SPSBIC 2019

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2ND SCHOOL OF PHYSICAL SCIENCES BIENNIAL INTERNATIONAL CONFERENCE (SPSBIC 2019)

PROCEEDINGS

THEME:
SUSTAINABLE ENERGY IN CHANGING CLIMATE: THE ROLE OF SCIENCE AND TECHNOLOGY

FEDERAL UNIVERSITY OF TECHNOLOGY MINNA, NIGER STATE, NIGERIA

PREFACE

This is the second international Conference organized by the school of Physical Sciences of the Federal University of Technology, Minna Nigeria the school is relatively new and comprising of the Departments of Chemistry, Geography, Geology, Geophysics, Mathematics, Physics and Statistics. It was exercised from the former school of Natural and Applied Sciences on the 6th of November 2014.

The school of Physical Sciences 2nd Biennial International Conference is an interdisciplinary forum for the presentation of new ideas, recent developments and research findings in the field of Science and Technology. The Conference provides a platform to scholars, researchers in the academics and other establishments to meet, share and discuss on energy, climate change and sustainable energy use and development. Submissions were received both nationally and internationally and severally reviewed by our international program committee. All contributions are neither published elsewhere nor submitted for publication as asserted by contributor.

We wish to express our gratitude to the school for challenging us to organize the second international conference. Special thanks to the former Dean of the School Prof. A. S. Abubakar who initiated the conference and to the present Dean Prof. Jonathan Yisa for keying into it. The Vice Chancellor Prof. Abdullahi Bala have given immense support to the Conference, thank you sir. Our special appreciation to the keynote speakers for accepting our invitation to give a talk at the conference. Special thanks to all members of the organizing committee and sub-committees for their dedication, determination and sacrifice towards achieving a fruitful and successful conference.

Prof. Kasim Uthman Isah
The Local Organizing Committee Chairman

THEME OF THE CONFERENCE:

Sustainable Energy in Changing Climate: The Role of Science and Technology

SUB-THEMES OF THE CONFERENCE:

- Political, Economic and Technical Challenges in Energy Development;

- Sustainable Energy on Climate and Disaster resilience;

- Energy for Sustainable Development, Benefits and Challenges for Poverty Alleviation;

- Implication of Fossil Divestment and Green Bonds for Financial and Energy Market;

- Energy Use And Environmental Impact for Energy Sustainable Development ;

- Climate Change Through Sustainable and Innovative Energy Technological Development;

- Analysis on Scientific Research in Technology and Energy for Sustainable Development

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Prof. Daniel Ayuk Mbi Egbe

Prof. Daniel Ayuk Mbi Egbe received his BSc in Physics and Chemistry in 1991 from the then University of Yaoundé (now University of Yaoundé 1), Cameroon. In 1992, he moved to Germany where he obtained a MSc and PhD in Chemistry in 1995 and 1999, respectively, from the Friedrich-Schiller University of Jena. He completed his habilitation in Organic Chemistry at the same institution in 2006

Prof. Egbe is a member of Organic Electronics Association (OE-A), and a board member of the World University Service (WUS) in Germany. He is the initiator of the German-Cameroonian Coordination Office, initiator and International Coordinator of the African Network for Solar Energy (ANSOLE), initiator and chairperson of ANSOLE e.V., an institution legally representing ANSOLE, and initiator of the Cameroon Renewable Energy Network (CAMREN). He is also the initiator and coordinates the research platform BALEWARE (Bridging Africa, Latin America and Europe on Water and Renewable Energies Applications). He was part of the team engaged in developing research programs at the Pan African University Institute of Water and Energy Sciences (including Climate Change) (PAUWES) in Tlemcen, Algeria. In 2016 he was appointed the first Distinguished Brian O´Connell Visiting Fellow of the University of the Western Cape, South Africa. He is the director of the VolkswagenStiftung-sponsored Summer Schools on sustainable energetics and on water.

He is presently member of the Institute of Polymeric Materials and Testing (IPMT), Johannes Kepler University Linz, where he researches and lectures. He is a PhD supervisor and visiting lecturer at the African Centre of Excellence in Energy for Sustainable Development (ACE-ESD) of the University of Rwanda in Kigali.

Prof. Egbe's main research interest is the design of semiconducting materials for organic photovoltaics and other optoelectronic applications, has published more than 120 peer-reviewed articles, speaks 5 languages and is father of 4.

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Kazeem Ojoye

Kazeem OJOYE was born on 9 October 1967 in Ibadan, the capital city of Oyo State. He enrolled into the Technical University in Munich where he graduated with a bachelor's degree in Computer Engineering. He worked at several places in Germany Between 1990 to 1997.

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Currently, Kazeem Ojoye is the application manager in charge of ICT at Unicredit direct Services in Munchen, He is the financial secretary of Nigeria in Diaspora organization (NIDO0 in Germany, the principal consultant for multivate consulting, UK and Germany, consultant for renewable energy, Chairman, Youth Empowerment Enlightenment and Self Sustainability Initiative (YEESSI), Project Manager at Bruder-Hilfe among others.

He speaks English, Deutsch and French. He is happily married with children

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CHEMICAL SCIENCES

Comparative Study of Sustainability of Resettlement Scheme In Part of Niger State Nigeria

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Abstract

The Sustainability of resettlement has one underlying goal of reinstating affected inhabitants quickly into their old lives and if possible more improved and lasting situations. Muregi and Akare has suffered floods for decades; the three (3) most recent ones are in 2008, 2009 and 2012. This caused displacement of people from their usual dwelling places resulting into varying impacts on infrastructure, crops, health, education, environment as well as damage to property. It seems that the resettlement programme is affecting the environment negatively because it iseasily observed that deforestation, overgrazing of lands are problems in Nigeria particularly in the resettlement areas which recur from time to time. This paper examine the people's perception on the sustainability of this resettlement schemesin Niger State. The study is empirical in nature and intends to analysis the sustainability of resettlement. Structural questionnaires were used, data collected were subjected to statistical analysis. Findings shows that the scheme has benefited both the resettlers and host communities in Muregi as compared to Akare by providing access to basic infrastructure and social services such as roads, schools, health services, safe drinking water and market access to their products.

Key words: Sustainability, Resettlements and Scheme

Introduction

Sustainability is not only one of the principles of engagement in development planning process but also a challenge in most developing countries. In planning circles the notion of development is often equated to sustainable development, which is simply seen as development for the present without comprising that of the future generation (Bruntland, 2007). This notion has guided the development of projects worldwide including large dams and the resettlement of its affected people. In Nigeria for instance, issues of sustainability has become an important language among development practitioners and a critical ingredient in planning and designing of development projects.

The Sustainability of resettlement has one underlying goal of reinstating affected inhabitants quickly into their old lives (cultural, economic and physical aspects), and if possible more improved and lasting situations. Achieving this goal comes with implicit and explicit challenges that arise because of land acquisition, compensation and integrating resettles into their new home through community participation. In the process, housing, community

structures and systems, social networks, and social services can be disrupted (Raschid-Sally.et al, 2008).

Resettlement scheme may be defined as a planned project or programme involving the transfer of people most probably through selection and control from one region to another. When resettlement schemes are considered, governments in developing countries, in general, and in Africa, in particular, make decisions as to when, where and how reestablishment should take place.

Resettlement of people can either be forced or voluntary. Disasters, such as wars, floods and earthquakes, among others, are some of the reasons that could force Man to move out of an area that he is familiar with, to resettle in an entirely new area. Government acquisition of land for development projects is another cause. All over the world resettlement programs abound. Nigeria is no exception to these phenomena. Most programs involve Government decisions, which leave the affected people with very little room to manoeuvre (Ajibola, 2009).

Although resettlement is increasingly seen in development theory as an important livelihood strategy for poor people (Tan 2008), implementing state-sponsored resettlement schemes and bringing about livelihood change is a complex process. Experience in Nigeria, elsewhere in Africa, and the world over, show the fact that things can often go very wrong in resettlement operations unless managed with meticulous care (Abbute 2003; De Wet 2004). Any resettlement programme involving the movement of hundreds of thousands of people over large distances has many risks and dangers attached to it. Even if in principle it is a good idea to move people from a less fertile area to new productive areas, the question of how far in practice is a planned resettlement programme actually a good policy needs to be answered.

The study areashas suffered floods for decades; the three (3) most recent ones are in 2008, 2009 and 2012. This caused displacement of people from their usual dwelling places resulting into varying impacts on infrastructure, crops, health, education, environment as well as damage to property (NSEMA, Assessment of Floods Report, 2013). The general problem of the communities is the frequent flood disaster that occurs yearly and it has being a serious problem which claims a lot of lives and properties. A lot of money has being sunk in developing a resettlement schemes called New Bussa, New Gbajigbo, New Muregi and New Akare by providing infrastructure facilities, yet the community are not ready to move away from the disaster prone area. Some noticeable challenges of resettlement scheme are the cost required for implementation of full resettlement programme could exceed the financial capacity of the State or may be the planning process involved in the resettlement was not properly managed

and implemented. Some other outstanding problems that affect the resettlement are the absence of social infrastructure in the settlement sites. For example in the absence of schools, health facilities, motorable roads, communication networks, etc., could make the life of resettles burdensome. Problems associated with these and similar other factors could create a challenge not only on the target group but also on the country's economy, host communities and the natural environment.

Many scholars (such as Abiy 2004; Belay 2004:24; Hammond 2008) argue that though the resettlement programme is expected to be implemented voluntarily in consultation with the host community and careful preparation (FDRE 2003), in practice these principles are not appropriately implemented. For them, many resettlers were physically forced to move, and the planning and execution of the programme was hastily and poorly done without the consultation of the host community.

Though there are studies on resettlement planning and implementation, to what extent the resettlers developed assets (physical, social, financial, human and natural) and secured their livelihoods is not known. It seems that the resettlement programme is affecting the environment negatively because it is easily observed that deforestation, overgrazing of lands, etc. are problems in Nigeria particularly in the resettlement areas which recur from time to time. Therefore, this paper will examine the people's perception on the sustainability of this resettlement schemein Niger State.

Study area

The study area is located between longitude 4^0 20' E to 4^0 50' E and latitude $9^0$51' N to 10^0 57' N in northern Nigeria. The study area cut across Mokwa and Wushishi local government area in Niger State. It is located along River Niger and River Kaduna Confluence. Akare is located at about 7km from Wushishi town in Wushishi local government area of Niger state, on the south eastern direction. The area lies between latitude $9^0$54'N to $9^0$72'N and longitude 6^0 38'E to 6^0 51'E of the equator.

Resettlement: Concepts and Theories

Resettlement is a programme that many governments in developing countries have been implementing; however, with mixed results. Resettlement as a policy action or intervention strategy differs from one case to another depending on the objectives of the programme. Most resettlement programmes have the objectives, firstly of poverty reduction, mainly targeting the poor communities especially the landless and, secondly, regional

development targeting those with own resources to invest in agricultural activities. It is quite difficult to define resettlement without referring to other related terms that describe population movement such as migration, colonisation and transmigration. "Resettlement, colonisation, or transmigration all refer to the phenomenon of population redistribution, either planned or spontaneous" (Rahmato 2003:1). According to Rahmato, different countries give emphasis to different terms, for instance, 'transmigration' implying government sponsored programmes in Indonesia, 'colonisation' referring to occupation of uncultivated land in Latin America, and 'resettlement' seems to be the more appropriate expression in the Ethiopian context that implies moving people to new locations. For Rahmato, resettlement is the phenomenon of population redistribution either in a planned or spontaneous manner: relocating people in areas other than their own for the purpose of converting "transient populations- nomadic pastoralists, transhumant or shifting cultivators- to a new way of life, based on sedentary forms of agricultural production" (Rahmato 2003: 2). According to Abbute (2002:25), "resettlement involves the movement of communities from one environment to the other, and changes or modifies the physical and social environment in which settlers find themselves in and adapt to". Piguet and Dechassa (2004:134) also define resettlement as a "planned or spontaneous redistribution of phenomena of population". According to Woube (2005:19):

Resettlement is defined as the process by which individuals or a group of people leave spontaneously or un-spontaneously their original settlement sites to resettle in new areas where they can begin new trends of life by adapting themselves to the biophysical, social and administrative systems of the new environment.

All of the above definitions emphasise that in the process of resettlement settlers could move voluntarily or involuntarily from their areas of origin to the new resettlement sites and this phenomenon is not without consequences. To Woube (2005:19), in this spontaneous or planned movement from their original settlement to new sites, people have to adapt to the biophysical, social and administrative system of the new environment. According to Woube (2005:25-27), during the relocation or adaptation process, resettlers may face physical and mental stress and different kinds of impoverishment risks. In order to minimise these risks, resettlement programmes, planned or spontaneous, should be planned, implemented and evaluated appropriately. Although this study mainly targets the planned resettlement programme, it is very difficult to demarcate the difference between planned and spontaneous resettlement schemes.

The Rationale behind Resettlement Schemes

Worldwide experience suggests that resettlement, caused by development projects, conflicts or other socio-economic, political and environmental factors, is a risky process that often leads to impoverishment and rarely results in sustainable development (Brown, Magee and Xu 2008; Cernea and McDowell 2000; Hwang 2010; Ohta and Gebre 2005). Other studies have shown that living conditions and livelihoods of resettled people improved after resettlement (Agnes, Solle, Said and Fujikura 2009; Manatunge, Takesada, Miyata, and Herath 2009, Nakayama, Gunawan, Yoshida, and Asaeda 1999). Different countries undertake resettlement programmes for different purposes and objectives depending on their social and political situations. These include poverty reduction, the improvement of social services and restoring the income and livelihood of affected people (Cernea 2008:89; Cernea 2009a:52; Pankhurst 2009:13-15).

From the Brazilian experience, one can learn that resettlement is helpful in creating new growth centres and reducing regional imbalances. These include creating conditions to integrate regions into the market economy, establishing conditions for effective agricultural transformation of the semi-arid and arid regions, redirecting labour migration to agricultural areas in order to minimise migration to the urban areas, and stimulating a process of industrialisation (Helena and Heneriques 1988:322).

According to Oberai (1992:16), the principal objective of the resettlement programme in Malaysia was "to develop land for the landless and the unemployed" in order to assist the rural poor such as those with small and fragmented holdings. In Malaysia, "land development and settlement constitutes one of the most important instruments of the regional development programme". Land development and settlement were reported to have increased rural production, raised rural income and reduce rural-urban migration in Malaysia (Obeari 1992:79).

The Somalian experience also indicates that the objectives of the resettlement programme were to 1) attain redistribution of Somalia's population so as to increase productive rural enterprise, and 2) provide social services to Somalia's largely nomadic population (Ragsdale and Ali 1988:205). Kassahun (2003:3), basing his argument on the Ethiopian experience, also postulates that resettlement is "a way out of pressing pressures caused by food shortages, land fragmentation and congestion faced by producers, rampant unemployment, marginality of land and decline in productivity in areas under cultivation." Pankhurst and Piguet (2009:9)

Voluntary vs Involuntary Resettlement

Under the planned resettlement schemes there are both voluntary and involuntary resettlement (Woube 2005:31). According to Woube, a voluntary resettlement scheme is a process whereby people move to resettlement sites willingly. Such schemes manifest a more or less sound resettlement planning methodology through which the resettlers are well informed about the new resettlement sites as well as when and how they will be resettled. Involuntary resettlement, however, takes place when an external agent imposes it on people in a planned and controlled manner due to external circumstances that force them to do so (World Bank 2004:4).

Yntiso (2004:106) recognises that the distinction of resettlement schemes as voluntary and involuntary is more theoretical than empirical. Yntiso (2009:127) argues that these two distinct forms of displacement fail to highlight the specific conditions of resettlement. In an attempt to tackle this limitation, Yntiso (2004:106 – 107; 2009:127) has proposed a modified and more practical conceptual scheme, which identifies four major types of resettlement: voluntary, inducedvoluntary, involuntary or forced, and compulsory-voluntary movements. This classification is based on the nature of willingness to move and the causes of displacement.

Much has been written about the consequences of involuntary resettlement which involves forceful displacement or dispossession of people for the purpose of developmental projects (Cernea and McDowell 2000; De Wet 2006; Muggah 2008; Oliver-Smith 2005; Scudder 2005). These studies have explored reasons, types and processes of people relocating and the mechanisms of how to improve the livelihoods of resettlers. In turn, they have come up with useful concepts, analytical approaches and models that have broadened our knowledge and understanding of relocation as a social phenomenon as a whole. The focus of this research, however, is on planned voluntary resettlement, where an agency or institution (mostly governments) secures land and recruits people to settle on this land and engage in farming activities. Most planned voluntary resettlement programmes aim to achieve either both or one of the two fundamental objectives: poverty reduction and promotion of regional economic growth through agricultural activities (Zhibin 2003:2). However, it should be borne in mind that most resettlement programmes are designed to meet certain political benchmarks and not poverty reduction.

According to Morris and Roth (2010:5), "resettlement of the old kind that is forced, harmful, and unjust is rejected, but resettlement of a new kind that is based on prior informed consent is

still possible". While the shift to a voluntary basis is a welcome evolution in resettlement practices, onthe-ground realities may substantially differ from expectations.

According to FDRE (2003b:1 – 3), any development initiative planned for implementation in a settlement area should adhere to the main principles of voluntary and informed consultation, the objective of improving life sustainably, environmental sustainability, cooperation, self-reliance, cost sharing, community- led, transparency, responsibility, etc., starting at its inception and going through to its planning and implementation stages.

a) *Voluntary and Informed Consultation*

The implementation of a settlement programme should be planned through a consultation process involving both settlers and receiving communities. There should be transparent, detailed and all-inclusive discussions among the settlers, receiving communities and others concerned. The participation of all concerned in the planning, implementation and monitoring and control of the economic and social development activities helps maximise possible options as well as choose the most effective among those options. For this participation to be effective, all sides have to obtain in advance accurate information and analysis concerning the settlers, the recipient communities and the status of the natural resources of the settlement areas.

b) **The Objective of Improving Life Sustainably**

The action taken in a settlement area should free citizens from dependency on aid caused by human induced environmental deterioration or by drought so that they may maintain themselves sustainably through their own efforts. This makes it essential to implement plans that spring from the communities themselves and are in harmony with the ecosystem dynamics as well as being consistent with the national vision of development. Therefore, all plans should incorporate the requisite environmental considerations. The action for environmental protection should be planned and implemented in such a way as to create economic capacity.

c) **Environmental Sustainability**

The economic and social development activities carried out in a settlement area should be based on a coherent environmental management plan that enhances the quality of the environment and maximises its productivity sustainably. Special care and protection must

be given to fragile natural and human made environments that can be easily damaged or destroyed and cannot be easily replaced. Therefore, consultations should be carried out on the environmental, economic, social and cultural impacts of any activity aimed at implementing the settlement programme.

d)   Cooperation, Self-Reliance and Cost-Sharing

The implementation of a settlement programme should involve the settlers, the receiving local community, as well as governmental and other actors, in cooperative and mutually supportive interaction. The settlement programme should foster self-reliance and eliminate the spirit of dependency**.**

e)   Community-led Administration, Transparency and Responsibility

The implementation of settlement activities and the sustainability of development plans should be clearly visible to both the settlers and the receiving local community. This can be effective if there is a community-led administration which is transparent and responsive.

f)   Improvement and Enrichment through Action and Experience

The settlement programme should be enriched and improved, using knowledge gained through implementation, monitoring and control. The implementation should vary according to what the diversity in time and space calls for. For this reason, resettlement should not take place in one go but should rather be initiated by family or local community representatives and, upon evaluation and realisation of its effectiveness, the accumulated positive experience can be used to develop a strategy for a more extensive implementation.

Finally an impact assessment needs to be carried out on the planned activities aimed at implementing the settlement programme in order to predict their positive and negative effects on the ecological, socio-economic conditions so as to strengthen the positive and, when possible, avoid (or at least minimise) the negative consequences. An impact statement is then prepared, based on the assessment as to whether that particular resettlement programme is bringing about sustainable development or not.

Resettlement and Livelihoods: Linkages

Pankhurst (2009:13) notes that 'despite all the recent expansion in research, there is much that we still do not know about resettlement, especially about the behavioural response of

various populations and subgroups, and about their own initiatives for coping and reconstruction'. At this juncture a theoretical synergy is required to explain resettlers' initiatives, i.e. the role of the people in coping with displacement as a response to foreseen risks. The sustainable livelihood approach developed beyond the concern for development induced displacement may fill the gap (Scoones 1998:4). The presentation of livelihood strategies and the attention the framework renders to societal institutions make it ideal for the topic under study. McDowell (2002:11) calls for such a theoretical blend and the need to ascertain how people respond to the risk of processes of impoverishment, and the role of institutions, associations and other forms of relationships in mediating their access to and control over the resources necessary to rebuild livelihoods.

The livelihood framework has five key features, according to Chimhowu and Hulme (2006:729) that make it especially relevant for studying resettlement. Firstly, it views resettled households as making a living in a variety of ways of which farming may be just one. Secondly, livelihood approaches emphasise the need to see land as just one among several assets/capitals required to make a living. Thirdly, livelihood approaches place the interaction of the various capitals within a broader policy environment. Fourthly, the framework allows us to investigate livelihood dynamics in a given geographical and historical context. Livelihoods are not static but change in response to various internal and external stimuli. Fifthly, the focus on risk and vulnerability is appropriate for resettled households in frontier regions.

Materials and Methods

This research is empirical in nature and intends to analysis the sustainability of resettlement in Muregi and Akare in Niger State. It was designed to collect information from all parameters that is needed to solve the research problems. The research makes use of both theoretical and investigative method for collection of data,also data was collect from residents of Bussa, Gbajigbo, Muregi and Akare on reasons for locating in such area, the infrastructure available, and its adequacy and otherwise. This provide opportunity to assess the coping strategies adopted and planning implication to sustainable resettlement in Niger State and Nigeria in general.

Data Sources

In this study, both secondary and primary sources of data will be use to carry out a comparative analysis of sustainability of resettlement scheme in Muregi and Akare, to assess and compare

the various infrastructure available in area and examine the resettled households assests vital to realise resettles sustainable livelihood outcome. Primary sources include a household survey, key informants' interview and observations. The major primary data will be collected through *survey of* settler households in Muregi and Akare to solicit a wide variety of information about their assets (physical, social, financial, human and natural), their livelihood strategies and the risks settlers faced, livelihood outcomes, etc. A key informants' interview will be conducted by the researcher Moreover, *observations* will be employed by the researcher to gain a deeper understanding of the areas. Observations will be employed to obtain a better grasp on processes of livelihood generation, the type, nature, state and use of household assets, livelihood strategies and outcomes.

Data Analysis

The analysis will follow the framework reviewed. The framework focused on the context of resettlement, risks of relocation, livelihood assets of settlers, institutional influences in access to livelihood assets, livelihood strategies and livelihood outcomes. The analysis will be done, based on the before and after situation as well as on spatial comparison. The quantitative data collected through questionnaire will be prepared by cleaning, coding and entering them into a computer. These data will be then analysed with the help of the Statistical Package for Social Science. Descriptive and inferential statistical analysis will be use. Firstly, descriptive statistical procedures including cross tabulations, frequency distributions, percentages, arithmetic means, line and bar graphs, indexes, etc. will be used to provide comparisons between the two areas' resettled households livelihoods and their perceptions related to the resettlement programme.

Results

Resettlers Knowledge about Resettlement

Information exchange is an important tool in creating awareness that enables the participants to make a decision to resettle. The current voluntary government sponsored resettlement programme document highlights the importance of information exchange with people in sending districts and consultation with the host community to enable participants to make their own choices regarding the program. Table 1 shows the extent to which information was shared with participants in the resettlement programme in the study areas.

Table 1: Information exchange about the programme

Were you well informed about resettlement?	Muregi (n=130)		Akare (n=120)	
	f	%	f	%
No	2	2	0	0
Yes	128	98	120	100
If Yes, source of information?				
Media	1	1	7	6
Government Officials	124	97	117	98
Previous Settlers	4	3	8	7
Others	2	2	-	-
What was your reaction to the programme?				
Accepted it	127	97.7	108	90
Rejected it	2	1.53	7	6
Indifferent	1	0.77	5	4

As depicted in Table 1, almost all of the respondents were well informed about the programme and most of the resettlers obtained information from government officials at different levels. Most of them also accepted the invitation to resettle.

Resettlers Perception towards Resettlement Process

Resettlers were asked whether the resettlement process was voluntary or not. As depicted in Table 2, more than 98 percent of the resettled households confirmed that the resettlement process was voluntary.

Table 2 Perception of resettlers about the relocation process

Variables	Muregi (n=130)		Akare (n=120)	
	f	%	f	%
How did you come to this settlement sites?				

Voluntary	128	98.5	117	97.5
Involuntary	0	0	1	0.8
Self-organised	2	1.5	2	1.7
Did your family members come with you?				
No	34	26	55	46
Yes	96	74	65	54
How did you assess the site selection of the resettlement areas?				
Highly inconvenient	2	1.5	2	1.7
Inconvenient	26	20	16	13.3
Don't Know	7	5.4	3	2.5
Moderately convenient	94	72.3	91	75.8
Highly convenient	1	0.8	8	6.7
Were you happy about leaving your former home village?				
No	18	14	16	13
Yes	112	86	104	87

The resettled households' perspective on what it meant when it was stated that the moving process was voluntary was not just the absence of physical force; issues like how much information one had before making a decision, and having an option to return if one did not like the new place were also considered as aspects that made this new resettlement programme voluntary in nature. These aspects were issues that gave the resettlers more choice and more options, and in relation to this the programme leant more to the voluntary side than to the other way.

Perceptions about the Push-Pull Factors

Respondents were asked to mention the push factors that forced them to resettle in order of importance. According to the survey data, the main push factors for the resettled

households in the two districts were related to shortage of farm land, landlessness, food insecurity, shortage of rainfall, land degradation, among others.
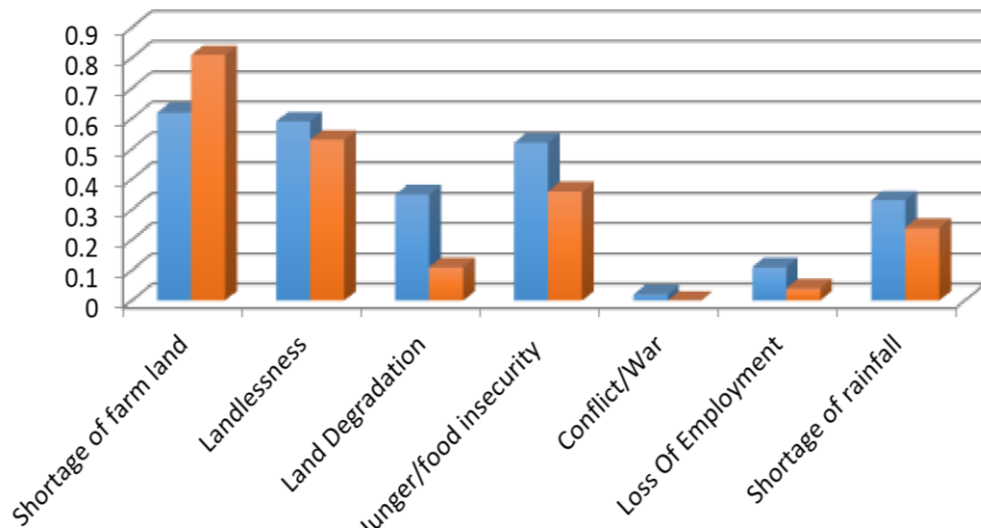
Figure 2: Push factors affecting households to resettle

More than 80 percent of the resettlers in Akare and 62 percent of them in Muregi were forced to relocate due to shortage of farm land at their places of origin. Since there was not enough arable land to match the population growth, this led to land fragmentation and low productivity. Most of these households had farmland, but they perceived it as inadequate to improve or even sustain the households' livelihood.

The respondents were also asked to what extent the reality met their expectations. Accordingly, more than 75 percent in Muregi and 68 percent in Akare found the reality on the ground below their expectations. The reason was that most of the promises were not implemented in practice.
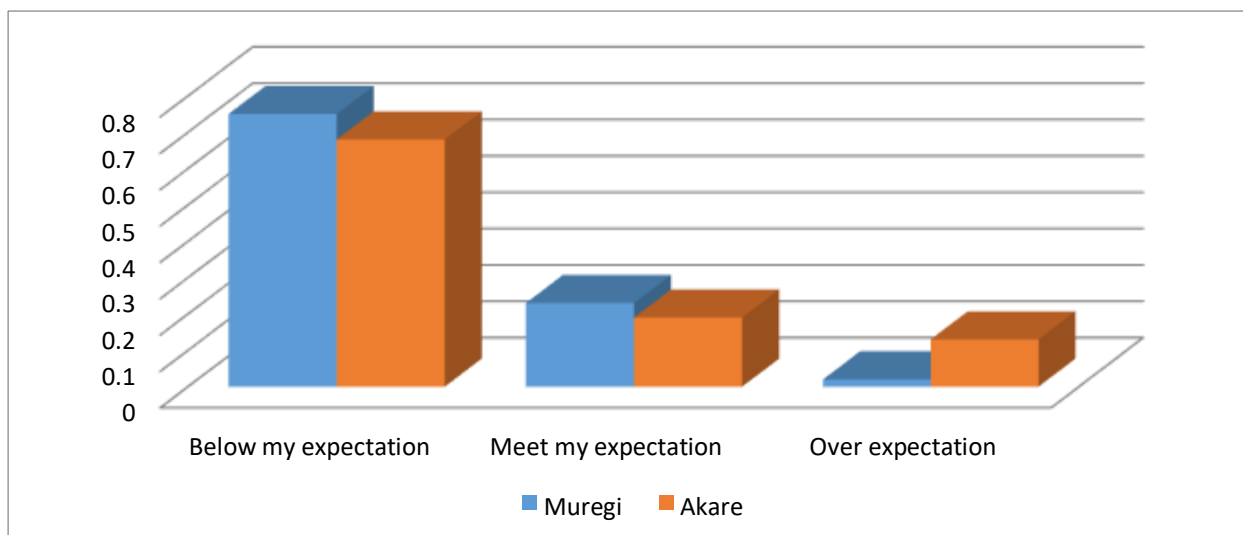
Figure 2: Reality as compared to expectation/promises

Table 3: Perceptions regarding occurrence of conflicts

Items	Muregi (n=130)		Akare (n=120)	
	f	%	f	%
Conflict with the host community or other settlers?				
No	88	68	75	63
Yes	42	32	45	38
If Yes, reasons for conflict?				
Religion	-	-	2	4
Competition for land	20	48	25	56
Forest destruction	6	14	-	-
Animal feed	8	19	10	22
Language	-	-	2	4
Others	1	2	6	13
If yes, how was it solved?				
by community elders	32	76	21	47

by village social courts	4	10	10	22
by district court	4	10	8	18
by religion head	-	-	2	4
Others	3	7	3	7

As depicted in Table 3, a significant number of respondents (32 percent in Muregi and 38 percent in Akare) reported that there had been conflict during the last one year. The main reasons for conflict occurrence in both districts were competition for land, followed by animal feed. The data also showed that conflict occurrence due to religion and language/ethnicity was very minimal among respondents in the study areas.

Respondents were also asked how the conflicts had been solved when they occurred. In both areas, the majority of conflicts were solved by community elders. Some of the conflicts related to land title and ownership issues were also solved by courts at district and village levels.
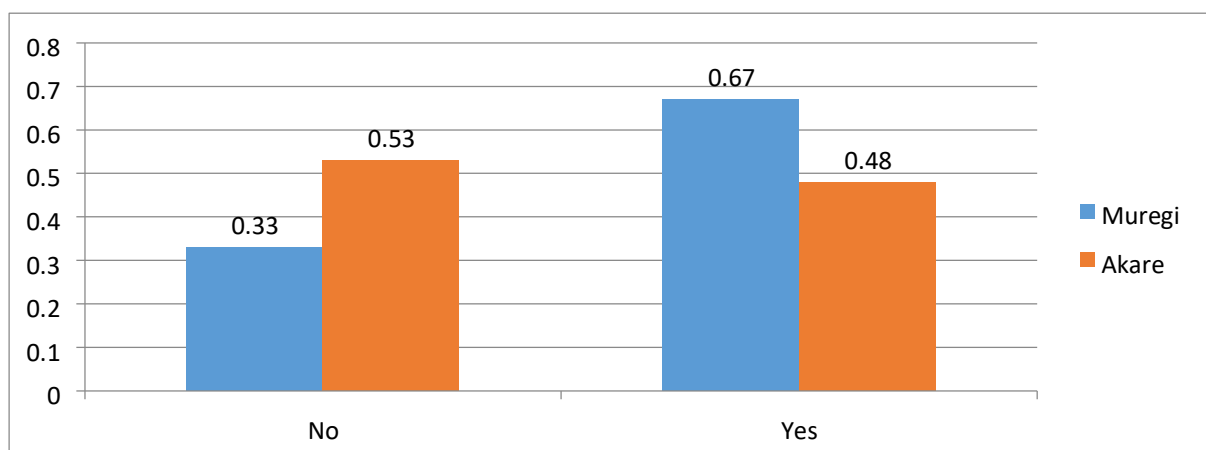
Figure 3: Have your problems been solved after resettlement?

Resettlers were also asked whether their problems were solved after resettlement or not. More than 33 percent of respondents in Muregi and more than 53 percent in Akare confirmed that their problems were not solved. In both districts there was a general perception that the information they had received in their home areas about the resettlement programme was different from the reality.

Conclusion

This study analysed the resettlement in Muregi and Akare resettlementscheme in Niger State to the implementation processes and outcomes of the new resettlement programme. This study concludes that the results are mixed and challenges the generic representation of the resettlement scheme as a failure or a success. Despite the many challenges the government experienced in this resettlement programme, there are evidences that clearly shows the successes of the programme. The planned state-led resettlement programme had brought relief to households facing food insecurity, raise the assets and incomes of the poor resettled households at least in the short run. The programme has benefited both the resettlers and host communities in Muregi as compared to Akare by providing access to basic infrastructure and social services such as roads, schools, health services, safe drinking water and market access to their products. Some of the impoverishment risks and vulnerabilities have been reduced after resettlement. The average land holding size of resettlers at the area of resettlement was much higher than before resettlement in both research sites. With this successes, however, there were many challenges that the scheme faced in planning and implementing the resettlement programme.

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