

COMMUNITY INCENTIVES TO REDUCE LAND USE CONFLICT AND CONSERVE BIODIVERSITY IN NEPAL

External Evaluation Report

July 2005

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Abbreviations

AHCs	Animal Health Centres
AI	Artificial Insemination
BZ	Buffer Zone
BZUC	Buffer Zone User Committee
CAHW	Community Animal Health Worker
CASC	Community Animal Service Center
CBOs	Community Based Organizations
CF	Community Forest

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Executive summary

The team found that the project “Community Incentives to Reduce Land Use Conflict and Conserve Biodiversity in Nepal” has been successful in most ways and it is providing extremely important services to communities in the Buffer Zone of Koshi Tappu Wildlife Reserve. The project could not make use of wild bull semen, as originally aimed, to cross with domestic buffalos assuming to produce a hardier and more valuable cross. Nevertheless, the project was able to identify, plan and implement a number of innovative activities to reduce domestic animal pressure on KTWR and provide livelihood based incentives to poor farmers.

The evaluation team studied the project reports, visited the project sites and interacted with

health services and artificial insemination of improved breed is quite reasonable. The inability of using wild bull semen seems to have no significant loss communities even though it was one of the project's key innovative ideas. However, there could have more scientific debates on the use of wild bull semen and generated a useful knowledge on the possibility of using wild genetic materials for local benefits.

5. The **project's approach of strengthening livelihood security through incentive mechanism of fish pond management and land allocation** has introduced a system of benefit sharing of natural resources to the poorest members in the community.

can be undertaken in other buffer zone areas. CFUGs in other parts of the country could also embark on such models if livestock issue is the key. These mechanisms can undoubtedly be replicated in other parts of the country as well.

Issues and Constraints

- 1. Limited Impact in the western sector of KTWR:** The major problem of park people conflict found to be in the western sector of the Reserve. So, a greater focus is needed from the KTWR with community mobilization, incentives and enforcement programmes in this sector.
- 2. Missed opportunity of scientific debate:** Although, the original idea was to provide wild buffalo semen to local communities as incentives and the idea didn't work out. The evaluation team considers it as a missed opportunity of scientific debate regarding the extraction and use of wild genetic resources. There could have been a more debate and knowledge creation on the use/misuse and benefit /loss of using wild genetic resources as community incentives.
- 3. Capacity development of groups:** Almost all groups that the project worked with are in forming stage of group development. A lot more is needed to do to help them get through storming, norming and performing stage. The project design, by default, less emphasized in developing group's capacity such as in leading, managing, organizing, record keeping, planning and working in teams. Due to the existing socio cultural tradition women and poor are often excluded from decision making and participation. So, it is important to develop capacity of groups to help them understand these issues and address.
- 4. Inadequate Social Mobilization and Inclusion:** The time constraints of project implementation has made project inadequate in social mobilization and inclusion. In the groups where the project is working, who controls the decisions, whose voice is heard, who benefits etc will continually need to looked at and supported to address.
- 5. Concern over spirit of joint implementation:** The project was proposed and approved for joint implementation by DNPWC and IUCN. The roles of each partners were clearly spelled out in the inception report itself. Nevertheless, DNPWC expressed little reservation in accepting that the project was implemented in a spirit of joint ownership. The evaluation team understood that there was quite strong push from IUCN to finish the project activities as the time was the key constraints. Moreover, the project was following IUCN financial rules which are quite robust with strictness in submitting expenditure bills, clearing advance dues, and auditing in time. There were also times when budget release was delayed due to several reasons. All these could have teammo

Recommendations

- 1. Project initiatives be continued:** A continuous managerial, planning and follow up

1. Introduction

1.1 Project Background

The World Bank's Development Marketplace 2003 chose a theme of "Making Services Work for Poor People" and aimed to provide funding for innovative pilot projects that would explore new ways of providing effective service delivery to those to whom traditional channels have failed. Out of 2700 applications worldwide, and 183 finalists, 47 were given final awards. The project "Community Incentives to Reduce Land Use Conflict and Conserve Biodiversity in Nepal" was one of the global winners and was implemented in Koshi Tappu Wildlife Reserve (KTWR) Buffer Zone area from 15 July 2004 till the end of June 2005.

The project proposed an innovative use of wild genetic resource to increase local income of poor communities, improve relationships between a protected area authority and local communities, and in the longer term change local domestic livestock composition that is better for local livelihoods and biodiversity conservation in Nepal. The resource being proposed for use is wild Asiatic buffalo semen from the Koshi Tappu Wildlife Reserve to produce a hardier and more valuable cross with domestic buffaloes. The project has a goal *to enhance biodiversity by reducing land conflicts through strengthening livelihood security for poor communities*, and has the objective of *demonstrating a system for reducing the number of livestock in the Koshi Tappu Area by providing livelihood-based incentives for poor farmers*.

To achieve the goal and objective, the project implemented a number of activities to reduce domestic animal pressures on the Koshi Tappu Wildlife Reserve and to improve local livelihoods. The project intended to institute a

The evaluation sought to assess:

1. The *efficiency* and *effectiveness* of project's processes, outputs and purpose;
2. *Relevance* (including local acceptance, park perspective and national policy issues) and *impacts* through the key outputs achieved by the project. While assessing the impact both present changed and potential change in future will be considered.
3. *Sustainability* of project intervention – perception from local communities, KTWR and other organizations (if there is any)
4. Extent the project is contributing to the component identified by the KTWR Buffer Zone Management Plan

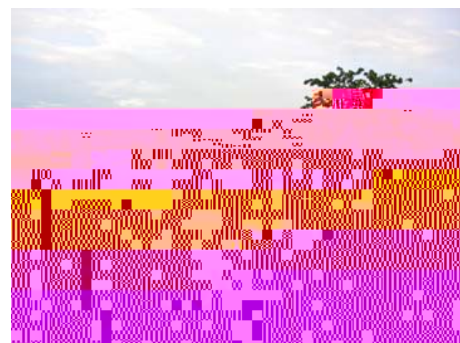
In particular the evaluation will look at the key cross-cutting issues of the project which included:

5. Contribution of project to achieving better relationships and *partnership* between Reserve and local communities and other service providers/ stakeholders
6. Contribution to the *innovative incentive* mechanisms identified and adopted to minimize resource conflicts and learning relevant for national level

The evaluation was done with major community stakeholders residing within the Buffer Zone of the Koshi Tappu Wildlife Reserve, district level stakeholders, KTWR staff, DNPWC and IUCN staff.

1.4 Evaluation process and methodology

The evaluation team consisted of five members-a Natural Resource Management specialist, a social scientist, and two senior staff of DNPWC and IUCN who were not involved in project implementation activities and one member from Buffer Zone Management Committee. The evaluation followed the



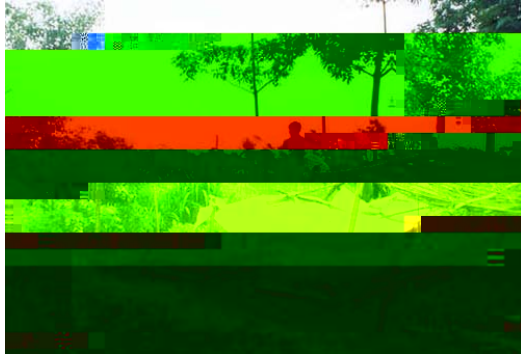
Output # 1: *Fodder and forage biomass increased in BZ through agro forestry and forestry plantations (private and communal)*

The main thrust of this output is to reduce community's dependency on the Reserve's resources through the promotion of forage and fodder plantation in private and community land. For this, the project implemented a number of activities.

Project Activities in Output # 1

Research and study: A study on “Fodder development opportunities in the KTWR Buffer Zone” was undertaken to understand constraints and opportunities for fodder development. The study revealed that 54% of the surveyed households are engaged in livestock rearing and the average fodder deficiency per household is estimated to be 487 kg/month in average. The study also identified two options to improve fodder situation- firstly by promoting better breed and healthier animals that are more productive for unit of fodder use and secondly by increasing fodder production through promotion of agro-

to sell grasses in local market. As these planting materials are produced at various locations and settlements, the multiplier effect in few years time would be tremendous. The local communities have also planted many fodder and fuel wood species in their community forest areas. All these would reduce the workload of women and children as they are the main collectors of fuel wood and grasses. This eventually would contribute for the changes in livestock raising practices by decreasing grazing inside the reserve and encouraging stall-feeding practices thereby reducing land use conflict and conserve biodiversity in the KTWR.



For the further expansion of production and plantation of fodder materials, the skill and knowledge of home nursery growers need to be retained or further developed. A regular follow-up visits, mentoring and coaching support by KTWR staff would be useful in this regard. These nursery growers could also be linked with other groups like CFui{otheg5.3dTD-0.()Tsini-v1D.5(1) ri0gs8)e CF

Another study was undertaken to recommend for the establishment of community managed animal health and artificial insemination services and strategy for obtaining wild buffalo semen. The study recommended locations for AHCs and Sub centers, identified technical and logistic requirement for the AHCs, institutional management and strategy for obtaining semen from Wild Buffalo. The best strategy suggested was to obtain semen from the captive wild bull at the Central Zoo, Lalitpur and process the sample at the Animal Breeding Division of Nepal Agricultural Research Centre, Khumaltar. The study also revealed that the local communities would opt for high yielding buffalo semen over wild buffalo semen.

A further study was done to elucidate relationship between livestock keeping (buffalo) with fodder availability and household characteristics. An analysis of grass and straw availability and number of buffaloes kept in a household was done to assess the contribution of each in the buffalo holding. Out of 305 households, 72 households had buffaloes in the range of 1 to 6. The daily requirement for an average buffalo as per the study is 20 kg of grass or 12.5 kg of straw. The study also analyzed the factors of households' characteristics of buffalo keepers. These factors are: family size; education level; cattle holding; goats and pig holding; poultry size; land ownership; total agriculture sales and total agricultural buying.

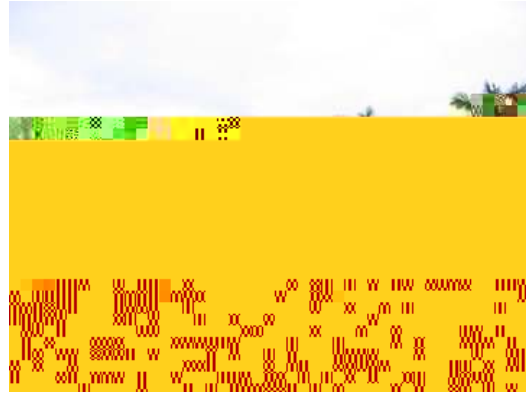
Training: "Community Animal Health Workers" training was conducted to create and enhance the skills of Community Animal Health Workers (CAHW) in the project area. A total of 10 persons were provided training out of which one is woman. 5 persons from Sunsari, 4 from Saptari and 1 from Udaipur district participated in the training. These health workers who are providing primary services in their locality through home visits. It is estimated that in average one CAHW earns Nrs. 2500 to 3000 per month. In order to sustain the human resource created the CAHW are provided with Nrs15000 as matching seed capital that would be provided on loan basis through the BZ user committee to purchase animal medicine and additional Nrs.15000 for medical equipments.

Establishment of Community Animal Service Center (CASC): A CASC has been recently established in Madhuban of Sunsari district. The center will provide following services – artificial insemination services to local farmers; provide improved animal breed semen from the District Livestock Service Office (DLSO); provide preventive (vaccination and better animal management) and curative (stool, blood and urine test to treat diseased animals) disease services. Furthermore about 50 farmers, in Sunsari, have received high yielding artificial insemination services to their domestic buffaloes with the support of DLSO prior to the establishment of the CASC.

The establishment of Community Animal Service Center in Madhuban VDC of the KTWR's Buffer Zone demonstrates an innovative example of collaboration among local government (VDC), KTWR, DLSO, and community. The center provides services to 6 adjoining VDCs in curative and preventive animal health. The center would also provide technical support to CAHW to enhance their skill and knowledge. The center has recruited one junior technician and two CAHWs.

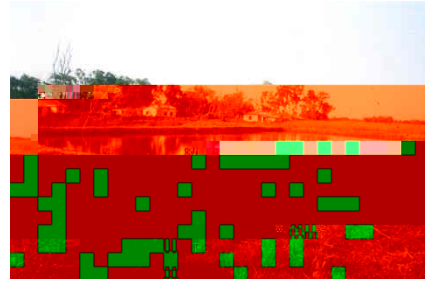
The evaluation team observed an outstanding ownership of center among community members. On the day of our visit the members were meeting to discuss and fix the service charge that the center would charge for different kind of services. The center is currently managed by an adhoc management committee and is in process of developing a constitution.

They have also developed a 5 year business plan which estimates a loss for the first three years of its establishment. The management committee is discussing a range of options to deal with the loss. Some of these are: distributing annual membership, increasing medicine sales, seeking support for VDC and



ecological impact and health hazard of semen extraction, and there was no visible benefit to poor farmers. The District Livestock Service Officer told the evaluators that he was surprised when he first heard of this idea. He does not believe that the market pays for the cross breed

The fish pond management group will have a MoU with the respective CFUGs and develop a guideline for benefit sharing. The benefit that the CFUGs will obtain from the fish pond is said to be 2-5% of the income. But, this provision was not clearly understood by the women members and no MoU is signed yet. As this is a new initiatives in the KTWR Buffer Zone area, a continuous mentoring and technical support for the production and marketing of the products is necessary.



Similarly, the linkages and coordination with various service providers must be established for the technical and informational support. The support would also be needed to manage conflict within the community members. Maintaining transparency of the group activities is already observed to the issues in two of the groups. So, KTWR will have to continuously facilitate to help the groups maintain transparency. In order to sustain their activities, women and poor must be increased their awareness on their rights and responsibility leading towards the empowerment.

The project extended the skill and knowledge of vegetable farming to potential leader farmers. This activity would not only increase the income of the participating farmers but would also improve the health condition through vegetable intake in the communities. At least 11 persons are found applying vegetable training skills and made income of Rs 2,000 to 5,000 from the sale of vegetables.

Output # 4: *Koshi Tappu Wildlife Reserve supported for effective project management, governance, learning and strengthening Park People relation for conservation of KTWR.*

This output aimed to strengthen the capacity of KTWR and enhance Park community cooperation. The lead role for this output was taken by KTWR authority and several activities implemented.

Project Activities in Output # 4

Human Resource Development: Orientation training were given to KTWR staff and Army commanders on the Buffer Zone (BZ) and 16 farmers with 9 women were orientated on Community Forestry management. Elephant camp staff were made aware on bio-diversity conservation through a orientation training. An exposure visit of well functioning FUGs of Sunsari was organized for the BZ CFUGs members.

Community Supports: Two high schools of Lauki and Haripur were supported with furniture and a scholarship is provided for a disadvantaged student.

Participatory Habitat Management: *Water hyacinth* was cleared from one of the wetland area. Two community forest user groups cleared *Mikania micrantha* (an exotic weed) from the KTWR forest and in exchange they were provided barbed wire worth Rs 80,000 to fence the park boundary. A study was made of food habits, ranging and habitat use by wild buffalo. Several community activities implemented for feral cattle control.

Infrastructure Development: A sewage system in the office complex is repaired. Motor garage, store room, water supply and guest house were repaired. A telephone

intercom system is installed in the office complex. Several equipments like computers, printers, and photocopier and two motor bikes are provided to KTWR.

The proposed KTWR and Buffer Zone management plan has also identified the need of enhancing conceptual understanding and practical skill of KTWR staff on community based bio-diversity conservation. In this regard, projects initiatives to increase awareness of KTWR staff, army commanders and elephant camp staff on BZ and community forestry is an important step in enhancing Reserve's capacity. Furniture support and scholarship support to schools and student has contributed to enhance relationship of park with local communities.

We observed an outstanding shift of people perception towards park in the eastern part of the KTWR. There is complete stoppage of grazing in the park area and people have started practicing stall feeding. Two of the CFUGs in Prakashpur and Madhuban have fenced their 7 km long community forest boundary hoping to stop wild buffalo towards their private farms. They have used the barbed wire from the exchange support they provided for grassland management in the forest of the reserve. A little further south there is about 10 km of previous fencing done by the KTWR about 15 years ago. The fence is without any barbed wire. People told us that the angry villagers demonstrated their anger by stealing barbed wire. The team is impressed from the paradigm shift in the way local people perceived the reserve then and now. The gray barren forests strips a year ago are now seen green and well stocked with grasses. The evaluation team appreciates the contribution made by the project towards the joint effort in developing the positive attitude of people towards KTWR. However, this is not at all a case in the western sector of the KTWR.

The team appreciates that the activities for this output were owned and led by the KTWR staff. However, there are not well written reports as there are with other outputs and IUCN staff knew much less about the activities implemented under this output. So, the joint planning and implementation, and the technical support if sought from IUCN staff and DNPWC would have further added value and quality in producing further more impacts.

2.2 Effectiveness and Efficiency

The evaluation team found the project very effective, -6.3(s7.1()d-5.3h)-15.Nhave352Wfectiv ii4(t)-5.s onsmtt

process which was periodically reviewed based on experiences and studies. Based on the logframe a monitoring plan was also developed. The plan consisted of community monitoring, monthly monitoring, quarterly monitoring, PAC field monitoring, financial monitoring and evaluation. The project also made use of self monitoring by encouraging lead farmers to submit monthly progress reports.

At the field level, a project implementation team was formed of KTWR, IUCN and PCP members. Every other month the implementation team met, planned the field activities, and reviewed the progress. We observed implementation team's effectiveness in the selection of training participants for leader farmer's training on on-farm fodder and grasses demonstration, which was done in an extr[de]-7.7(m)12oi(r5a1d in)ef(ai1d in-5.3(w)-5.752v07(on)-5.3(t3saTJ e

The Draft Management Plan of KTWR and Buffer Zone has identified several issues for Buffer Zone management. Some of these are:

Inadequate forest and grazing land in the Buffer Zone for reducing pressure in the Reserve resources.

adopting various strategies to mobilize resources such as renting out space for which the

- a) Agroforestry development through farmers to farmers knowledge transfer: Starting with 34 lead farmer trainees, the project expanded the home nurseries in 217 farmers and produced 88,000 seedlings of fodder trees and thousands of fodder slips. The multiplier effect of these newly introduced varieties of grasses and fodder should be tremendously high in few years of time. The farmers to farmers approach can be replicated and scaled up in many buffer zone areas to increase the fodder production and reduce the pressure in the park.
- b) Reaching women and poor for livelihood improvement: The identification of poorest of the poor women and allocating them pieces of land to plant fodder and NTFP and handing over of fish ponds for income generation is an excellent example of reaching poorest of the poor for the livelihood improvement. This modality of reaching poor can be scaled up in many of the CFUGs in the buffer zone areas.
- c) Community animal health center: The CAHC has been established with different processes, steps and has developed different rules and regulation within it. During this process of establishment, the community has taken full responsibility and ownership. It has its own management committee and business plan. This model of establishing CAHC can be practiced in other parts of buffer zone areas and also by many Community Forestry Users Groups.

Another interesting incentive mechanism observed during the evaluation by the team was the participatory fencing of the community forest by the locals to safeguard their livestock and crop deprivation from wild buffalos. This is an important lesson that can reduce conflict between park, people and wild animals for revenge killing. These mechanisms can undoubtedly be replicated in other parts of the country as well.

3. Issues and Constraints

Project achievements, as discussed earlier, clearly indicates the success of the project contributing to strengthen livelihood security for poor communities, reducing land use conflict and enhance biodiversity conservation. However, the evaluation team identified several issues and constraints that came up during the course of project implementation. These issues and constraints need to be considered in the upcoming “Conservation and Sustainable Use of Wetlands” project and other similar projects in Nepal.

Limited Impact in the western sector of KTWR:

In the western sector of the reserve the impact of project is limited. The practice of grazing

The KTWR has tried several times to control feral cattle but has not been effective in permanently removing them from the reserve. Enforcement is also difficult as the army patrolling by boat is not enough to control such a huge animal intrusion in the reserve. These

original inception report. However, DNPWC expressed some reservation in accepting the spirit of joint implementation. The evaluation team was not surprised to learn that there was quite strong push from IUCN to complete the project activities due to time constraint of the project. Moreover, the project was following IUCN financial rules which are quite robust with strictness in submitting expenditure bills, clearing advances dues and auditing in time.

Annex 1: Persons and organizations consulted/visited

Name and organization	Name and organization
<p><u>DNPWC, Kathmandu</u> Dr. Tirtha Man Maskey, DG Mr. Narayan Poudyal, DDG Mr. Gopal Upadhya Mr. Surya Bahadur Panday</p>	<p>20 Male and 8 Female members of Madhuban and Prakashpur Users Committee, CAHC Adhoc Management Committee and observation of CAHC in Madhuban.</p>
<p><u>KTWR, Sunsari</u> Mr. Ram Chandra Kandel, Warden Mr. Rom Adhikari, Nayab subba Mr. Yogananda Jha, Ranger Mr. Gopal Raut, Accountant Mr. Karna Ghimire, CM (PCP) Mr. Ashok K Shah, CM (PCP) Mr. Hasan Ansari, CM (PCP)</p>	<p>Mr. Md. Hadish Minya (Chairperson), Mr. Gopi Yadav (Secretary) and other member of Shiddakali CFUG, observation of nursery, land allocation and fish pond. Focus Group Discussion with: Ms. Oshila Devi Yadav; Ms. Somni Devi Sardar; Ms. Rabia Devi Chaudhari; Ms. Malia Devi Sardar; Ms. Jayeda Khatum Ms. Bunti Devi Sardar; Ms. Parma Shree Sardar.</p>
<p>Dr. Shyam Ranjitkar Sr. Irrigation Specialist World Bank Focal Person</p>	<p>Discussion with about 20 members of Simsar CFUG and observation of their nursery and fish pond.</p>
<p><u>IUCN Kathmandu and Sunsari</u> Mr. Sameer Karki, Coordinator Dr. Bishnu Hari Pandit, Project Advisor Dr. Vivekananda Jha, Field Coordinator</p>	<p>Home Nursery of Mr. Rudra Pd Khanal Home Nursery of Mr. Teeka Ram Raut Home Nursery of Mr. Lekhnath Dahal Home Nursery of Mr. Raj Kumar Singh</p>
<p>Mr. Puspa Bhattarai, Community Evaluator Mr. Dhrmendra Biswas, CAHW Mr. Indra Dev Yadav, CAHW Mr. Naresh Shah, CAHW Mr. Manoj K Chaudhari, CAHW Mr. Sanjay K Charudhari, CAHW</p>	<p><u>Individual and Group discussion with:</u> Ms. Renu Shah, Chairperson, BZMC Mr. Ganesh Mandal, Chairperson, Bairba-Barmeja UC Mr. Feroed Seikh, VC, Bairba-Barmeja UC Mr. Balaram Yadav, C, Udraha-Kamalpur UC Mr. Chandra Kanta Jha, Secretary, Barmeja VDC Mr. Guneshor Jha, Local person, Barmeja Mr. Badri Chaudhari, Local person, Barmeja</p>
<p>Mr. Rishi Ram Tripathi, DFO, Sunsari</p>	<p>Dr. Keshav Pd Premi, Chief, DLSO, Sunsari</p>

Annex 2: Consulted Reports and Docu

Annex 3: One-one interview check list for Beneficiaries

(to be made specific for specific groups of people)

1. What have you done/ received in the last year under the project support?
2. How have you expressed your needs in the project and how they are addressed or tried to address?
3. Please explain how you were selected to become trained or to become a member of committee. Who decided?
4. Tell me about the objective of your group or organization and how project is contributing to achieve your group's goal or organizational goal? (if they are affiliated with group or organization)
5. What project activities worked well in contributing your org /group's goal? And what factors contributed for those successes?
6. What did you like about this project and why? What did you not like or feel could have been strengthened and why”?
7. Who is being benefited from the project and how? What are the potential benefits? Who and how?
8. How are poor, marginalized and women involved and benefited in your activities? How they can benefit in the future?
9. How the activities initiated in your group/org will be continued from now on? Who will be responsible? How will you ensure transparency, accountability and financial/ social/ environmental sustainability?
10. Is there any improved relationship between people and park authorities? what was your interaction like with KTWR authorities before the project and now? What changes have occurred at all? Why have the changes occurred if they have occurred.
11. How the current political conflict has affected the activities in your group/org? (with specific examples)

Annex 4: One-one interview check list for Implementer/supporting partner
(to be made specific for specific groups of people)

1.

Annex 5: One-one interview check list for Central People

(to be made specific for specific groups of people)

1. What was the nature of your involvement with the DM Project and since when?
2. In what way project has tried to address the national priorities or conservation & development priorities (including DNPWC's/ KTWR's/ Local people's)? If yes, how? If no why?. Thinking about the future, how a project like this can contribute to address the national priorities?
3. Tell me about the DM project. What do you think about this project?
4. In your opinion, what worked well in the project? And What didn't work well in the project? And Why?
5. What do you t think about the process and implementation modalities of the project?
6. How do you access the impact of the project?
7. Has it been able to achieve its purpose (demonstrate a system for reducing no. of livestocks in the project area by providing livelihood-based incentives or poor farmers?
8. Reason for the project not been able to initiate wild buffalo insemination activities?
9. In what way project has tried to address the national priorities? If yes, how? If no why?. Thinking about the future, how a project like this can contribute to address the national priorities?
10. How has the h6wa

