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Agro-Pastoral Interventions in the Kano River Irrigation Project Area in Northern Nigeria

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Annatte, I.
National Agricultural Extension and Research Liaison Services
Ahmadu Bello University, Zaria, Nigeria
Corresponding Author's Email: ekundayoafolabi@ymail.com
Afolabi, E.A.
National Agricultural Extension and Research Liaison Services
Ahmadu Bello University, Zaria, Nigeria
Uzegbu, H.O.
National Veterinary Research Institute,
Vom, Plateau State Nigeria
Abudu, S.
National Agricultural Extension and Research Liaison Services
Ahmadu Bello University, Zaria, Nigeria

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ABSTRACT
Agro-pastoral intervention studies in Nigeria generally were designed to promote Improved Livestock Production Practices (ILPP) among Agro-Pastoralists through capacity building, input delivery and cooperative development. The Kano River Irrigation Project (KRIP) Phases I and II, totaling about 62 000 ha. The main source of water for irrigation in the region is the Tiga Reservoir. The KRIP has beneficial impact on the biodiversity generally. The area, formerly semi-arid and drought prone, is now a region where climatic risk factors have been reduced, living standards has improved and food supply is assured without adverse effects on the biodiversity. Nomadic livestock production systems, as well as effective rangeland utilization procedures were studied, taking into consideration the needs, this include a census of pastoralists. The main objective was to identify herd distribution and ownership structure, herd composition and size, and migration routes. Consequently, grazing routes were noted, defined and demarcated to provide information needs on alternative grazing for pastoralists in years of low rainfall, which might force pastoralists to seek pastures outside declared grazing areas. The main activities, assumptions, achievements and constraints were recorded and recommendations were made on those aspects of the project that will facilitate achievement of the project goal in the subsequent interventions.

Keywords: Rural Development, irrigation project Area, Agro-Pastoralists, Interventions

INTRODUCTION

The Kano River Project is a large-scale, capital-intensive irrigation scheme designed to cover an area of 62,000 hectares in Kano State, Nigeria (Appendix 2). The project is managed under the authority of the Hadejia-Juma'are River Basin Development Authority (HJRBDA), The project includes the Kano River Project, Phases I and II. The main source of water for irrigation in the region is the Tiga Reservoir. This intervention covers the dam site and the irrigated area. There are many pastoralists living within, and in the surrounding areas of the project. These groups of pastoralists have established their permanent homesteads in the area even before the construction of the Tiga dam in 1870's. Apart from the settled pastoralists, there is huge population of pastoralists that periodically grazed their animals within the irrigated areas, particularly during harvest of irrigated crops where the animals feed on the crop residue.

In both the design and development of irrigation farming in the area, no much attention or consideration were given to the safety needs of the Agro-Pastoralists. Due to the incessant conflicts between pastoralists and farmers, this study became paramount thus undertaken. The study focuses particularly on the Agro-pastoral activities in the area. The purpose were to address the inadequacies of Agro-Pastoral Production Systems in the Kano river irrigation project area and promote Improved Livestock Production Practices (ILPP) among pastoralists through capacity building, inputs delivery and cooperative development in the eight pastoral communities within the site. The target Pastoralists communities are Kosawa, akauna, Dan Hassan in Kura LGA, Dan Mauran, Kutumburi, Kuran in Garun Mallam LGA and Zanya and Gaabo in Bunkure LGA.

The target of the study was to be achieved through promoting improved livestock productivity among pastoralists by the feeding and management of livestock, building cordial relationships between pastoralists and farmers and capacity building of the pastoralists' cooperative societies leaders in the irrigated areas of the Kano River Irrigation Project (KRIP).The specific objectives are to promote the establishment of eight herders' cooperative societies and support the capacity building of the societies to tackle the key production problems confronting the Pastoralists; support the establishment of a Herder-managed Livestock Service Centre (HLSC) to provide essential services to the pastoralists and assist in building the capacity of the Herders to managed the HLSC; mobilize, organize and train pastoralists on methods of improved feeds production, preservation, and utilization for better feeding of animals that will result in improved productivity of the animals and minimize conflicts between pastoralists and farmers; and facilitate and strengthen linkages between pastoralists and relevant governmental institutions at all levels to tackle issues related to grazing reserves, stock routes, veterinary services and other essential services required by pastoralists in the area.

METHODOLOGY

Formation of Project Team

To effectively implement the Project, a core team was constituted as follows:

1. One Project Director with vast expertise on issues of environmental resource management, pastoralism and projects management to oversee the overall implementation of the Project;

2. One Project Coordinator with expertise in community mobilization, participatory approaches and agricultural development to coordinate field activities; and

3. Two Group Facilitators, one with vast expertise of extension services, crop production, and agricultural development and the other with expertise on Para veterinary services,

livestock production, educate extension and community development to serve as field based facilitators. All the above personnel are conversant with the cultural value systems and ways of life of the pastoralists, and essential element is working with the pastoralists. 4. In addition to the core team, other technical and administrative staff were involved in the Project implementation as support staff. Experts and volunteers supported some key technical activities such as diagnostic studies, mobilization of herders for formation of cooperative societies and group management trainings. These experts were drawn agencies such as the National Commission for Nomadic Education (NCNE) and the National livestock Project Division (NLPD) as well as from National Agricultural Extension Research and Liaison Services (NAERLS), ABU Zaria.

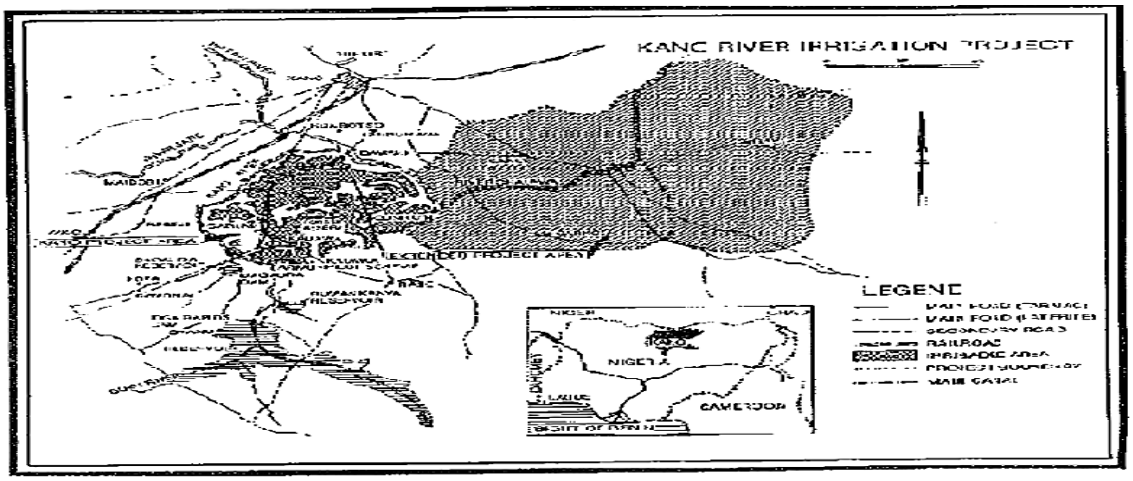


Figure 1: The Project Area

The Intervention Phases

The planning and execution of the interventions were implemented in three phases within 24 months. The first phase was the need assessment stage, which required guided survey of the target Pastoralists communities. They include the Kosawa, akauna, Dan Hassan in Kura LGA, Dan Mauran, Kutumburi, Kuran in Garun Mallam LGA and Zanya and Gaabo in Bunkure LGA. The development of survey instruments using Participatory Rural Appraisal (PRA) approach to capture and quantify needs and factors that constrain agro-pastoral production and marketing systems. The second phase involves the evaluation and prioritization of identified needs and development of strategies for interventions at the farmer's, researchers and consultant levels. The third phase was the intervention stage includes: pastoralists' organization into registered cooperative groups, animal population studies, production supports, promoting and disseminating proven dairy technologies in selected sites.

Secondary Data Collection and Analysis

Several project documents and technical reports were received from the Agricultural Development in Nigeria (ADENI) Project on the Project objectives, implementation strategies and work plants. In addition, some methodological documents, highlighting practical strategies were also part of the documents.

Consultative Meetings

Various consultative meetings were held with various stakeholders during the preparatory phase of the interventions. This included meetings with pastoralist community leaders,

pastoralists associations and the Technical Experts. Consultations were also held with some supporting organizations, including the National Livestock Project Division, Kaduna, the National Commission for Nomadic Education, Kaduna and the National Animal Production Research Institute (NAPRI), Shika, Zaria on the potential prospect of the proposed intervention on the livestock sector.

Preparatory Meeting and Workshops

Series of preparatory meetings and workshops were organized by the ADENI Project for various stakeholders. The preparatory workshops planned the operations and assigned roles and responsibilities of the stakeholders. This workshop also provided an opportunity for shared experience and discussions on the line of activities.

RESULTS AND DISCUSSION

Mobilization and Group Meeting

Figure 2 shows the community mobilization and a typical group meeting in session a total of 907 pastoralists participated in 47 mobilization and discussion meetings. Total of 102 households in the KRIP study area were visited. Prior to the commencement of the Project, the pastoralist had no established cooperative societies. In addition, the pastoralists were excluded from all of the KRIP activities that were supported by governments and problems of livestock production were grossly neglected. The pastoralists had no organized platform to channel their needs and/or initiate actions that will ameliorate their problems. The first intervention was to promote pastoralist cooperative formation and registration. For this imitative to be successful, meetings were planned and held with community members. During these initial meetings, pastoralists were skeptical about the idea of cooperatives because of their previous failed experiences. IEC materials prepared on group formation, training and registration significantly supported this confidence building process.



Figure 2: Community Sensitization in Session

During the participatory rural appraisal meetings, discussion sessions centered on problems confronting the Pastoralists, the inability of governments to address the problems over the years, the inability of the Pastoralists to organize themselves and other factors that affected implementation of most of the development initiatives. The goals of

the interventions were explained to groups, including the leading roles they are expected to play.

Problem Identification, Ranking and Community Needs Assessment

A team of experts were put together to carry out a community needs assessment of the eight target communities. PRA techniques were employed. The pastoralists identified wide range of environment, socio-economic and technical problems facing them. Community resource potentials and assets were also evaluated and documented. The pastoralists discussed and analyzed the output of the discussions and rank the workable solutions to some of the problems in line with the available and potential community assets and resources.

Based on the findings, the following problems were common to all the eight communities.

a. Animals do not receive appropriate and adequate veterinary care;
b. There is prevalence of biting files and near absences of pest control services;
c. There is high incidence of manageable animal diseases;
d. Bush burning is a very serious problem affecting dry season conservations and grazing;
e. Animals receive inadequate supplementary feeds and feeds are costly;
f. Blockage/encroachment into grazing areas and cattle routes by crop farmers is of serious concern to the pastoralists;
g. There is low level of cooperation among pastoralists and no formal cooperative activities; **viii** repeated and continuous conflicts between the land and water users;
h. Lack of vocational trainings, National Occupational Standards and high levels of illiteracy among the pastoralists, and
i. **xii** unnecessary harassments by law enforcement agents as well as constituted authorities for taxes among other levies.

On the basis of this ranking, the group leaders were assisted to develop action plans. The working team provided a better explanation of the issues and set up working teams to follow up on the community action plans.

Community Resource Base Assessments

The following resource base were identified and characterized:

a. Human Population-2,380 households with over 23,000 people
b. Animal Resources-46,000 cattle, with over 54,740, sheep, Goats, Donkeys Horses, and Poultry
c. Land Resource-35% of stakeholders own fragmented pieces of land for cultivation and grazing about 3.5 hectares per household.

Constraints

Some of the constraints encountered in the course of implementation of the interventions were:

1. Herders waste time socializing during meetings. By their nature, Fulanis spend a lot of time greeting each other during meetings, thus reduces the time available for meaningful discussions and drags meetings into late hours;
2. Too much expectation by the pastoralists from the Project – the pastoralists saw the Project as 'all problem-solving intervention'. When such demands could not be achieved, participation and attendance to meetings reduced drastically.

3. The Project Coordination Office work with timelines, instead of building time consuming democratic structure, they were rather too much in haste to meet targets
4. Seasonal migration of the herders out of the Project Site due to heavy challenges of insect bites;
5. Lack of inputs to the pastoralists, e.g. control of biting files which is beyond what the communities could provide.
6. Inadequate trainings and support materials for field works;
7. More time for supervision needed for the Herders Organization to gradually grow and mature, since group organization is a new concept among the pastoralist; and
8. Nonetheless, the study could not capture some of the activities in the course of this write up as show case in Table 1:

Table: 1 Calendar of Activities

S/N	Activity	April				May				June				Responsibility
		1	2	3	4	1	2	3	4	1	2	3	4	
1.	Group Meetings	x	x	x	x									SC, GFs
2.	Mobilization Meeting	x	x	x	x	x								PARE, SC, GFs
3.	Identification of the problems and needs of members		x	x	x	x								TE, SC, GFs
4.	Facilitate Cooperatives (Group) Foundation						x	x	x					TE, SC, GFs
5.	Facilitate the Preparation of Cooperatives Rules and Regulations										x	x	x	TE, SC, GFs
6.	Facilitate the Election of Cooperative Leaders						x	x	x	x	x	x		SC, GFs
7.	Identify the training requirements of Cooperative Leaders									x	x	x	x	TE, SC, GFs
8.	Facilitate Preparations of Group Action Plans by Cooperatives										x	x	x	TE, SC, GFs
9.	Training of Cooperative Leaders											x	x	TE, SC, GFs
10.	Supervisory Visits			x				x				x		SC
11.	Internal Monthly Reports				x				x				x	GFs
12.	Quarter Review Meeting											x		
13.	Headquarters Supervision											x	x	ED
14.	Quarterly Report												x	PARE, SC, GFs

Lessons Learnt

The following were some of the lessons learnt during the first year of the Project implementation:

1) If adequately mobilized, pastoralists could form viable groups that can tackle some of the problems of traditional livestock production.
2) Pastoralists need time to grow with the group formed and gradually build on the benefit at all levels and also build trust with the other stakeholders alike;
3) Winning the trust and confidence of pastoralists requires time and patience and they business partners that have a sustained activities in livestock economic activities like

milk collection, processing and marketing, Beefing processing and marketing and commercial pasture production etc.

CONCLUSION

Five out of the eight Herder's Organizations have registered with the government authority to exist and operate as groups; the others are expected to register in the subsequent year. The KRPI has beneficial impact on the environment generally. The area, formerly semiarid and drought prone, is now a region where climatic risk factors have been reduced, living standards have improved and food supply is assured without adverse effects on the environment. Traditionally there has been a clear divides between sedentary farmers made up of the Manga and the Hausa people, and the nomadic pastoralists known as Fulani. However, this has diminished as a result of KRIP and both groups now engage in livestock and crop production, although the priority for Fulanis is still the rearing of cattle. The interventions have succeeded in changing the minds of the pastoralists to accept crop and pasture production form groups to support their community developmental efforts. It is on the basis of this that the objectives of the Project will be achieved in the subsequent period of the Project.

RECOMMENDATIONS

i. Commercial pasture production should be encouraged in the river basins and irrigated area. It is on this that the modernization and evolution of commercial dairy farming and breeding scheme can thrive.
ii. The Agro-pastoralist component of the KRIPs activities should not be equated with crop farmers or water user groups in terms of water result expectation. Agro-Pastoralist needs to be nurtured to grow to apex level with all the required specialized support.
iii. Enough time and patience should be given for Agro-Pastoral interventions projects to grow into strong self-sustaining producer's organization in the KRIP area
iv. More train-trainer-trainings should be organize for the field team and adequate tools made available;
v. Funding for Project has been timely released which facilitated field activities;
vi. The Project might wish to consider direct support to the pastoralists in terms of sourcing experts from outside Nigeria to diagnose and recommend remedies to the incidence of biting flies.

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