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An Investigation on The Application of the Participatory Rural Appraisal Approach in Determining Farmers' Needs of Winterveldt Community, Tshwane Municipality, South Africa.

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Abstract

Purpose of the study was to investigate the application and outcomes of using participatory rural appraisal (PRA) in assessing farmer's needs. The study, which was conducted in Northwest region of Pretoria in the Gauteng Province, revealed that participatory rural appraisal methods allow facilitators an opportunity to lend relevant support to farmers, in that during the implementation process, facilitators learn about the needs of farmers and therefore the requirements needed to fulfil those needs. The results indicated that while current agricultural programmes may reduce the problems encountered by farmers, challenges remain. It was further observed that, although the methods may be easy to implement, improper facilitation skills of the facilitators may affect the quality of the captured data.

Strengths and weaknesses of methods in gathering farmer's needs were studied. The challenges and practicality of applying each method were explored. The effectiveness of the methods to gather reliable data was also explored.

Keywords: Participatory Rural Appraisal (PRA), Rapid Rural Appraisal (RRA), Participation.

Introduction

The Participatory Rural Appraisal approach (PRA) is a specific form of Rapid Rural Appraisal (RRA) that focuses on learning (White & Taket, 1997:523). It evolved from approaches such as RRA which were argued to be centralised and less focused on the needs of local communities (Chambers, 1994:953). The RRA did not emphasise the participatory involvement of the intended subject population thus a top down approach was used. In

support of Chambers (1994:953), Mohd *et al.* (2012:15) explained that RRA caters for the needs of developmental workers and agencies. To that effect, the emphasis is placed more on the efficient use of time and the achievement of objectives. However, PRA emphasises the involvement of community members in the appraisal of their needs (Bhandari, 2003:9).

It is for that reason that participatory involvement of farmers became the main motivation behind the development of PRA, which ensures that various stakeholders become involved in the developmental programmes for people to work together to plan and execute the programmes. PRA is thus termed an interactive approach (Mohd *et al.*, 2012:16). The PRA approach facilitates a systematic gathering of information as well as the analysis process (Alam, Thompson & Ihsan, 2012:27). As a result, the PRA approach requires a collection of people who share common interests. There should be action towards the pursuit of the interest and voluntary participation.

Participatory Rural Appraisal emerged in response to the need to empower local communities and the dissatisfaction of the transfer of technology approaches as well as the irrelevance of the transferred knowledge (Amartya & Loader, 1999:75). PRA therefore serves to eliminate the potential risk of bias and ensures that the results are reliable (Leurs, 1997:291). However, it is documented that the reliability of results can be achieved if the researcher embraces the principles of PRA, for example, participation, flexibility, teamwork, focused learning and triangulation (Mitlin & Thompson, 1995:234). Furthermore, PRA methods such as semi structured interviews, seasonal calendars, Venn diagrams, ranking, transect walks, observation etc. are used during the cross-checking of data (Bhandari, 2003:12).

Participatory Rural Appraisal is not only about participation, although the term participation is used as the main guiding principle. Participatory Rural Appraisal is described by Chambers (1994:953), as a learning process. It gives participants the opportunity to learn about their environment and for the researcher to change their perception and attitudes towards community development. Moreover, Chambers (1994:954) further argued that the PRA breeds opportunity to a collective research; hence local diversity is embraced. The concept of local diversity is important when gathering data using PRA. Thus, a large scale of demographics needs to be considered. Participatory Rural Appraisal has been described by Mohd *et al.* (2012:17) as the enhancement of linkages between communities, agencies and institutions involved in rural development.

Pretty and Chambers (1994:32), reported that there are few documented evaluations of the PRA process, its activities and its impact as an extension method in agricultural development. Despite the scarcity of research in PRA, reports of its practical use and evaluation indicate a great potential for using PRA to improve extension and move closer to the development of paradigms and strategies that are currently much needed. Despite the growing international interest in PRA, there has been remarkably little research and writing on PRA in South Africa. The reason behind this is that, given the history of the country, communities are often reluctant to accept the presence of researchers and frequently question the legitimacy and relevance of their research (Binns *et al.*, 1997:5).

This paper discusses the results of a study to assess the outcomes of using participatory rural appraisal in determining farmer's needs. The study was conducted in 2018, had three main objectives: Identify the strengths and weaknesses of using the PRA framework in guiding the process of determining the needs of farmers. Investigate the strengths and weaknesses of PRA tools in gathering data. Determine the reliability and validity of the PRA outcomes.

Materials and Methods

The methods that were employed include: semi structured interviews, focus group discussions, time lines, ranking, community mapping, Venn diagrams and seasonal calendars, which targeted the community members of Winterveldt who are involved in farming and who have benefited from agricultural extension visits. These tools were implemented at different stages of the research and for different purposes (Saunders & Lewis, 2012:151).

The research questions included

What are the strengths and weaknesses of using PRA frame work in guiding the process of determining farmer's needs?

What are the strengths and weaknesses of PRA tools in gathering data??

How reliable and valid are the outcomes sought through the use of PRA?

The data collected through SSI and focus group discussions was then collated on a spreadsheet and synthesized using codes and categories; participant's identification was protected using codes which the researcher developed.

Problem Statement

Over the years there has been evidence that PRA can be used to generate problem based data from farmers and communities. Whilst there is evidence that the use of PRA indicates a great potential in developing extension. However, there have been few reports on evaluation of the approach about its outcomes as well as the strengths and weaknesses of the approach. Little regard has been given to the effects of such problems as group and decision on the outcomes of the approach.

Results

Obtaining Background Information on Farmers Using SSI

The researcher observed that SSIs allowed participants to speak openly about their issues in the absence of their colleagues (Opdenakker, 2006:sa).

The results indicated that the SSI tool was fit for purpose as it was able to capture detailed information on the current needs of farmers. Hence, the researcher observed that one of the strengths of this tool is its capacity to bring about collective data (Chambers, 1994:954). To evaluate the reliability and validity of the information, a comparison of the data gathered using different methods was drawn. The responses further show SSIs to be a valid method of gathering information. More so, there was similarity in the information obtained from the co-interviewer and the main interview (the researcher) which means that the manipulation of data by the researcher was minimised. This strongly indicates that the tool minimises the chances of bias by facilitators, as Clifford *et al.* (2003:146) asserted. The responses of the participants show that SSIs can be used not only as a data gathering tool, but can be used by facilitators to perform an analysis of how farmers perceive their problems in order to offer relevant advisory services to them (Freudenberg, S.a: 74). The variety of issues raised assisted in studying the reality context of the farmers compared with the generalised idea that extension in most cases communicates the needs of farmers (Duveskog, 2006:6). On the one hand, the method does not only extract detailed information on the issues that the farmers experience, but it enables facilitators to gain an in-depth understanding and knowledge behind their farming motives. The facilitators are afforded an opportunity to analyse the efficiency of their programmes. Furthermore, the farmers are able to review their farming history and discover why certain problems persist.

The observed weaknesses of the method were noted during the implementation process, where constant modification of the questions was required if posed to a diverse group of farmers.

Obtaining in-depth Information using Focus Group Discussion

The SSI analysis revealed that the majority of the farmers practised farming because they were motivated by the government and only a few had followed their passion to pursue farming. The analysis was then disputed during the focus group discussion, where farmers justified their farming motivation by stating that those farmers who practised farming because they were motivated by the government were the ones who lacked commitment to an extent that they even discontinued with the research study.

On the other hand, the SSI analysis revealed that the stated reason that farmers did not own their farms was due to the lack of interest in the industry by the youth. Even so, others commented that they would appreciate owning their own farms. Also, the delay in their sustainability was a major discouragement. During the focus group discussions, these comments were further verified and accepted.

Based on the researcher's observations of the responses given during the focus group discussion, it is therefore clear that although the SSI is a good tool for capturing data on farmers, the same data needs to be cross checked as it is evident that during analysis, misconceptions by the researchers could arise, which then need to be clarified. The strength of the focus group tool then lies in its ability to clarify any misconceptions identified during the SSIs. The observation validates the assertions made by Hennink (2014:2) that a focus group discussion can generate approximately 70 percent (%) of the issues through as a series of in depth interviews. This is so because new issues arise during the implementation of focus group discussions which give the study more substance and value. More so, ideas of the participants are clearer as they are afforded the opportunity to justify and clarify their responses

The observations indicate that the tool cannot be used only as a clarifying tool, but it was also reliable in assisting farmers towards reaching a common understanding and consensus on various issues. Fruitful discussions and debates were held among the participants. Although, it is important to note that the session is not open to debates and sorting out disputes (Opdenakker, 2006:sa). The tool still indicated that other debates that may arise during the discussions are advantageous as participants are afforded an opportunity to understand and relate to the views of others, thus leading to a particular consensus being achieved. Another key positive attribute was revealed, namely that the tool can be used to evaluate the cause and effect relationship of the problems experienced by the farmers.

The constant interaction during the discussions among the farmers increased the level of awareness of the depth of their problems. The study confirmed a point made by Robinson (2002:48) that the PRA tools are utilised to empower participants and encourage them to become involved in the appraisal of their own needs. The weaknesses of the approach were that there was dominance of strong-willed members of the group tended to dominate the less opinionated ones. This further emphasises the importance of a well-trained facilitator to deal with such group conflicts that may arise during the implementation of a focused group discussion. Furthermore, it was challenging to capture all the issues discussed by a single facilitator

Community Map

The purpose of using a community map was to understand the community and evaluate the methodology in its capacity to capture the details of the community as well as its practicality of its application. Narayanasmy (2009:44). Hence, it was important that the researcher allowed the participants to take control and in turn be an observer in the process, only giving guidance where necessary. This action was deemed acceptable by Bembridge (1991:96), when stating that the facilitators should not be passive during the process of a group discussion, but they should be careful not to dominate the process.

The map revealed the land use as well as the community setting. These resources were located either within the community or outside the community. The task was embraced with much enthusiasm and understanding.

The participants seemed to agree with each other in most of the decisions. However, there were instances where they showed differences, for example, they had differences when considering where certain resources were located and in what sense certain other resources were important to them and critical to their sustainability. Even so, the participants managed to resolve their issues. This was achieved without the intervention of the researcher. This observation clearly indicates that a community map is a positive tool that could be used by researchers to holistically understand how the community members value and perceive their community, assess the quality of natural and physical assets of the community in relation to their problems and to summarise the community with limited time without necessarily having to conduct field walks. Moreover, this has shown great potential to assist farmers in the process of analysing their situations. This means that the use of community mapping has multiple advantages to both facilitators and participants.

The observation confirms the words of Cavestro (2003:18) that community mapping is not only purposively used to highlight the resource base of the community, but it may also be used to raise awareness among the community members regarding issues that they did not know about concerning their community. The other strength of the tool was that it enhanced the interactions among the community members. As documented by Mukherjee (1993:32-33), the basic principle of PRA is to gain quality participation rather than focusing on the end product. Thus, the community map was deemed fit for purpose. The validity of the ideas presented in the community mapping was deemed appropriate, because the information stemmed from various sources and was further verified through the discussions that emerged during the process. Disputes as well as agreement arose which led to fruitful and successful discussions. Such discussions were used to crosscheck the truthfulness of the data gathered, because the chance of bias, as may be perceived by the researcher in presenting the results, was reduced.

The researcher further identified one of the weaknesses of the method to be that some information that would be beneficial to facilitators in obtaining an in-depth understanding about the community may be left omitted from the map drawn by the participants without proper direction from the facilitator. Qualitative methods encourage a certain level of unobtrusive research when studying the reality of participants (Van Averbek, 2014:2). However, such concerns maybe be minimised through the principle of triangulation (Bhandari, 2003:10). More so, it was challenging to merge the ideas of the participants if they do not stem from the same region within a particular community. This was achieved through the intervention of the facilitator.

Timeline

A time line was used to identify problems of the farmers in detail the capacity of the tool was tested in cross-checking and validation of information as well as its effectiveness to practically gather information. Jayanthi *et al.* (2007:29), noted that one advantage of a timeline is that it raises a certain level of awareness among the participants in regards to their problems and allows the community to study different options and solutions open to them to improve their livelihoods. The focus of the researcher was to test such assertions by observing the process of constructing the timeline. The degree of interaction among the participants and the quality of their participation was also evaluated during the process.

One of the observed strengths of the tool was that it proved to be useful in generating adequate and relevant data used to assess the development in the Winterveldt community. The researcher observed that the exercise allowed discussion and disagreement among the farmers as they realised that even though their problems were similar, they did not occur at the same time. The tool was advantageous in its capacity to engage the participants. The manner in which the participants interacted with one another during the exercise allowed constructive decision making.

The content of the discussions held among the farmers further indicated the importance of cross checking data in order to validate it. Failure to cross check data invalidates the information gathered. That is why the researcher tested various methods to ensure that the results that are presented are valid. The timeline showed that a consensus can be achieved during the implementation of other exercises. This tool then demonstrated that is a necessary tool in conducting in-depth analyses of the problems encountered by the farmers as mentioned by (Townesley, 1996:106). Again, a point made by Jayanthi *et al.* (2007:29), that this exercise allows participants to be more aware of their problems was confirmed to be correct, as the information presented gives them a clear perspective regarding their problems.

The unresolved disagreements among the participants during the implementation process may lead to improper presentation of results. Thus, strong facilitation in this regard is necessary. As a result, it was important that the researcher intervened in some of the disagreements. This enabled the researcher to understand the information provided by farmers so as to analyse it for the purpose of the study. The analysis performed by Bessette (2004:14), that facilitators should be well prepared and trained for the application of PRA, was verified.

Venn Diagram

A Venn diagram was used to identify the relationship between institutions and the importance of different institutions from which farmers benefit (refer to Figure 2.1). The participants were requested to illustrate and name the various institutions from within and outside the community, which were crucial to their sustainability. The use of the Venn diagram is supported by (Townesley, 1996:97). He explained that it represents a community analysis of its space; it may be used as a different method to map the community. The researcher focused on analysing and evaluating the feedback of the farmers in terms of the method, the effectiveness of producing valid results when using this method, and the feasibility of applying the method within communities.

The positive observation was that the tool encouraged the participants to share different ideas on how they perceived their community, and common priorities were shared among the participants. However, a weakness was observed as the participants required constant

monitoring as their concentration was often diverted to other issues not concerning the research. This reveals that not all discussions that may arise during the process are necessarily related to the research question at hand. Hence, the researcher noted a skills gap to deal with and manage such challenges within group discussions. Another positive attribute noted was the relevance of the tool to identify the relationship of various institutions that exist in the Winterveldt community. Furthermore, it revealed the perceptions of farmers towards their community which assisted the researcher to understand why the farmers make certain decisions and how they relate to different institutions.

The tool also revealed that other institutions may be perceived to be important by individuals outside a certain community, which may not necessarily indicate the reality of the community members. This demonstrated that it is important to identify with the community and establish good rapport with them in order to understand the motives behind their actions. Analytically, the tool demonstrated that it is a good tool as it revealed the capability to broaden facilitator's understanding of the community. Such a tool could be beneficial in terms of summarising various aspects of the community for outsiders who are interested in the community. Again, this tool allowed the participants to appreciate the offerings of various institutions in an attempt to minimise their problems. Hence, the effectiveness of the tool to gather information can be deemed to be acceptable. The practical application of the tool was a success. Such success can be related to the exercise being carried out with a manageable group in which similar objectives were shared.

Ranking Exercise

Ranking was used to rank the problems of the farmers the role of the researcher during the process was to observe and analyse the information. The purpose of using the tool was to test the method in assisting farmers to prioritise their issues and to assist the researcher to identify which problems can be deemed most critical in preventing the farmers from being sustainable.

The tool yielded positive results as the researcher was enlightened during the process regarding the priority needs of the farmers as a group rather than individually. In addition, through a logical analysis of the information, the researcher was able to identify the problems that the farmers encounter and their causes in detail (Mobley, 1999:9). Therefore, the position in which the cause and effect of the said problems were evaluated can be deemed appropriate. It is however important to emphasise that the purpose for which the tool was used in the research was not necessarily to identify the cause and effect relationships, but that these were nonetheless revealed throughout the process.

Table 2.1: Ranking exercise: Winterveldt community's views on how their problems affect their sustainability scale (1-10)

Problems of farmers	Highest impact problem	Medium impact problem	In-between impact problem	Low impact problem
Water scarcity	10			
Security (fencing)	9			
Lack of marketing skills		6		
Lack of capital	10			
Poor roads			4	
Lack of farming implements		7		
Storage			5	
Lack of soil information	10			
Transportation		6		

Source: own study

During the process, the informants were requested to rank their problems from the highest priority problem to the one they perceive to be the least important, or rather, one that poses the least impact on their sustainability. The participants used a scale of (1-10), (1), indicating the lowest impact, (4-5) indicating in-between (meaning irrespective of these problems, production still continued) and (10), the highest impact on their problems.

Some farmers added that the exercise was beneficial; stating that it gave them a new perspective on their problems and that further planning of solutions was going to be relatively easy going forward. This indicated a positive feedback from the participants as the exercise was not rejected. During the process, although the researcher observed that some participants were reluctant to voice their views as they were over powered by others. This further confirmed a concern raised by Gaussets (2004:4) that conducting any form of a ranking exercise with a group of informants could be highly problematic, as subtle differences are hidden by the fact that the powerless informants will give way to the view of the powerful ones so that a certain level of consensus can be reached. As a result, it was imperative that the researcher created an environment which encouraged all the participants to be active. A favourable environment was created by allowing the participants to exchange roles in writing the ideas.

During the evaluation of the method, it emerged that the issues that the participants had raised and ranked during the ranking were similar to those raised during the SSIs that were conducted with the farmers. The cross checking of data for validity was thus achieved. It could be confirmed that the results gathered using the SSIs were reliable. The other identified strength of the exercise was its capacity to assist with analysing the problems of the farmers. Additionally, it was demonstrated that the exercise could be useful in bringing unity to both

the marginalised and the individuals who are considered to possess greater power in the community. This was identified during the implementation as the tool was easily employed with both literate and illiterate farmers.

Even so, some of the noted disadvantages of the exercise were that because it was conducted with individuals with different traits, it was often difficult for them to allocate numerical values to emphasise the impact of certain problems. More so, they found it challenging to rank their problems in terms of numerical values, the participants needed further convincing and motivation to engage in the exercise.

Seasonal Calendar

A seasonal calendar was subsequently used to analyse the problems which the farmers had raised both the timeline and the seasonal calendar afforded the researcher an opportunity to study the various changes that each community experiences. The participants were requested to draw a seasonal calendar in which they were requested to identify and quantify various changes that occurred in their community relating to the agriculture. The changes were compared using the different seasons and grouped using the different months of the year. The process did not pose any challenges regarding the ability of the participants to understand the exercise and what was expected of them. A challenge was experienced, however, during the execution as the animal farmers along with the crop farmers had to apply their problem analysis on one calendar. There were conjunction of ideas and disputes. This challenge confirmed an assertion made by Mohd *et al.* (2012:16); Khalid (2020), which during the implementation of PRA tools, skilled and equipped facilitators must be used so as to manage and resolve such issues. This tool was therefore relevant in confirming the existing literature and exploring such challenges.

Even though the criteria of comparing the various community changes was explained to participants, for example it was explained that per issue participants should indicated the extent and effect of the issue by putting quantity to it. There were a few cases where participants agreed upon themselves that using the size of the symbol to indicate the extent of the issue was more preferable and easier. This was done with such issues as security (theft), extension visits, pest infestation and minimum information on soil. For example, the size of the symbol would differ according to seasons where the issues occurred most and seasons where the issues/problems occurred less. Regardless of the differences in quantifying strategies, the content was not lost and it was easy for the researcher to analyse the data. During the analysis, the researcher further noted that not only did the seasonal calendar reveal the agricultural variations but it also gave insight into the impact of the variations of the sustainability of the farmers. This further indicates that the advantage of using this tool is its capability to understand and simplify the complex nature of problems experienced by the farmers. As a result, various factors were identified as contributors to the farmer's problems to the extent that the tool can be deemed appropriate in analysing their problems. Thus, the objective of gathering information regarding the needs of the farmers using this method was achieved

Discussion and Conclusion

SEMI Structured Interview

SSI has potential to gather data and provide an in-depth understating of needs and history of the farmers and Effective in identifying the needs of the farmers irrespective of the availability of secondary data; the data sought using SSIs is not invalidated by the absence of secondary

data. Although the researcher was unable to use secondary data, it proved not to be a limitation as SSIs were capable of obtaining the background information of the farmers.

Winterveldt community members were able to relate and identify with the questions that were asked, which resulted in the participants gaining a sense of ownership of the research. The method assisted Community members to reflect openly on their problems and background of farming. Thus, their ability to analyse their problems improved. Field experience further suggests that to achieve success from SSIs, the interviews need to be scheduled on dates that favour the participants and the interviews need to be flexible in order to allow the participant's sufficient time to express their views.

The researcher noted that a successful implementation of the exercise results in an increased pool of ideas from the participants. More so, a further notification that designing the SSI questions to suit the participants without the necessary background information was challenging. Thus, it was important that the questions be modified to suit different individuals during the interviews. This forced the interviewer to exercise flexibility. The capacity of the researcher to be flexible and conduct successful interviews in complex situations was tested in this case.

Focus Group

The results of the research demonstrated the importance of crosschecking data with the participants as it increases the validity of the information collected. Focus group discussions can be used as a tool that is appropriate for the validation of data. The tool encourages interaction among the participants, meaning that even though different opinions may be raised where participants were not in agreement. Due to the interactions, participants are empowered as they have an opportunity to share a variety of ideas. The focus of participatory rural appraisal (PRA) is based on the quality rather than the end product of participation.

Field work shows that a focus group discussion tool requires appropriate guidance from the researcher, because key points that could give fruitful meaning to the research may have been missed during the SSIs. Focus group discussions in this regard serve to mitigate such problems. That is why a competent facilitator should be used.

Community Map

The research reveals the importance of active participation during the drawing of the map. This helps the researcher to gain a holistic understanding of the community in terms of their setting and resource base. Similar to the findings from the SSIs and focus group discussions, skilled facilitators must be used when conducting community mapping.

The reflected results suggest that there should be a certain level of flexibility in the process of drawing community maps and how this is facilitated to achieve optimum results. This increases the pool of ideas discussed as well as allowing maximum participation. Furthermore, the ability of the community mapping to engage participants suggests that the tool is participatory. However, the participants need constant monitoring as these discussions may not necessarily address the purpose of the research. The content that needs to be reflected in the map needs to be agreed upon by the participants. This is a challenge if the participants cannot find common ground. The results of community mapping suggest that, the variety of the ideas that may be reflected could be used to analyse and understand the community without necessarily having to use methods such as SSIs. The information gathered therefore forms a foundation on which focus groups may be developed whereby the

facilitator would seek information that clarifies specific information required to answer the research question.

Time line

A timeline is useful in generating adequate and relevant data that is used to analyse the problems faced by the farmers. This was demonstrated through the discussions that took place in the process of drawing the time line. The tool assisted farmers to further identify conditions that cause the occurrences of their problems, for example, one of the identified causes of the lack of productivity was the drastic change of weather in their area.

The timeline was not tested only as a method to analyse data, but it was also used to crosscheck the data that had been collected using the previously tested participatory methods. The results suggest that the tool is appropriate and new information which yields voluminous and meaningful data in the study may emerge throughout the process. The method was able to reveal the agricultural changes within the community, which had occurred prior to receiving extension services. This tool then served its purpose.

Venn Diagram

The exercise enhances the community member's level of understanding and awareness of the community as a whole. Evidently, community members are likely to lose focus and the content of the research may be lost along the way, therefore as with the community mapping, the researcher needs to guide the process. However, the intervention of the facilitator should not affect the presentation of the results. The Venn diagram is constructed in order to eliminate the risk of bias. Hence, it is important that facilitators trust that community members are able to conduct their own research (Bhandari, 2003:1).

The Venn diagram was successful in identifying the said institutions and it indicates that farmers are not poor resourced. The challenge can be related to how they build working relationships with these institutions as well as becoming familiar with the various channels that they can use to obtain the help they need.

Ranking Exercise

Ranking revealed a need for the intense training of facilitators who practice participatory methods. Challenges may be present when dealing with community members, because the communities are comprised with individuals who may share different goals and objectives. This challenge however poses no limitation when trained facilitators are used. The ranking as a tool is successful in analysing the problems of farmers and in understanding the problems that community members regard to be priority problems.

The tool has also demonstrated the capability and opportunity to be used as a tool that can assist advisory service providers in identifying the areas of intervention in various communities. The aim is that relevant advice is given to the communities with regards to handling their problems. Most of the projects rejected by community members did not necessarily reflect the needs of the communities.

Recommendations

Devotion needs to be made developmental institutions use participatory approaches to promote sustainable livelihoods. Furthermore, training for extension agents needs to be emphasized to train them on conducting participatory research. This is because certain level of flexibility needs to be employed for the research to present acceptable results. Methods

applied should be inclusive of all demographics, this is to bridge knowledge gaps during the research.

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