandada).

Finding 19: The Bindangombe irrigation scheme has yet to show the same impact in terms of increased incomes.

The Bindangombe community had not yet seen the benefits of additional income, due to three key challenges. Firstly, there was a warranty construction issue that led to the linings in the tanks breaking, and subsequent delays by Sesani on importing new linings according to CRIDF's quality standards to remedy the problem. Secondly, frequent power outages were experienced and because no water was stored, fields could not be irrigated as and when needed. Thirdly, there was

a delay in ZSS delivery of inputs on time. These challenges combined to prevent the Bindangombe community from benefitting from a full growing season, losing a season's income. Feedback from the community was that they were still earning the same because profits went to purchasing inputs for the next crop.

"We are not better or worse off as a result of the irrigation scheme. Our profits went to the next crop's inputs"

(Men's focus group discussion, Bindangombe).

"We are still earning the same – there is no money from the scheme"

(Women's focus group discussion, Bindangombe).

outbreak was. Kufandada respondents highlighted that the last incidence of diarrhoea was before the irrigation scheme was in place. The Kufandada Women's FGD noted that they had training about hygiene from nurses – this likely also contributed to the reduction in diarrhoea.

Finding 16: Women report having more time.

The women interviewed as part of focus groups in both Kufandada and Bindangombe shared how they now only need 10 to 20 minutes to collect water, compared to one hour spent before the irrigation scheme. Men in Kufandada also highlighted time saved. In Bindangombe, the women indicated that they now only go 500m to collect water, compared to



4 Learnings & recommendations

Several learnings have emerged from this evaluation which can feed into the design and implementation of similar projects throughout the SADC region.

In design, consider the long term sustainability of the project.

In comparing these two projects, it is clear that the Bindangombe project faces more challenges in terms of its ongoing sustainability. This is mostly due to the project's connection to the national grid. Apart from issues relating to the reliability of this power, the cost of abstraction and pumping may overwhelm the limited cash resources of the community. While initial capital outlay costs may be higher, and maintenance may be more challenging, a solar powered irrigation scheme appears to be a better option than a grid linked scheme, particularly where there are challenges relating to a high frequency of power outages and high electricity costs.

In design and early implementation, work with partners that understand the needs of the communities.

Providing infrastructure on its own will not achieve project outcomes. Real effort was required to obtain community buy-in at the start of the project, to leverage community workers to work the government land and to intervene when the communities experienced challenges. A key learning is that for projects such as these to succeed, the Project Implementation Team need to have dedicated personnel who understand the community and who are willing to go beyond the prescribed Terms of Reference to support and intervene during project phases.

In design, work with the communities to establish optimum plot size and orientation.

During the evaluation Bindangombe respondents reported that they thought their plot sizes were too small to be economically viable. Kufandada respondents reported that the irrigation infrastructure was not sufficient to reach the full scope of their plots. At the validation workshop with CRIDF it emerged that the plot sizes were allocated by the community based on historical precedent. Given the importance of ensuring adequate income and adequate irrigation per plot, it would be worthwhile exploring an opportunity to work with the community to reallocate plots, if needed.

Ensure that partners are comprehensively briefed.

Projects such as this have a multitude of moving parts, many of which are dependent on the roles of independent stakeholders. For the project to be successful it is vital that all of the partners are fully aware of their obligations and roles and the timeframes for their specific deliverables. The Bindangombe community lost out on a full growing cycle partly as a result of a late delivery of agro-inputs, and partly as a result of infrastructure issues relating to the storage tanks.

Communicate delays and challenges to all partners.

With complex and complicated projects such as these, involving multiple partners and stakeholder groups, ongoing and open communication between all the involved parties is vital. In the course of the evaluation it became apparent that miscommunication or a lack of communication between partners led to misunderstandings and ongoing delays. The late delivery of inputs to Bindangombe, the collapse of the Bindangombe tank linings and the length of time to replace these, as well as the issues relating to leaking irrigation

infrastructure in both communities are three examples where early and regular communication between stakeholder parties might have resolved issues earlier or resulted in at least an understanding of the delay.

Allow for quick follow-up and response time, especially regarding agricultural growing cycles.

The issue of seasonality is often forgotten in the implementation of technical programmes. However, in livelihoods projects such as this, where farming and harvests are central to the success of the project, the issue of seasonality needs to be understood by all partners. Initiating a project too late in a season or unanticipated implementation delays can have a knock on effect on the livelihoods, cash flow and wellbeing of a community. Late delivery of agricultural inputs in the case of Bindangombe impacted on this community's ability to plant and harvest, having a knock on effect on their cash flow the following season.

Build in project time post construction for capacity building and mentoring.

As noted in the Final Evaluation Report of CRIDFI, capacity of the communities will prove to be a lynchpin in the long-term success of these projects. Sufficient time and consideration must be given to build the capacity of the communities in a variety of areas including on-going maintenance of the abstraction and irrigation infrastructure and the power source for the pumps. Together with capacity building the relevant partners must also consider a mentoring process where community members might work side by side in initial maintenance, to build hands-on experience and confidence of being able to resolve future problems. A reflection at the validation workshop included considering more frequent training sessions with future project communities as well as the need to make training material more accessible; for example, making use of posters spread across the community. In addition, training and mentoring to empower the community to call upon the contractor to repair/maintain the defective infrastructure, was also identified as important.

Future similar projects could ensure there is regular training, mentoring and support taking cognisance of levels of education, and literacy along with practical assessments to determine whether the community has acquired the necessary skills to continue implementing and maintaining the irrigation scheme independently.

Similarly, capacity building is needed for the communities to actively engage in their Management Committees; to plan for maintenance issues, to understand their communities' rights and obligations and to engage constructively with other project partners.

Projects like this are a prime opportunity for women's empowerment.

The positive impact that irrigation projects can have in the lives of women, especially regarding saved time, open significant opportunities for their further empowerment. Women's inclusion in community water management committees has already been shown to be a factor contributing to the success of these committees. In line with the need to increase capacity of communities to effectively manage the irrigation schemes, projects should consider using the opportunity to partner with an agency to focus on greater women's empowerment.



Climate Resilient Infrastructure Development Facility CRIDF II
Email: gerry.mcdonald@cridf.com
www.cridf.com
Phone: 012 364 0720

