

Institutional Strengthening and Awareness Raising for Sustainable Conservation of Critically Endangered

Achhami Cattle

(RSG Project: 01.12.09)

Final Report



Submitted by

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Acronyms

ACCAP	Achhami Cattle Conservation Awareness Project
ABD	Animal Breeding Division
CRG	Cattle Rearing Groups
DLSO	District Livestock Service office
FM	Frequency Modulation
FMD	Foot Mouth Disease
JTA	Junior Technician Assistant
NGO	Non Governmental Organization
NARC	Nepal Agriculture Research Council
NASRI	Nepal Animal Science Research Institute
TV	Television
RSG	Rufford Small Grant
RSGF	Rufford Small Grant Foundation
VDC	Village Development Committee



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RESULTS

After the completion of the RSG I and II project the following result was obtained.

1. Population declining rapidly due to:

a. **Breeding System**

Cross breeding was not done intentionally with Haryana bullocks but there was great chance of cross breeding with other indigenous bullocks. Inbreeding was more common being one bullock was available for servicing many cows for breeding.

Bullocks should be interchanged among different VDCs. Due to grazing on the same pasture land with other local and Haryana bullocks there was a great chance of cross breeding.

b. **Illegal trading to Tibet for slaughtering**

People from Jumla and Humla districts of Nepal buy the cow in very low price or exchange with woollen blanket weaved from wool of mountain goat and sheep 2 to 3 times per year and export to Tibet for slaughtering. Local people don't ask with Jumli and Humli for what purpose they buy the cow. Local peoples sell or exchange with out any queries.

c. **Socio religious aspect**

Locals have to donate at least one cow to Brahmin (Priest) to purify the house impured by the death of the family member. Priest cannot rear the whole cows obtained through the donation from the local people. The conventional culture was that other people should not buy that donated cow. So the Brahmins were compelled to sell the cows to Tibet.

d. **Economic return**

Due to very low output obtained from the cow, local farmers do not like to rear a large number of cows.

e. **Neglected by local people due to small size**

Being very small in size, they neglected the cattle.

2. The cow produces 2 to 3 litres of milk per day in lactation period.
3. The total number of the cow is 812 which is less than previous census.
4. Price of the cow has increased since they know the importance of it. Before conducting



the RSG first project(ACCAP), the price of the cow was NRs 3000/-cow but now the price of the same category of cow is up to NRs 5000/-

5. They have high resistance on foot mouth disease (FMD) .
6. Registered as world smallest breed by Food and Agriculture Organization.
7. Can thrive in diverse environments (5-40⁰C).
8. Rearing of cow, buffalo and goat at the same place at night period.
9. Formation of the Naumuthe Cow Rearing Groups

For the sustainable conservation of the Cow, Cow rearing groups and communities were formed .The project was able to conduct the census of the Cow and formation of the Cow rearing group simultaneously. The Cow rearing groups have been formed under the direct control and supervision JTA of DLSO.

10. In situ conservation through group (focusing on few VDCs in the natural habitat) from the following way.

- a) Awareness workshop including local farmers of pocket VDCs.
- b) To identify the local and national level project partners.
- c) Conservation pocket (Khaptad buffer zone in Achham district). The pocket area lies near to the Khaptad national Park. NARC decided to consult with buffer zone of Khaptad National Park.
- d) Incentive for conservation
- e) Incentive will be provided the cow rearing group.
- f) To make strategy for Naumuthe Cow improvement and conservation

11. Priority will be given to Achham district for Naumuthe Cow.

12. Exploration of resources (external except NARC, DLSO).

13. Stakeholder interaction for further programme formulation (HIEFER, IUCN, LI_BIRD, NARC,DLSO, WWF, NAST, Department of Wild Life Conservation – Buffer Zone, Biodiversity Focal Point, NGO Federation Achham).

14. Explore possibility of ex-situ conservation.

15. Support (technical and materials from DLS/NARC/NGOs- coordinated programme).

16. Conservation tied up with improvement - selective breeding, feeding improvement.

17. Evaluation for (positive attributes):

- Disease resistance



- Quality parameters (milk, urine, dung, hair, skin)
- Breed valuation study (social, economic)

18. Breed to be taken as national heritage from the national perspective.

19. Likewise President of NGO Federation and the priest committed to request the priest not to sell the Cow to Jumli and Humli who involved in illegal trading to Tibet and also committed to raise the issue of conservation of the Cow in the meeting of NGO Federation. They are going to request to corresponding VDC to allocate some budget for the conservation of the Cow.

Conclusion and Recommendation.

1. Inbreeding is more common being one bullock is available for servicing many cows for breeding; bullocks should be interchanged among different VDCs.
2. Cowshed should be improved and cow, buffalo and goat should not be placed at the same place at night period and separate place should be managed for goat and buffalo.
3. Neglected breed in its own habitat. The cow is neglected in its own habitat due to low output with compare to other milk breed. The next steps are to conduct the awareness project including local NGOs on different villages beside pocket villages.

4. Proper population estimation

When the number of females is less than 500 and the number of males is less than 20 the species is categorized as an endangered species. The present number of the female cow is 410 in Achham district. So, it is still categorized as rare animal. In this regards, census should be conducted in Doti, and Bajura districts too.

5. In situ conservation through group (focusing on few VDCs in the natural habitat) should be conducted through the following way:

6. Awareness workshop including local farmers in Achham, Doti and Bajura district.
7. Conservation pocket (Khaptad buffer zone in Achham district)
8. The pocket area lies near to the Khaptad National Park. NARC decided to consult with buffer zone of Khaptad National Park, NGO Federation Achham. Naumuthe Cow rearing group formation in pocket area.

9. Incentive will be provided to the Naumuthe Cow rearing groups.

10. To make strategy for Naumuthe Cow improvement and conservation.

11. Local people should be aware of causes of illegal trading of the cow towards the Tibet and positive attributes of them.



12. Village development committee should allocate budget for the promotion of Naumuthe Cow from village development fund.
13. Incentive should be given to the cow rearing local people for the conservation.
14. Providing pure Naumuthe bullock for the natural breeding to cow rearing groups.
15. Selling of cow towards the neighbouring VDCs to control illegal trading to Tibet.
16. Castetion of the other bullocks to avoid impact of current practices of cross breeding that threatens the genetic purity of cow by DLSO Achham.
17. Insurance of the cow through cow rearing committee.
18. Awareness programme should be conducted through local FM Radio.
19. Scholarship should be given to the students whose parents reared Naumuthe Cow.
20. Local people committed not to exchange the cow for woollen blankets.
21. Naumuthe Cow conference programme should be conducted in VDC as well as in district level and best one should be rewarded.
22. Breed to be taken as national heritage.
23. To make strategy for Naumuthe Cow improvement and conservation.
24. Priority will be given to pocket VDCs of Achham district for Naumuthe Cow.
25. Exchange of bullock between to village should be done to control inbreeding.

References:

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www.narc.org

<http://www.achhamicattle.com>

<http://lib.bioinfo.pl/blid:1297>

<http://lib.bioinfo.pl/meid:14699>

[http:// www.ruffordsmallgrants.org/rsg/projects/surendra_wagle_0](http://www.ruffordsmallgrants.org/rsg/projects/surendra_wagle_0)

Annex 1



Team Leader Surendra Wagle and Assistant Amar Shahi recording Cattle in census programme



Annex 2

Workshop with local people

A workshop with local people and DLSO was conducted at VDC office in Devasthan 5 which is a pocket VDC of Achhami Cattle lies very from district headquarter Mangalsen Achham on 27 Oct. 2010 .The participants were the representative of the different pocket VDC of the Achhami Cattle groups, local clubs, teachers, NGO federation, college/high school students and news reporter of different TVs and local FM radios. They were motivated to form Cattle rearing group and committee and committed to help research assistant Amar Shahi (JTA of DLSO Achham) for the formation of the CRG. Amar Shahi had been appointed as research assistant for the sustainable function of the CRG.

Prior to this workshop interaction with local people and workshop with DLSO and were also conducted separately and inference obtained from interaction and workshop were shared with local people held on 27 Oct. 2010 at Devasthan VDC 5. The place is the two days walking distance from the district headquarter Mangalsen Achham so workshops were done separately to share the information with more local people.

Participants of the workshop

- | | | | |
|-----|------------------------|-----|-----------------------------|
| 1. | Khadak Od | 15. | Khem Raj Dhami |
| 2. | Kamal Od | 16. | Brinda Devi Od |
| 3. | Range Od | 17. | Surendra Wagle |
| 4. | Prem Bista | | Team leader of the project |
| 5. | Kule Bista | 18. | Rabindra Wagle |
| 6. | Dan Bahadur Bista | | News reporter of local news |
| 7. | Rajendra Bahadur Dhami | | paper and FM radio |
| 8. | Surat Od | 19. | Shailu Wagle |
| 9. | Badhure Od | | College student |
| 10. | Ranna Devi Das | 20. | Amar Shahi |
| 11. | Dambara Devi Khadka | | JTA of DLSO Achham |
| 12. | Paunu Od | | |
| 13. | Mohan Od | | |
| 14. | Nrip Bahadur Bista | | |

On this occasion, inferences obtained from workshop with national level officers of NARC and NASRI from the RSG first project (ACCAP) were printed in books entitled of **the smallest Cattle breed of the world Achhami Cattle** as well as **wall calendar** containing information of the RSG First project (ACCAP) were shared with local people in workshop with local people and DLSO in local level. After the completion of workshop the following important outcomes were extracted.

Current status of the Cattle

1. Population declining rapidly due to following empirical facts:

a. Cross breeding with other species of Cattle especially with Hariana bullocks.

Due to grazing on the same pasture land with other local and exotic bullocks there is the chance of cross breeding.

b. Illegal trading to Tibet for slaughtering

Due to lack of knowledge about positive attributes of the Cattle, local people exchange the Cattle with woollen blanket.

c. Socio religious aspect

Locals have to donate at least one Cattle to Brahmin (Priest) to purify the house impured by the death of the family member. Priest cannot rear the whole Cattle obtained through the donation from the local people. The conventional culture is that other people should not buy that donated Cattle. So the Brahmin is compelled to sell the Cattle towards Tibet.

d. Economic return

Due to very low output obtained from the Cattle, local farmers do not like to rear a large number of Cattle.

e. Neglected by local people due to dwarf

2. The Cattle produce 2 to 3 litres of milk per day in lactation period
3. Price of the Cattle has increased since they know the importance of it before conducting the RSG first project(ACCAP), the price of the Cattle was NRs 3000/-Cattle but now the price of the same category of Cattle is up to NRs 5000/-
4. They have high resistance on foot mouth disease (FMD)
5. Registered as world smallest breed by Food and Agriculture Organization.
6. Can thrive on diverse environment (5-40⁰C).

7. After the completion of ACCAP a national level workshop was conducted at local level including local people, DLSO Achham and neighbouring DLSO

Issues

1. Proper population estimation
According to previous published data, the total number of the Cattle was 863. Among them adult female number was 378. When the number of female is less than 500 and the number of male is less than 20 in any species they are categorized as endangered.
2. Grazing on the same pasture land with other bullocks is the causes of hybridization
3. Neglected breed in its own habitat due to dwarfness and low output with compare to other milk breed.
4. Rearing of cow, buffalo and goat at the same place at night period.

Way Forward

1. Help to estimate the proper population of the pure breed
In this regards, the local people are excited to help the census process conducted by research assistant (JTA of the DLSO Achham) to estimate the pure breed population.
2. Formation of the Cattle rearing committee in pocket VDCs to contribute institutional strengthening and awareness raising for sustainable conservation.
3. Cowshed should be improved and cow, buffalo and goat should not be placed at the same place at night period and separate place should be managed for goat and buffalo.
4. Local people should be aware of causes of illegal trading of the Cattle towards the Tibet and positive attributes of them
5. Village development committee should allocate budget for the promotion of Achhami Cattle from village development fund.
6. Incentive should be given to the Cattle rearing local people for the conservation.
7. Providing pure Achhami Bullock for the natural breeding to CRG.
8. Selling of cow towards the neighbouring VDCs to control illegal trading to Tibet.
9. Castetion of the other bullocks to avoid impact of current practices of cross breeding that threatens the genetic purity of Cattle by DLSO Achham.
10. Insurance of the Cattle through Cattle rearing committee.

11. Awareness programme should be conducted through local F.M Radio.
12. Scholarship should be given to the students whose parent reared Achhami Cattle.
13. Local people committed not to exchange the Cattle with woollen blanket.
14. Achhami Cattle conference programme should be conducted in VDC as well as in district level and best one should be rewarded.
15. Breed to be taken as national heritage.
16. To make strategy for Achhami Cattle improvement and conservation.
17. Priority will be given to pocket VDCs of Achham district for Achhami Cattle.
18. Exchange of bullock between to village should be done to control inbreeding.

Representative of different Achhami Cattle rearing committee of different pocket VDCs and Representative of DLSO were participated in the workshop. ACCAP was very successful to aware the local people about the attributes of the Achhami Cattle .If they will get subsidy budget for the improvement of cowshed, they will rear more cow. They were fully aware about the importance of the Cattle and committed not to sell or exchange the cow with woollen blanket with Tibetan people. This awareness programme related to nature conservation was organized successfully. Local farmer's response was very good. They were very happy and excited about the importance of the Cattle they have. They asked to DLSO to allocate the budget to improve their cowsheds. They asked DLSO to provide seed and seedlings of different types of grass in time. They requested us to launch such a programme from time to time.

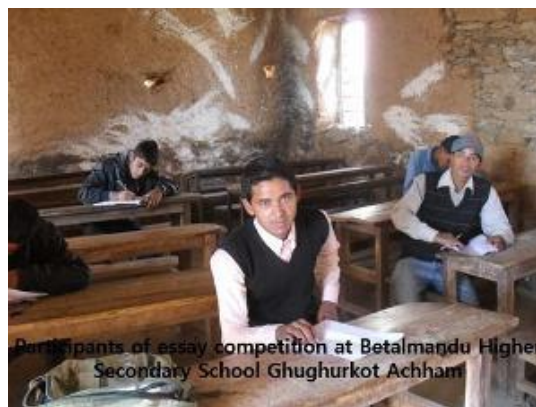
Workshop with representative, clubs, teachers, NGO federation, DLSO Achham, college/high school students and reporter of TVs and FM radios

Annex 3

Essay writing competition

To enhance the conservation of Achhami Cattle, essay competition was conducted in 10th October 2010 .The title of the essay competition was **“Role of Local Community in Achhami Cattle Conservation”** The programme was conducted at Betalmandu Higher Secondary School located at Ghughurkot VDC, Achham. The school was the resource centre of the different 6 schools. To conduct the program, different schools located at pocket VDCs

of the Achhami Cattle were informed to send the participant for the essay writing programme. The schools conducted the essay writing competition in the given title in corresponding school. The schools sent two participants to take part in the essay writing programme, who secured first and second position in their school's essay writing competition. Four schools sent their selected participant for the programme. Although the time was of only one hour and there was no word limit, the participants came up with some really good essays and our judges was thoroughly impressed by the overall standard of the essays.



Participant of Essay Competition

S.N	Name of students	Name of school	Result
1	Hansha Raj Khadka	Hansbahini Secondary School,Devisthan	First
2	Niraj Shaha	Betalmandu Higher Secondary School,Ghughurkot	Second
3	Krishna Kumari Bhatta	Shree Budhakot Secondary School,Budhakot.	Third
4	Dilip Rajbhandary	Ghughurkot Secondary School,Ghughurkot	Forth
5	Nirmala Bhatta	Hansbahini Secondary School,Devisthan	
6	Nirmal Khadka	Betalmandu Higher Secondary School,Ghughurkot	
7	Harka Bahadur Bista	Shree Budhakot Secondary School,Budhakot.	
8	Amar Od	Ghughurkot Secondary School,Ghughurkot	

English version of essay of first position holder of the competition

Resource centre : Betalmandu Higher Secondary School
 Name of the participant : Hansa Raj Khadka
 Name of school : Hansabahini Secondary School, Devisthan

“Role of Local Community in Achhami Cattle Conservation”

Far Western development Region is important from religious and natural points of view. Achhami Cattle is the smallest Cattle species in the world which is found only in the hilly districts of Far western development region such as Achham, Doti, Bajhang and Bajura. Achhami Cattle is called **“Naumuthe cow”** because it is only nine fists from its foot to the hump of its body. The origin of Achhami Cattle is in Achham though it is found in different districts of far western development region. Achhami Cattle, which is significant from, religious and natural points of views, is endangered. It is dwarf, black in colour and has small and sparkling (dazzling) eyes. It has small and thin horns. It can graze in steep hills as goats. It does not need large space to stay (live). The female Achhami Cattle can be rendered (tended) easily on little (few) grass. Thus it is important because of its different characteristics.

Achhami Cattle, which might help to extend tourism if related organizations pay heed (attention), has become a rare. There are 243 Achhami cattle in Jalpadevi VDC, 137 in Baijanath VDC, 119 in Ghughurkot, 63 in Budhakot, 53 in Babla, 98 in Khaptad, 76 in Mastamandu and 74 in Devasthan according to the Cattle statistics of Cattle service, Achham though it is endangered. In accordance with this statistics, Achhami Cattle is very low in number and endangered. There are many reasons why it has become an endangered species. The major reasons are that it is killed by wild animals and sold to the people of Bajura, Humla and Jumla. Not only these, it is given in daughter's marriage as dowry as it is degrading. People think that if a cow is given in their daughter's marriage, dead ones will have people in heaven. The next problem in preserving this cow is that it is exported to Tibet. Export of such a cow to Tibet is doubtful because either they eat its flesh or want to make news that the smallest Cattle species is found only in China. There are more than 70% of Chhetries and other castes, Brahmins can't tend cows which are given in ritual as they are low in number. On the other side, the other castes are not allowed to keep cows. The Brahmins therefore are compelled to exchange such cows in low price with Bhote, Humli and Jumli who came to graze their goats in Achham. Thus Achhami cows are decreasing. Achhami people believe that if a cow is given in daughter's marriage, there will be Goddess Laxmi in their daughter's house and give a cow in her marriage. It is one of the reasons why a cow is decreasing. If such a tradition is stopped, preservation of such a cow is possible.

To preserve Achhami Cattle, local people in the community should not sell it and the community should allow all castes to keep cows. Not only these, different groups should be formed for the preservation of Achhami Cattle. There should be well management of fodder and grass for it. Cowshed should be kept clean and cows should be timely treated if illness occurs. Farmers should be educated about hygienic cowshed so as Cattle will be healthy. Another significant characteristic of Achhami Cattle is that it gives birth to male calf mostly because of which Achhami Cattle is declining. Apart from it, different tribes of cows are imported from Terai. It therefore is endangered. If local people keep Achhami Cattle, it will help for the preservation of Achhami Cattle; the other VDCs except the pocket VDC, Achhami Cattle area should have vital in preserving it. The natural height of Achhami Cattle is ascending /descending because of cross breeding with other Cattle imported from Terai. Thus it is essential for preserve it because preservation of Achhami Cattle is our existence and pride and prestige our nation. All of the people such as social workers, farmers, intellectuals and politicians should play significant role to preserve it. We need to make the people aware of Achhami Cattle that it is the smallest Cattle species in the world.

The milk of Achhami Cattle is nutritious and contains much fat. We can make cheese out of it and earn flourish our trade. A safe grassy land should be managed to preserve Achhami Cattle. Since it can be hunted by wild animals, a safe and fixed grazing area for it should be managed. The farmers should inform the clerks of DLSO who works for the preservation of Achhami Cattle. Not only farmers, all of the people in the community need to work collectively to preserve it. The community should organize Achhami Cattle festivals. Farmers should have permission to graze their Cattle in community forest. All farmers should tend Achhami Cattle, the smallest Cattle species to preserve it. Thus Achham a back warded district of Nepal will be recognized with world through the preservation of Achhami Cattle. In addition to this, only Achhami Cattle tenders- if facilitated, it will be helpful and beneficial in preserving Achhami Cattle.

English version of essay of second position holder

Resource centre : Betalmandu Higher Secondary School
Name of the participant : Niraj Shaha
Name of school : Shree Betalmandu Higher Secondary School

“ Role of Local Community in Achhami Cattle Conservation”

Nepal is a landlocked country. There are varieties of animals, birds, insects and amphibians though Nepal is a small country. It is full of natural bio-diversity. There are 183 species of animals in Nepal. It has 4.22% of animal species. These animals have their own significance, no matter they are domestic or wild. Cow is the most significant in domestic animals.

According to Hindu religion, cow is taken as Goddess Laxmi. It is the national animal of Nepal. Achhami cattle are famous in the world. It is small in size and recognized in many other countries. It is short horns. It is 90 cm tall and 120 cm long. It is the smallest cow in the world. Achhami oxen (bulls) have hump where as cows do not. Because of its fame Achhami cattle has been a sample in the world. This animal species flourished in Achham district. There are 119 Achhami cattle in Ghughurkot VDC, 58 in Babla VDC, 283 in Jalpadevi VDC, 137 in Baijnath VDC, 98 in Khaptad VDC, 63 in Budhakot VDC according to statistics presented by **Achhami Cattle Conservation and Awareness Project, Nepal (ACCAP)**. ACCAP had played the vital role for the development and up-liftment of Achhami cattle conservation. It has become prestige respect and pride of Achhami people so as Achham is recognized in the world though Achham is remote district. Nepal is famous not only for the highest peak Mt. Everest but also for the smallest animal species- Achhami cattle.

But these cattle are endangered today. This has made Achhami people sad. If this cattle extinct, our prestige will go down, because it is quite questionable. It is essential to show these cattle for future generation. It is likely to be legendary story. It is so because these cattle is attacked and endangered by wild animals and because of grazing land respectively. On the other side, Achham does not have suitable and sufficient grazing land. Not only this, it is endangered because of cross- breeding with exotic bulls of Terai. Some of them meet death from steep hills where as some are killed by wild animals because of unsafe cowshed. The next important cause why it is declining is that these cattle are exported in Tibet.

To preserve these cattle we all Achhami people have to think of preventive measures and omit its name from the list of endangered species. For its preservation various organizations in different places are to be opened up such as ACCAP, DLSO, etc. Apart from it, Achhami cattle conservation team is to be formed in the district. Export of it to Tibet is to be stopped. Safe cowshed is to be constructed and government should allocate budget for its

conservation. For artificial insemination is to be practiced. Not only this grazing land should be fixed up and farmers should be provided with varieties of grass seeds. Public awareness programme, seminars and workshops are other important aspects for its conservation. Media also should work for its significance and conservation.

Since Achhami cattle is our own, we have to play significant role in conserving it. "Let's preserve Achhami cattle, let future generation see it and let Nepal be recognized as an example in the world by increasing its number" it is essential that we have to play significant role for the development of Achhami cattle.



Certificate given to the participant of essay writing competition

Annex 4

Wall calendar distribution

Wall calendar had been published on the occasion of Nepalese New Year 2067 B.S., including information obtained from Achhami Cattle Conservation Awareness Project ACCAP Nepal .In this calendar activities done by DLSO, Ways of Conservation, Population of the Achhami Cattle and characteristics of Achhami Cattle have been included. Beside these information, different photo of first RSG have been included. Local farmers hang the calendar at least one year with great interest and it had been found as an effective tool for information dissemination/sharing. In this context one thousand copies of wall calendars were

published and these are being distributed free to the local people, students, teachers and different relevant governmental and non-governmental organizations in Nepal.



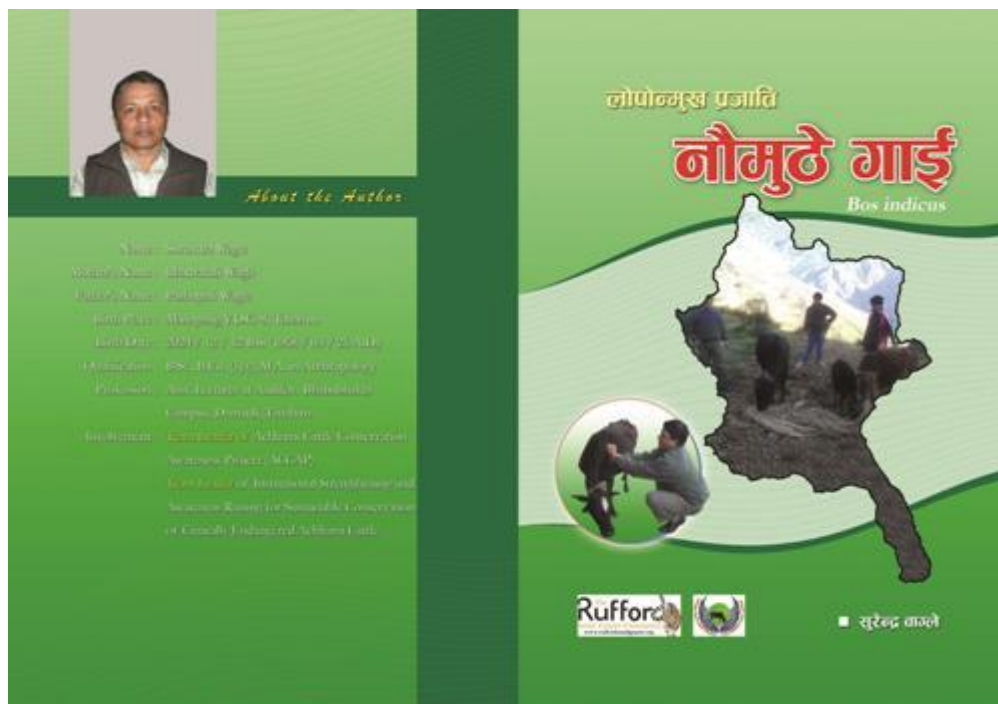
Surendra Wagle disseminating the wall calendar to Lok Nath Poudel (chief of central cattle and buffalo promotion office)Nepal



The calendar had 4 pages and each page contains three months. The half of each page had been occupied by the pictures and message of conservation and the remaining area is occupied by national/local festivals, holidays, national and international days. The green days (different conservation days) are highlighted. Some of the photographs of activities during the first RSG project are also printed to increase awareness and motivate the people to participate in Achhami Cattle conservation initiatives. The RSGF logo along with the contact details of the team leader had also been published.



Annex 5



Annex 6

Formation of the Achhami CRG

ACCAP, Nepal had revealed that there were 863 Cattle and categorized as endangered species for the conservation point of view. So the RSG II project had committed to find the actual population of the Cattle as well as to form the Cattle rearing group for the sustainable conservation of the Cattle. This project was able to conduct the census of the Cattle and formation of the Cattle rearing group simultaneously as committed in proposal. The CRG have been formed under the direct monitoring and supervision of JTA of DLSO Achham (assistant of this project). Cattle rearing committees had been formed from CRG. Assistant of this project and JTA of the DLSO Achham was also member of the each Cattle rearing committee. Each Cattle rearing will be supported from DLSO Achham and get benefited via JTA Amar Shahi. Information as well as supporting activities conducted by DLSO will be flow into each Cattle rearing group through the Cattle rearing committee. Three Cattle rearing committees had been formed in eight pocket VDCs from CRG. They were as follows:

- I. Kalalekh Achhami Cattle Rearing Committee**
- II. Pantola Achhami Cattle Rearing Committee**
- III. Dhudhkoshi Achhami Cattle Rearing Committee.**

I. Kalalekh Achhami Cattle Rearing Committee

Kalalekh CRG had been formed from five CRG. The catchment area of the Kalalekh committee ward no 5, 6,7and 8 of Devasthan VDC and ward no 9 of Khaptad VDC. There are altogether five CRG under Kalalekh Achhami Cattle rearing Committee. They are as follows:

1. Kalika Achhami Cattle Rearing Group, Devasthan -5
2. Pyare Gaun Achhami Cattle Rearing Group ,Devasthan-5
3. Kimtoli Achhami Cattle Rearing Group, Devasthan-7
4. Paribartanshil Achhami Cattle Rearing Group , Khaptad-9
5. Achhami Cattle Rearing Group Devasthan- 6

Kalalekha Achhami Cattle Rearing Committee

Executive Board Member

Name	Position
Ranga Od	President
Kul Bahadur Kahdka	Vice –President
Harka bahadur Rokaya	Secretary
Biru Bista	Treasure
Nar Bahadur B.K	Member
Prata Od	Member
Dane Bista	Member
Prem Bista	Member
Kule Bista	Member
Amar Bahadur Shahi	Assistant/JTA

The followings were the member of the Kalalekh Achami Cattle Rearing Committee from which five CRG were formed. The total member the Cattle rearing committees are listed below:

Members of the Kalalekh Achhami Cattle Rearing Committee

Kamal Od	Naya Das
Ranga Od	Jagat Das
Dhwaj Od	Kul Bahadur Bista
Kanne Od	Dan Bahadur Bista
Prem Od	Dile Bista
Paunu Od	Nandu Singha Bista
Bindu Od	Santa Bahadur Bista
Padama Od	Khiure Bista
Chandra Devi Od	Prem Bista
Khadak Od	Dipak Bista
Mahani Od	Biru Bista
Tile Od	Ranga Bista
Rajendra Od	Lali Bista
Rajendra Dhami	Sarba Bista
Mauni Dhami	Bas Bahadur B.K
Naya Das	Harka Bahadur Rokaya
Jagat Das	Janga Bahadur B.K
Kul Bahadur Bista	Man Bahadur Rawal
Dan Bahadur Bista	Bahadur Rawal
Kamal Od	Prem Rawal
Ranga Od	Prem Bahadur Rokaya
Dhwaj Od	Birman Rokaya
Kanne Od	Dharma Rawal
Prem Od	Saliman Bhul
Paunu Od	Kamal Devi Lohar
Bindu Od	Khane Od
Padama Od	Dhan Bahadur Khadka
Chandra Devi Od	Indre Das
Khadak Od	Khemraj Khadka
Mahani Od	Prata Od
Tile Od	Jogi Luhar
Rajendra Od	Rup Khadka
Rajendra Dhami	Kul Bahadur Bohora
Mauni Dhami	Amar Shahi

Kalika Achhami Cattle Rearing Group, Devasthan -5

Executive Board Member

Name	Position
Shree Ranga Od	President
Dhwaj Bahadur Od	Vice –President
Shree Prem Od	Secretary
Tile Od	Treasure
Khadak Od	Member
Rajendra Od	Member
Rajendra Dhama	Member
Bindu Od	Member
Padma Od	Member
Mauni Od	Member

Pyare Gaun Achhami Cattle Rearing Group ,Devasthan-5

Executive Board Member

Name	Position
Kule Bista	President
Naiya Das	Vice- President
Dane Bista	Secretary
Dilli Bista	Treasure
Dambar Od	Member
Jagat Das	Member
Mahoni Dhama	Member
Kamal Od	Member
Kanne Od	Member
Chandra Devi Od	Member

Kimtoli Achhami Cattle Rearing Group, Devasthan-7

Executive Board Member

Name	Position
Bir Bahadur Bista	President
Prem Bahdur Bista	Vice- President
Prakash Bista	Secretary
Ranga Bista	Treasure
Dipak Bista	Member
Sarba Bista	Member
Lali Bista	Member
Khiure Bista	Member
Santa Bahadur Bista	Member
Nanda Singh Bista	Member

Paribartanshil Achhami Cattle Rearing Group ,Khaptad-9

Executive Board Member

Name	Position
Shree Nar Bahadur B.K	President
Harka Bahadur Rokaya	Vice –President
Janga B.K	Secretary
Kamal Od	Treasure
Shree Bahadur Rawal	Member
Prem Rawal	Member
Prem Bahadur Rokaya	Member
Dharma Rawal	Member
Saliman Bhul	Member
Birman Rokaya	Member

Achhami Cattle Rearing Group Devasthan- 6

Executive Board Member

Name	Position
Swane Od	President
Kamala Devi Od	Vice- President
Kul Bahadur Kahdka	Secretary
Dhan Bahadur Khadka	Treasure
Suke Od	Member
Indra Od	Member
Prata Od	Member
Khem Raj Khadka	Member
Bir Bahadur Khadka	Member
Jogi Luhar	Member

II Pantola Achhami Cattle Rearing Committee

In Ghughurkot VDC, there are five (5) CRG are formed under the Pantola Achhami Cattle Rearing Committee. This committee is consisted of 11 members including two members from each CRG and JTA of DLSO Achham who is the assistant of this project too. The names of the Achhami CRG are as follows:

1. Kalika Achhami Cattle Rearing Group
2. Nawadurga Achhami Cattle Rearing Group
3. Sirjanshil Achhami Cattle Rearing Group
4. Himresal Achhami Cattle Rearing Group
5. Khapar Achhami Cattle Rearing Group

Kalika Achhami Cattle Rearing Group

Executive Board Member

Position	Position
Prem Prasad Bhat	President
Ranga Prasad Bhat	Vice –President
Dirgha Prasad Bhat	Secretary
Harina Devi Bhat	Treasure
Gomati Devi Bhat	Member
Dhannath Bhat	Member
Dabal Prasad Bhat	Member
Nanda Kala Bhat	Member
Nirmal Kumari Bhat	Member
Ranga Devi Bhat	Member

Nawadurga Achhami Cattle Rearing Group

Executive Board Member

Position	Position
Saraswoti Devi Bhat	President
Ganga Devi Bhat	Vice- President
Archana Kumari Bhat	Secretary
Dambara Devi Bhat	Treasure
Paru Devi Bhat	Member
Lipuri Devi Bhat	Member
Ganga Prasad Bhat	Member
Ganesh Prasad Bhat	Member
Badhi Devi Bhat	Member
Chandrakala Devi Bhat	Member

Sirjanshil Achhami Cattle Rearing Group

Executive Board Member

Name	Position
Hemkarna Aauji	President
Jagate Aauji	Vice -President
Kale Aauji	Secretary
Ramesh Aauji	Treasure
Mangale Aauji	Member
Sita Aauji	Member
Apsara Aauji	Member
Radha Aauji	Member
Dwaj Aauji	Member
Kule Aauji	Member

Himresal Achhami Cattle Rearing Group

Executive Board Member

Name	Position
Ganesh Bahadur Shaha	President
Lok Bahadur Shaha	Vice –President
Rup Aauji	Secretary
Janaki Shaha	Treasure
Kashiraj Bhat	Member
Janaklal Bhat	Member
Krishna Devi Bhat	Member
Deuma Kumari Bhat	Member

Khapar Achhami Cattle Rearing Group

Executive Board Member

Name	Position
Man Bahadur Khadka	President
Subitra Khadka	Vice –President
Prakash Khadka	Secretary
Dandi Prasad Joshi	Treasure
Ganesh Bahadur Khadka	Member
Lalita Devi Joshi	Member
Ram Khadka	Member
Gokul Khadka	Member
Tek Bahadur Khadka	Member
Surat Bahadur Khadka	Member
Kale Khadka	Member

The followings were the member of the Pantola Achhami Cattle Rearing Committee from which five CRG were formed. The total member the Cattle rearing committees are listed below:

Members of the Pantola Achhami Cattle Rearing Committee

Deumati kumari Bhat	Kashiram Bhat
Ganga Devi Bhat	Janaklal Bhat
Nanda kala Devi Bhat	Ganesh Bahadur Shaha
Harina Bhat	Dambara Devi Khadka
Krishnakala Bhat	Tek Bahadur Khadka
Dhanraj Bhata	Pabitra Devi Khadka
Dish Raj Bhat	Subitra Khadka
Chandra Kala Bhat	Kalu Khadka
Damba Devi Bhat	Prakash Khadka
Bisnu Prasad Bhat	Makar Khadka
Ranga Prasad Bhat	Bhim Bahabur Khadka
Bhim Prasad Bhat	Hemkarna Aauji
Nirmal Kumari Bhat	Jagate Aauji
Goati Devi Bhat	Ramesh Aauji

Lipuri Devi Bhat	Dhwaj Aauji
Saraswoti Devi Bhat	Mangale Aauji
Sirjan Kumari Bhat	Sita Aauji
Paru Devi Bhat	Radha Aauji
Ganesh Prasad Bhat	Apsara Devi Aauji
Ganga Prasad Bhat	Kale Aauji
Rup Aauji	Januka Kumari Shaha
Kule Aauji	Lok Bahadur Shaha
Surat Bahadur Khadka	Dandi Prasad Joshi
Ganesh Khadka	Lalata Devi Joshi
Gokul Khadka	
Ram Khadka	

III. Dhudhkoshi Achhami Cattle Rearing Committee

Being less number of members, Dhudhkoshi Cattle Rearing Committee had not been divided into CRG.

Executive Board Member

Name	Position
Dabal Bahadur Rawat	President
Dwaj Bahadur Bogati	Vice- President
Kalu Singh B.K	Secretary
Naina Devi Bogati	Treasure
Dhan Bahadur Bogati	Member
Santi Devi Das	Member
Naresh Bahadur Khadka	Member
Lal Bahadur Khadka	Member
Jagat Bahadur Badahit	Member
Nrip Bahadur Bogati	Member

Members of the Dudhakoshi Achhami Cattle Rearing Committee

Min Bahadur Bogati	Jogadevi Bogati
Harka Bahadur Rawat	Manasara Devi Das
Kalu Singh B.K	Santi devi Das
Bhwansingh Badahit	Saru Devi Khatri
Dhwaj Bahadur Bogati	Lal Bahadur Khadka
Maniraj Bogati	Naresh Bahadur Khadka
Mepati Bogati	Remanta Bahadur Bogati
Sagar Bahadur Bogati	Jit Bahadur Bogati
Dabal Bahadur Rawat	Lalit Bogati
Nandakala Devi Bogati	Rup Bahadur B.K
Maina Devi Bogati	Kul Bahadur Rawat
Kamala Kumari Bogati	Shobha Devi Das

Annex 7

Article published in Bhanushree on the auspicious occasion silver jubilee ceremony

STATUS OF ENDANGERED SPECIES “NAUMUTHE COW” IN NEPAL

Abstract

Naumuthe cow is the smallest indigenous cow breed of the world, less than one metre in height at withers can be domesticated in harsh environment and low input systems not only in Nepal but in entire world where low input system prevails, considerably at risk of being extinct due to illegal trading to Tibet for slaughtering. However it is a great genetic resource for entire world, local farmers are avoiding this animal due to low level of awareness on such positive aspects. There is inadequate information on indigenous animal genetic resources & the available information has not been properly documented for the conservation of these unique cows. If the trend of avoiding these cows continues, the future generation will never see this animal & it will be a great loss of biodiversity.

1. Introduction

Naumuthe Cow (*Bos indicus*) is a breed of zebu cow originated in Achham district, far western region of Nepal and distributed in Achham, Bajhang, Bajura, and Doti districts. Naumuthe Cow is a smallest breed of the world less than 1 meter in height at the withers. Naumuthe Cow is the unique fauna of Nepal. They are suitable for hilly region and can be reared in very low input systems & used mainly for milk production. Their body colour varies from black to white, i.e. black, brown, grey, white, spotted black and white. According to the census report 2010, the total number of cows in Achham district is 812. According to DLSO Achham, cow's average height is 88 cm at the withers with an average weight of 150 kg. Bull's average height is 97 cm at the withers and weight on average 160 kg.

Status of “NAUMUTHE COW” in Nepal

Understanding and evaluation of the species status in the nature require reliable scientific data on the species ecology, behaviour and population before they are classified into specific threat category. Then only successful conservation action plans could be tailored to reduce the vulnerability of animal. There have been reports of Naumuthe Cow, which indicates that the population of Naumuthe Cow is declining.

Achhami Cattle Conservation and Awareness Project (ACCAP) Nepal, funded by Rufford Small Grants Foundation (RSGF) revealed that there were 863 Cow in Achham district. Among them, 378 were cows. Being number of female population is less than 500; it was categorized as endangered species. So the Rufford Small Grants Foundation (RSGF) second project committed to find the actual number of population of the Cow in Achham district. So the RSGF's second project (Institutional Strengthening and Awareness Raising for Sustainable Conservation of Critically Endangered Achhami cattle.) successfully completed the census programme and found the actual number of population of the Cow in Achham district. According to census survey, the total population of the Cow in Achham district is 812 out of them female population is 410. For this purpose, the help of district livestock service office (DLSO) Achham was taken for the census. The previous census was conducted by DLSO in 2007. For this purpose DLSO explored the area where the Cows were reared through the help of Sub-DLSO of the Achham district. DLSO had ordered sub office

to investigate the location of the Cow. Finally, it was declared that only eight VDC were found as pocket VDC out of 75 VDCs of Achham district.

In order to find the actual population of the Cow same procedure as conducted by DLSO in 2007 was applied via DLSO Achham in this census program too. Again it was found that only eight VDC were found as pocket VDC and there were not any Cow in other VDCs. It was quite difficult to identify the Naumuthe Cow phenotypically. So the entire census was carried out by JTA of the DLSO Achham through the direct observation of the morphological features of the Cow. The Cow having height less than 90 cm was categorized as Naumuthe Cow. The census was completed visiting door to door of the farmers. During the census, it was observed that hybridization reduces the number of pure Cow especially in the area where Hariana Bullocks are used for draft purpose. The data obtained from the census has been tabulated below for the analysis.

	Year	2007	2010	2007	2010	2007	2010	2010		2007	2010		
S.N	VDC	Bull	Bull	Cow	Cow	Calves	Male Calf	Female Calf	Total Calves	Total	Total	Difference	%
1	Budhakot	74	11	118	54	51	25	23	48	243	113	-130	-53.49
2	Ghughurkot	22	5	65	47	50	18	25	43	137	95	-42	-30.65
3	Baijnath	20	3	43	38	56	17	16	33	119	74	-45	-37.81
4	Babla	22	5	35	47	41	15	15	30	98	82	-16	-16.32
5	Khaptad	10	28	21	85	32	30	34	64	63	177	114	180.95
6	Devisthan	10	8	15	44	28	13	34	47	53	99	46	86.79
7	Jalpadevi	13	4	42	37	21	11	13	24	76	65	-11	-14.47
8	Mastamandu	12	5	39	58	23	24	20	44	74	107	33	44.59
Total		183	69	378	410	302	153	180	333	863	812	-51	-5.9
Difference		-114		32		31				-51			
Percentage		-62.29		8.46		10.26				-5.90			

Source: Census report 2010

The above table reveals that the number of population of the Cow have been increased in Khaptad, Devisthan, and Mastamandu VDCs which are very far from the road accessible area. It also reveals that the number of bullocks have been decreased except Khaptad VDC. Likewise total population of cow have been increased by 8.46%. If it is analyzed individually, it reveals that number of cows in Budhakot has been decreased most i.e.53.49% Likewise the number of cow's population has been

increased in Khaptad and Devasthan, Mastamandu, Babla VDC where as the number of cows have been considerably decreased in Ghughurkot, Baijnath and Jalpadevi.

The previous census report was analyzed placing the male and female calves in one column but in this census male and female calves has been placed at separate column. The total numbers of calves have been increased by 31 i.e. 10.26%.The number of calves have been increased in Khaptad, Devasthan, and Mastamandu and considerably decreased in other VDCs. The number of cow have been increased by 32 and there are 180 female calves .In total, the number of female population will be 590 including female calves. So the table shows that the population of the Cow is increasing order. Local were highly sensitive about the importance of the Cow and current status of the Cow In total the number of cow have been decreased by 5.9% .The Cow is still endangered condition in the conservation point of view.

2. Objectives

- To contribute conservation efforts to Naumuthe Cow in Achham district of Nepal through activities for raising awareness among local people.
- To contribute sustainable conservation and reduces the current practices of cross breeding of the Cow that threatens the genetic purity of cow.
- To find out actual status of the cow which need for the further conservation effort need for the government and any other stakeholders who want to involve in conservation activities.

3. MATERIALS AND METHODS

3.1 Reconnaissance Survey

A week long reconnaissance survey was organized in study site during Oct 2010, with intent to familiarize the research activities and exploring the Naumuthe Cow rearing sites, potential habitats, and planning for detailed Naumuthe Cow survey. A superficial survey was conducted 75 VDCs of Achham district. The survey reveals that Naumuthe Gai were found in eight VDCs of Achham district viz. Mastamandu, Baijanath, Devasthan, Babla, Ghughurkot, Khaptad, Jalpadevi, and Budhakot.

3.2 Naumuthe Census Survey

Based on the cursory survey detailed Naumuthe Cow survey was conducted during Oct 2010 to gather data on Naumuthe Cow status, habitat use, suitability and key and potential habitats and threats. Survey was conducted in eight pocket VDCs viz. Mastamandu, Baijanath, Devisthan, Babla, Ghughurkot, Khaptad, Jalpadevi, Budhakot hiring JTA of DLSO Achham.

3.3 Interviews

During the survey, local farmers, teachers, government officials, news reporter, students, and rearing community based organizations were interviewed to generate information. This was helpful to understand overall picture on Naumuthe Cow status, illegal trading to Tibet. Interview also helped to assess local attitudes for possible Naumuthe Cow conservation.

3.4 Stakeholder Consultation Meeting

A meeting with local people and DLSO was conducted at VDC office in Devisthan 5 which is one of the pocket VDC of Naumuthe Cow lies very from district headquarter Mangalsen Achham on 27 Oct. 2010 .The participants were the representative of the different pocket VDC of the Naumuthe Cow rearing groups, local clubs, teachers, NGO federation, college/high school students and news reporter of different TVs and local FM radios. In this meeting importance of the cow were shared with local people

3.5 Key informant interview

Key informant interview was done among the national level officers of NARC and NASRI, teachers, officials of the NGO federation.

3.6 Data analysis

Data obtained from the field study were categorized to two types quantitative and qualitative. Quantitative data were analysed through tabulation and while other forms of data were analysed by descriptive ways.

4. RESULTS

4.1. Population declining rapidly due to:

i. Breeding System

Cross breeding is not done intentionally with Hariana bullocks but there is great chance of cross breeding with other indigenous bullocks. Inbreeding is more common being one bullock is available for servicing many cows for breeding. Bullocks should be interchanged among different tole. Due to grazing on the same pasture land with other local and Hariana bullocks there is a great chance of cross breeding.

ii. Illegal trading to Tibet for slaughtering

People from Jumla and Humla districts of Nepal buy the cow in very low price or exchange with woollen blanket weaved from wool of mountain goat and sheep 2 to 3 times per year and export to Tibet for slaughtering. Local people don't ask with Jumli and Humli for what purpose they buy the cow. Local peoples sell or exchange with out any queries.

iii. Socio religious aspect

Locals have to donate at least one cow to Brahmin (Priest) to purify the house impured by the death of the family member. Priest cannot rear the whole cows obtained through the donation from the local people. The conventional culture is that other people should not buy that donated cow. So the Brahmins are compelled to sell the cows to Tibet.

iv. Economic return

Due to very low output obtained from the cow, local farmers do not like to rear a large number of cows

v. Neglected by local people due to small size

- 4.2. The cow produces 2 to 3 litres of milk per day in lactation period.
- 4.3. The total population of the cow is 812 which is less than previous census.
- 4.4. Price of the cow has increased since they know the importance of it. Before conducting the RSG first project(ACCAP), the price of the cow was NRs 3000/-cow but now the price of the same category of cow is up to NRs 5000/-
- 4.5. They have high resistance on foot mouth disease (FMD).
- 4.6. Registered as world smallest breed by Food and Agriculture Organization.
- 4.7. Can thrive in diverse environments (5-40⁰C).
- 4.8. Rearing of cow, buffalo and goat at the same place at night period.
- 4.9. Formation of the Naumuthe Cow Rearing Groups.
For the sustainable conservation of the Cow, Cow rearing groups and communities were formed .The project was able to conduct the census of the Cow and formation of the Cow rearing group simultaneously. The Cow rearing groups have been formed under the direct control and supervision JTA of DLSO.
- 4.10. In situ conservation through group (focusing on few VDCs in the natural habitat) from the following way:
 - 4.10.1.1. Awareness workshop including local farmers of pocket VDCs.
 - 4.10.1.2. To identify the local and national level project partners.
 - 4.10.1.3. Conservation pocket (Khaptad buffer zone in Achham district).
 - 4.10.1.4. The pocket area lies near to the Khaptad national Park. NARC decided to consult with buffer zone of Khaptad National Park.
 - 4.10.1.5. Incentive for conservation

- 4.10.1.6. Incentive will be provided the cow rearing group.
- 4.11. To make strategy for Naumuthe Cow improvement and conservation.
- 4.12. Priority will be given to Achham district for Naumuthe Cow.
- 4.13. Exploration of resources (external except NARC, DLSO).
- 4.14. Stakeholder interaction for further programme formulation (HIEFER, IUCN, LI_BIRD, NARC,DLS, WWF, NAST, Department of Wild Life Conservation – Buffer Zone, Biodiversity Focal Point, NGO Federation Achham).
- 4.15. Explore possibility of ex-situ conservation.
- 4.16. Support (technical and materials from DLS/NARC/NGOs- coordinated programme).
- 4.17. Conservation tied up with improvement - selective breeding, feeding improvement.
- 4.18. Evaluation for (positive attributes):
 - 4.18.1.1 Disease resistance
 - 4.18.1.2 Quality parameters (milk, urine, dung, hair, skin)
 - 4.18.1.3 Breed valuation study (social, economic)
- 4.3. Breed to be taken as national heritage from the national perspective.
- 4.4. Likewise President of NGO Federation and the priest committed to request the priest not to sell the Cow to Jumli and Humli who involved in illegal trading to Tibet and also committed to raise the issue of conservation of the Cow in the meeting of NGO Federation. They are going to request to corresponding VDC to allocate some budget for the conservation of the Cow

CONCLUSION AND RECOMMENDATIONS

1. Inbreeding is more common being one bullock is available for servicing many cows for breeding; bullocks should be interchanged among different tole.
2. Cowshed should be improved and cow, buffalo and goat should not be placed at the same place at night period and separate place should be managed for goat and buffalo.
3. Neglected breed in its own habitat. The cow is neglected in its own habitat due to low output with compare to other milk breed. The next steps are to conduct the awareness project including local NGOs on different villages beside pocket villages.
4. Proper population estimation

When the number of females is less than 500 and the number of males is less than 20 the species is categorized as an endangered species. The present number of the female cow is 410 in Achham district. So, it is still categorized as rare animal. In this regards, census should be conducted in Doti, and Bajura districts too.

5. In situ conservation through group (focusing on few VDCs in the natural habitat) should be conducted through the following way:
6. Awareness workshop including local farmers in Achham, Doti and Bajura district.
7. Conservation pocket (Khaptad buffer zone in Achham district) The pocket area lies near to the Khaptad National Park. NARC decided to consult with buffer zone of Khaptad National Park, NGO Federation Achham. Naumuthe Cow rearing group formation in pocket area.
8. Incentive will be provided to the Naumuthe Cow rearing groups.
9. To make strategy for Naumuthe Cow improvement and conservation.
10. Local people should be aware of causes of illegal trading of the cow towards the Tibet and positive attributes of them.
11. Village development committee should allocate budget for the promotion of Naumuthe Cow from village development fund.
12. Incentive should be given to the cow rearing local people for the conservation.
13. Providing pure Naumuthe bullock for the natural breeding to cow rearing groups.
14. Selling of cow towards the neighbouring VDCs to control illegal trading to Tibet.

15. Castetion of the other bullocks to avoid impact of current practices of cross breeding that threatens the genetic purity of cow by DLSO Achham.
16. Insurance of the cow through cow rearing committee.
17. Awareness programme should be conducted through local FM Radio.
18. Scholarship should be given to the students whose parents reared Naumuthe Cow.
19. Local people committed not to exchange the cow for woollen blankets.
20. Naumuthe Cow conference programme should be conducted in VDC as well as in district level and best one should be rewarded.
21. Breed to be taken as national heritage.
22. To make strategy for Naumuthe Cow improvement and conservation.
23. Priority will be given to pocket VDCs of Achham district for Naumuthe Cow.
24. Exchange of bullock between to village should be done to control inbreeding.

Perception of Schools Student and Local People

Interview were taken to know the perception of local people towards the Achhami Cattle conservation in Achham, Local people strongly believed that population of Achhami Cattle are decreasing in study area as compare to past.

Interviews were taken from herders and other local people of the study area.

All the respondents were not known its legal status. Our conservation activities and series of local people discussion and workshop were able to raise conservation awareness and provided knowledge its situation and status. Therefore, there was urgent need to conduct conservation awareness activities both for schools students as well as villagers.

Annex 9

Impact of the ACCAP

After the completion of the ACCAP, Nepal, the first project of mine, head of the Livestock Production Directorate conducted the seminar entitled of Bio-Diversity Preservation Programme.

English version of seminar conducted by head of the Livestock Production Directorate Bio-Diversity Preservation Programme.

Summary of Awareness Seminar on Achhami Cattle's Genetic Resource Preservation

Under the Bio-diversity Preservation Programme, one day seminar on **Achhami Cattle's Genetic Resource Preservation** was held in Sanfe Bagar, Achham District on Sunday, February 14, 2010. The programme was organized in Mastamandu Village Development Committee. Participants were from four/four Village Development Committees of the Bajura and Doti District. The total numbers of the participants were 76. They were two each from the eight Village Development Committees including farmers running Achhami Cattle farms; Karna Bahadur Bogoti, and Dinesh Prasad Parajuli, Directors from the Far Western Regional Livestock Service Offices, respectively; Head of the Goat Development Farm Office Budhitola; Head of the Livestock Service Office Achham, Bajura, Dadeldhura and Doti; head of the Livestock Production Directorate; Head of the National Pasture land and Livestock Feed Center; head of the Central Buffalo Development Office, Harihar Bhawan, were present in the seminar.

The first session of the programme was Inauguration Ceremony which was chaired by Mr Karna Bahadur Bogoti, the Regional Director, Far-western Livestock Service Directorate. Mr Udaya Chandra Thakur, the Programme Director, Livestock Directorate had shed light on the purpose of the Seminar and welcomed the

participants and on the occasion. He had also presented seminar paper on The Importance, Potentiality and Challenges of Cattle Rearing. The second seminar paper was on The Role of Farmers and Motivators in Livestock Preservation and Utilization which was presented by Dinesh Prasad Parajuli.

The second session was chaired by Dr. Dinesh Prasad Parajuli, Regional Director, and Central Region Livestock Service Office. The first seminar paper of the session was on Diversity, Preservation, and Utilization of Livestock Available in Far-western Region, which was presented by Dr. Karna Bahadur Bogoti, Regional Director, and Central Regional Livestock Service Office. The second seminar paper of the session was on Appropriate Breeding Management Necessary in the Preservation and Utilization of Achhami Cattle which was presented by Lok Nath Poudel, Developmental Officer, Central Buffalo Development Office, Harihar Bhawan Kathmandu. The third seminar paper of the session was on The Practice and Challenges of Preservation of Achhami Cattle in the Achham District. It was presented by Khadga Bahdur Saha, Head of the District Livestock Service Office, Achham.

After the paper presentation the participants were divided into three Groups. They were:

1. Condition of Rearing Achhami Cattle: Then, Now and in Future.
2. Why is it necessary to preserve and utilize of Achhami cattle?
3. Means of preservation and utilization of Achhami cattle: Who, what, how and why the means of preservation and utilization of Achhami cattle adopt?

The conclusion of the discussion is following:

1. Seminar papers on issues of biodiversity presentation and Achhami Cattle raising were very appropriate.
2. All the programmes running for the preservation of Achhami Cattle should be in coordination with District Livestock Service Center.
3. Though the programmes on preservation of Achhami cattle are not enough, whatever programmes are running on the preservation of Central Buffalo

Development Office and Livestock Production Directorate on the preservation and utilization of world famous Achhami cattle are appreciable.

4. It should be kept in mind while planning next year's planning that though the district is the working area of Community Livestock Development Project and bottoms of planning is taking place in the district necessary activities could not be performed on the preservation of Achhami cattle.
5. Since the conservation of biodiversity is a difficult task, the farmers involved in in-situ conservation should be provided monthly incentives and rewards from the state.
6. Livestock Service Department and Livestock Production Directorate should give special attention to the conclusion notes agreed in the discussion.
7. Non- governmental Organization involved in the activities should be carried out in coordination to the concerned governmental agencies.
8. Such seminars should be continued in the future as well.

Annex 10

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