**DIPLOMA IN PROJECT MANAGEMENT: AFRICA INSTITUTE OF PROJECT MANAGEMENT**

**LINDELWE MAPURISA**

**An explorative study of the effects of dam rehabilitation on improving rural community livelihoods: A case of Malaliya: Binga District, Zimbabwe.**

Research carried out in partial fulfilment of the Diploma in Project Management

Date: 18 August 2019

Course Title: Project Management Research Project

Admission Number: AIPMS/227/2019

## Abstract

This study, “An explorative study of the effects of dam rehabilitation on improving rural community livelihoods: A case of Binga, Zimbabwe”, explores the experiences of the Malaliya community in rural Binga that has benefitted from infrastructure development projects, in this case Dam Rehabilitation. It seeks to assess whether dam rehabilitation has any effect on strengthening rural livelihoods, or there are other determining factors. This study utilised a qualitative research methodology, using face to face interviews with key informants randomly selected in Malaliya,Binga District. The key findings of the research regarding improved rural livelihoods due to dam rehabilitation revealed that, infrastructure development is one component critical to improving rural community livelihoods, but it is part of a larger complex system. Another finding was that educating the community and engaging tem as development partners rather than recipients was critical in ensuring that development projects were sustainable and “owned” by the community. This research was a positive experience in revealing the importance of not “dumping” infrastructure development projects. Development organisations should seek to partner with the community in challenging their mind-set about development projects, and helping them own and drive their development agenda. A key recommendation from this research is that all development projects must have a community education component and development interventions should be viewed holistically.

## Chapter 1: Introduction

* 1. **Overview:**

This project seeks to show the impact that dam rehabilitation projects have on rural community livelihoods in this case Malaliya in Binga District. The research will show how development infrastructure should not be viewed as the be all and end all of development, but rather as part of a structure of various components, political, social, and economic.

**1.2. Background information**

Binga District in Zimbabwe, has since independence in 1980, been a development relegated area. This is mainly due to political marginalization and unequal wealth distribution, consequently the district is very polarized. Binga district falls under the natural region IV and V (drylands), and is characterized by erratic rainfall patterns and has an annual mean rainfall of between 450mm-630 mm. The rains are inadequate to provide the necessary environment needed for agro-based livelihoods. Despite these low rainfall patterns, populations in this region are dependent on the rain for their agricultural production. Consequently, the region is perennially prone to droughts and as such the livelihoods of the people are challenged. More so, the region is popular for livestock production, a key source of livelihoods. However, due to erratic rains and the unabated acute shortages of water, livestock production has drastically declined due to chronic droughts and other water shortage related challenges.

Pre-independence infrastructure has not been maintained and has been in a state of degeneration, dams included. It is against this background that donor agencies have embarked on dam rehabilitation projects in order to strengthen rural livelihoods and improve the livelihoods of Binga rural communities by ensuring water security. As the adage goes, “water is life”, it is anticipated that water security will bring a new lease of life to these rural communities of Malaliya Binga District.

**1.3 Problem Statement:**

Malaliya area in Pashu Ward, Binga will be investigated for the purpose of this research. Malaliya dam is an earth dam with a holding capacity of 74000m3 and services an estimated population of about 3 263. Malaliya dam was successfully rehabilitated and prior to its rehabilitation, the dam breached three times. It was anticipated that the completion of the dam will eradicate most of the socio-political and economic problems in Malaliya. However the singular act of dam rehabilitation has not brought about an overnight solution to decades old issues in this area. Therefore this research seeks to uncover the critical key components to improving rural livelihoods apart from “dumping infrastructure”. A lot of funds are put up by donors for these capital intensive projects, and it would be a waste to see them become “white elephants”. It is anticipated that these findings will inform donor and development agencies going forward on how to improve rural livelihoods.

**4.4 Research Objectives**:

* To assess the impact dam rehabilitation has on rural livelihoods, in this case Malaliya in Binga District
* To determine other elements requisite for improving rural livelihoods
* To examine the relevance and appropriateness of the intervention to the critical constraints to livelihood recovery and development
* To assess project quality and effectiveness towards achieving intended objectives and suggestions to improve delivery
* To inquire whether the dam rehabilitation interventions are reaching the most vulnerable demographic groups
* To inquire the degree to which project interventions are coordinated with local government and humanitarian partners for the purposes of sustainability and longevity
* To draw lessons and provide recommendations on improving the effectiveness of the intervention in improving rural community livelihoods.
  1. **Research Questions**:

1. Does dam rehabilitation have any impact on improving rural livelihoods, in this case Malaliya in Binga District?
2. How can development agencies ensure projects create sustainable rural livelihoods?
   1. **Research hypotheses:**

The hypothesis for the purpose of this research is that dam rehabilitation has no impact on improving rural livelihoods.

* 1. **Justification of the study:**

Binga is a historically marginalized province, both politically and economically. Poor service delivery and marketing infrastructure limit both the viability of existing livelihood activities and the potential to pursue alternative options. Binga District is among the least developed districts in the country. High HIV/AIDS prevalence and lower education levels further undermine development in the region. This has been further eroded by the economic down turn and accompanying political instability over the last decade. Productive capacity and service delivery declined precipitously over this period. Modest recovery prospects have become evident since the establishment of the Government of National Unity in 2008 between the main political parties, Zimbabwe African National Union- Patriotic Front (ZANU-PF) and the Movement for Democratic Change (MDC). Macro-economic indicators show an improving economic outlook, productivity gains and an overall reduction of estimates of the food insecure population.

In Binga, Malaliya, existing dams are dilapidated from years of neglect and overuse. Dam rehabilitation is relevant and appropriate because it addresses the community’s primary identified community needs and builds on existing community development plans. Malaliya dam in Binga for example, identified the rehabilitation of the dam and spillway structure as the foremost development priority for the community. Dam rehabilitation interventions are aimed at increasing water holding capacity and reducing siltation as well improving annual water availability.

The critical issue is to address the question whether this singular action of dam rehabilitation improves rural livelihoods. The findings of this research will inform development practitioners on some best practices in sustainable livelihoods programming.

* 1. **Rationale**:

This research is critical in shaping donor and development partners’ attitude towards implementing sustainable rural livelihoods. It is anticipated that this will eliminate “donor dumping” of projects and help create consultative processes to address community “real” and not “perceived” needs.

**4.7 Scope and Limitation**

This study was conducted in one section of Binga where a dam rehabilitation project was carried out, and should be taken as contextual and applicable to the specific area of study. Quantitative data is also limited as the study relied on a small community sample affecting representativeness. Another limitation is that the study was done over a week and it is a well-known fact that livelihood projects are best studied over a period of years. There is not enough academic reference data on this particular area of Binga to establish emerging patterns because of the isolation and remote nature of the geographic area.

**5. CHAPTER TWO: Literature Review**

Primary literature for this study is from Google scholar, rural district development plans as well as the following scholars;

Pandey, P. Devendra, (2008). Rural Project Management. New Delhi: New Age International (P) Limited Publishers who spells out the complexities of rural development. According to Pandey, P Devendra, good project design involves undertaking the needs analysis with the stakeholders to address “real” needs. The target group for the planned intervention should be identified and the background to the problem stated. In addition, the project team should explicitly state project goals and objectives and the project process to the community so they understand what is happening and is expected of them.

Mochal, T et al (2011) Lessons in Project Management, 2nd Edition, New York: Apress (117), state that involving stakeholders through regular communication,”…helps to manage expectations”. In addition it helps the project assess its performance realistically and opens lines of trust and participation which creates a sense of project ownership and its eventual outcome.

Phillips, Jack J. et al (2012). Project Management ROI; A step by step guide for measuring the impact and ROI for Projects. New Jersey: John Wiley and Sons Inc., states partnering with key stakeholders and engaging them meaningfully can go a long way towards securing buy-in and support of the project. Political factors are other determinants as project team needs to be apolitical and only push the development agenda and be wary of being used as pawns or to settle scores. Transparency is important to gain trust of the stakeholders.

**6. CHAPTER 3: Methodology**

This research was conducted by the use of quantitative and qualitative research and getting information from face to face interviews from focal persons in the community of Malaliya, Binga. Field work was carried out between 22 and 26 July 2019. Interviews with key community informants inclusive of dam committee members and project beneficiaries formed a key part of the exercise.

**6.1 Philosophical paradigm:**

The study used a quantitative approach and according to Phillips, Jack J. et al (2012). Project Management ROI; A step by step guide for measuring the impact and ROI for Projects. New Jersey: John Wiley and Sons Inc., (110), “…surveys and questionnaires are often used because of their cost effectiveness and convenience”. He further states that, “…in reality, a quantitative value can be assigned to or developed for any intangible. If it exists it can be measured”.

As a result of these underlying theories, quantitative research was adopted for this study. Some qualitative research was also utilized for balance.

**6.2 Study Design**:

This study was conducted using face to face interviews in view of the low literacy levels in the community. If a written questionnaire had been given to the interviewees to complete, it would have been ineffective and unreliable. Pandey, P. Devendra, (2008), Rural Project Management. New Delhi: New Age International (P) Limited Publishers (63), states that “there are three main methods of enquiry, observation, survey and interviewing”. The interview questions were structured in a simplified manner for ease of communication.

**6.2.1 Study site**:

The research is conducted in Binga, Malaliya, Zimbabwe. This area is north of Zimbabwe, and is sparsely populated mainly due to a lack of economic infrastructure, job and academic opportunities as well as drought and political isolation and exclusion from mainstream development in the country.

**6.2.1 Research Approach:**

The research will utilize mixed approaches but lean more on quantitative research methods and face to face interviews and direct observation and use of rural district council development plans. Qualitative research will also be utilized for balance.

**6.2.2 Data needs types and sources**:

The sources of data for this project include primary data (interviewing community members) and direct observation. Other sources include secondary data, use of district council records and the agriculture department records. Other sources that were utilized were online sources, and literature sources.

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**6.2.3 Population, Sampling procedure and Data collection**:

Participants for this research were selected on the merit that they are community leaders. In order to balance the gender scale, three men and three women were selected for the purposes of this study. This was in order to manage the group by creating a small but representative sample of people with first-hand experience as beneficiaries of the dam rehabilitation program.

Initial contact was established with the participants and a date and interview time slots set up at a convenient time for the participants.

Research questions were drafted and interviews conducted one at a time with each participant. A questionnaire was used for interview purposes and the questions translated in the local language in order to bridge language barriers considering some of the participants are not conversant in English. The researcher is also fluent in the local language eliminating translation problems. These questions were also posed orally to ensure a common understanding.

On the appointed days, face to face interviews were conducted, and the purpose of the study explained to each participant. They were then asked to sign consent forms and demographic information. They were briefed on what each section of the interview would entail and asked to ask questions for clarification purposes. A school hall was generously offered by the school for the purposes of this exercise. Each interview ranged between 35 to 45 minutes in duration.

**6.2.4 Data Analysis**:

To ensure that no information was lost during the interview, notes were carefully made and taken down in the comments section during the interview. To inform data analysis, the researcher used scheme labels, categories and themes, as well as creating linkages for similar responses. This was then taken from paper to an excel spreadsheet for ease of use and interpretation.

**6.2.5 Data Presentation**:

Data will be presented in the discussion section of the research paper.

**7.0. Validity and Reliability**

In order to maintain the integrity of the study and the findings thereof, the researcher took several steps to ensure that data was credible and reliable. This included making notes as the interview progressed to endure that no information was left out. The interview notes were recorded on an iPad and saved accordingly. Data collected has saved and is available for use by any third party that may wish to undertake a similar study in the area.

**8.0** **Ethics**

According to Kliem, R (2012) Ethics and Project Management, Florida: Taylor and Francis Group(1), ethics are defined as, “…a systematic study of the norms and values that guide how humans should live their lives”. In order to protect the dignity and rights of the participants, several steps were taken to ensure that the study was ethical. This included ensuring that participants were aware that their information would be held in confidence (privacy) and they could opt to use pseudo names and not their real names to avoid whatever effects they felt may come up.

Consent to participate in the study was also sought and given in written form with the rights of the participant clearly stated and their option to withdraw at any given point of the study was made known to them. At the end of the interview, participants were debriefed by the interviewer. Clearance to conduct the study was received from the village head who briefed the participants on how the study will also benefit the community. The Village head also expressed his desire to hear of the findings of the study before they were made public and this was assured to him. The researcher also conduced herself in an ethical manner observing the dress and cultural norms of the village and explaining what the purpose of the iPad was for.

1. **Presentations of findings, Analysis and interpretation (chapter four)**

Listed below are the profiles of participants that were interviewed:-

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Age | Gender | Population Group | Level of Education | Number of Years Having lived in area |
| Participant A | 30 | Male | Black | Secondary level | 30 |
| Participant B | 26 | Female | Black | Secondary level | 26 |
| Participant C | 59 | Male | Black | Primary School | 59 |
| Participant D | 45 | Female | Black | High School | 45 |
| Participant E | 70 | Male | Black | None | 40 |
| Participant F | 38 | Female | Black | Teachers College | 20 |

Clearly the participants have resided long enough in the community to make objectively verifiable statements on the development initiatives in their community.

Listed below are the findings on the perceived impact of dam rehabilitation on strengthening livelihoods:-

One of the main challenges in Malaliya is the lack of water for livestock and human consumption. As a result of this challenge, the main dam in the community, Malaliya dam was rehabilitated in 2012 by the District Council in collaboration with some donors. This was done with the aim to improved water security and decreased drought proneness for this community, due to greater storage capacity of water sources that will last throughout the year (perennial).

A positive outcome of the project was that dam rehabilitation would lead to improved farming and livestock production due to greater access to water. For example, communities will get value for their livestock thus improving livelihood and reduce vulnerability. Another projected benefit of dam rehabilitation was of the project was improved dietary diversity of community members through establishment of nutritional gardens and fish farming.

A key factor to the project was to ensure women engaged in productive work by reducing their time as they will have more time to engage in other local economic livelihoods as they will have access to water and livelihoods support locally. Another benefit of the project was that school age children would not be disrupted from school attendance due to improved water access and livelihood support.

However in spite of the dam rehabilitation exercise, lives of the community have not improved significantly over time, hence the study to enquire the cause of this. The finding are that the exercise needed to address long held conflicts in the community as it is polarized and has a lot of infighting along tribal and political lines. Perhaps introducing a training program on conflict resolution would have assisted in unifying the community and creating a sense of ownership around the dam. The dam breached in several areas and the community did not bother to report or fix it as interview participant, “C”, felt that it did not “belong” to them, but rather another political faction.

One of the participants, “D”, stated that they preferred walking long distances in spite of the fact that they now had a dam as it gave them “relaxing and catch up time”, away from the day to day demands of household needs. Having a water source close by was seen as ‘cutting off” this networking session. In future, gender considerations should be made to include views of women and alternatively help them to identify other projects that they could use to not only network but also generate income. This will create less resentment for projects and they will be viewed as “complementary” to the existing social structures. Community involvement is critical in project design and implementation. According to Mochal, T et al (2011), Lessons in Project Management, 2nd Edition, New York: Apress, 209. “People don’t always understand what is expected of them when they are left without proper guidance”

Training in watershed management and dam and borehole maintenance, gender and HIV/AIDS mainstreaming promote community ownership and sustainability of project infrastructure. These issues should be addressed with every major infrastructure development as they are cross cutting issues. With the dam rehabilitation, a need for sanitation and hygiene education was pivotal to mitigate the risk of water and sanitation concerns. Participant, “B’, felt that toilets for safe waste disposal should have complemented the dam rehabilitation as people had now resorted to disposing human waste in the dam rendering the water a potential hazard.

Dam rehabilitation does not necessarily provide households with access to safe water for drinking. This is because the same open water source (namely the dam), was used both for human and livestock consumption. A parallel closed clean water system should have been implemented to eliminate the risk of the human population drinking contaminated water for example through borehole drilling.

**10.0 Discussions (Chapter five)**

This study has progressively shown the impact that dam rehabilitation projects have on rural community livelihoods in this case Binga District. The findings will show that development infrastructure should not be viewed as the be all and end all of development, but rather as part of a structure of various components, political, social, and economic. They should be mandatorily accompanied by a comprehensive education drive for the community on infrastructure management, conflict resolution, value addition and linkages with rural district services.

**10.1 Limitations of the study**

The limitations in this study include the small sample size in relation to the community population, limiting the representativeness of the study. Another limitation to this study was not being able to stay in the study area for a long period of time to make solid observations that may have come up once the community got to know the researcher better over time.

Data analysis was a subjective process and relied entirely on the interpretation of the researcher.

**10.1 Limitations of the study**

Some hiccups encountered during the study include the difficulty in accessing the area of study as it is a remote area and some places can only be accessed by foot, with wild animals posing a danger since a national park borders the area. Some of the other challenges include the expectation for financial remuneration by participants. The researcher also faced challenges explaining why certain people were selected for the study and others were not.

**10.2 Recommendations**

* Further research on the impact of dam rehabilitation on improving rural livelihoods should be carried out over time
* Community recommendations should be implemented in the next phase of infrastructure development in this community as they have indigenous knowledge systems and solutions to their own challenges
* Development practitioners should empower people and not just “dump” projects

**10.3 Conclusions**

Dam rehabilitation is a commendable exercise but its benefits and values are taken away when it is not accompanied by community project management, asset management and water and sanitation hygiene training. Underlying community conflicts should be addressed through conflict resolution management so that everyone works together for good for one common cause.

**10.0 References**

Mochal, T et al (2011) Lessons in Project Management, 2nd Edition, New York: Apress

Pandey, P. Devendra, (2008). Rural Project Management. New Delhi: New Age International (P) Limited Publishers

Kliem, R (2012) Ethics and Project Management, Florida: Taylor and Francis Group

Lawson Erik and Gray F Clifford (2011), Project Management, The Managerial Process, 7th Edition, New York: McGraw-Hill Education

Phillips, Jack J. et al (2012). Project Management ROI; A step by step guide for measuring the impact and ROI for Projects. New Jersey: John Wiley and Sons Inc.,

Binga Rural District Council Ten year Development Plans

Binga Department of Agriculture

Zimbabwe Census Office

**Appendixes**

Below is the structure of the interview questions posed before the study participants:-

1. **Interview questions:**

**Appropriateness and relevance**

* Has the assistance provided by the dam rehabilitation exercise met the needs of the population?
* Which parts of the assistance have been the most appropriate and why? Which were least appropriate and why?
* To what extent has the affected community been involved in the design or implementation of the assistance programme?
* How are beneficiaries’ needs now changing?
* Have protection concerns been adequately considered in the design of assistance?
* What, if any, changes do we need to make to the programme to make it more appropriate and relevant?

**Effectiveness**

* Are the dam rehabilitation interventions broadly on course to achieve their purpose on livelihood strengthening?
* Which activities are the most effective or least effective and why?
* What are the biggest obstacles to the achievement of the purpose of the intervention?
* What, if any, changes could we make to the programme to make it more effective?

**Connectedness and sustainability**

* What types of longer-term development issues are most affected by the response and how?
* How has the response affected longer-term coping mechanisms?
* What environmental impact has the response had?
* What, if any, longer-term impacts has the dam rehabilitation program had?
* What, if any, changes could have made the programme a better fit with longer-term needs?

**Coverage**

* Which group has benefited most from dam rehabilitation, how and why?
* How has assistance been allocated geographically?
* Has the emergency response affected men and women, poor and non-poor differently?
* Has our programme considered the differing needs of men and women, children, adults, the elderly, the able and the disabled, the comfortable and the very poor?
* What, if any, changes could have been made to the programme to improve the coverage of assistance?

**Interview Initiation:-**

1. (**Introduction**) Good afternoon, my name is Lindelwe and I am a Project Management Student at AIPM, please tell me a bit about yourself and role in the community
2. (**Intent**) I would like to ask you some questions about your experiences and opinions the dam rehabilitation exercise at Malaliya near the secondary school.
3. (**Motivation**) I hope to utilise this information to share with other development practitioners on the fundamentals of infrastructure development projects
4. (**Time Line)** The interview will take about 45 minutes of your time, are you available for the duration of this interview

**Interview termination:-**

After the participant has been interviewed

“Well, it has been a pleasure finding out more information from you. I would like to take a few minutes to summarise our chat and get your views on it.

After summary participant thanked and asked if they have further views or concerns or questions.