TRAINING OF TRAINERS WORKSHOP ON SNAIL FARMING

ORGANISED BY CAD/RSG IN MUAMBONG ON 31 MAY 2008

Reported by:
Martin N. Etone
Atanga Wilson Nebafor
Hilary Ewang

1.0 INTRODUCTION

Both hunting and trading in *Bushmeat* form an important push factors to wildlife depletion in the Bakossi and Muanenguba forest region of Cameroon. This is done to generate income to satisfy basic household needs. One of CAD's key strategies has been to address the plight of endangered species of wildlife and improve livelihoods is to build locals capacities in viable micro-enterprises to provide alternative income and nutrients to the hunting populations in our project area. It in this light that CAD organized a training of trainers workshop on Snail farming in Muambong village on the 30th of May 2008 with financial assistance from the Rufford Small Grants Foundation in the UK as an additional way to generate income and curb pressure on wildlife resources. The workshop brought together 35 participants including hunters, Pepper Soup women, bushmeat consumers and traditional chiefs who gained practical knowledge and skills in snail farming. In to ensure effective participation, trainers employed participatory methods such as brainstorming, presentation, questions and answers, animation and practical demonstrations.

2.0 WORKSHOP OBJECTIVES AND EXPECTED OUTPUTS

Objectives

- To introduce snail farming as a viable alternative to bushmeat trading;
- To build local capacities in snail farming techniques ;
- To share ideas on existing snail farming methods;
- To mainstream HIV/AIDS in wildlife conservation.

Expected Outputs

- Participants gain knowledge and skills on snail farming;
- Participants recognize snail farming as an alternative source of income and food;
- Exchange of ideas and knowledge on snail farming is enhanced;

3.0 OPENING SESSION

Following prayers and self-introduction, the Coordinator of CAD welcomed and thanked participants for their participation at the workshop, as people who form major actors in the wildlife sector in Cameroon in general and in the Muanenguba and Bakossi region in particular. He said Cameroon's 1994 Wildlife law restricts the killing of animals and totally prohibits the sale of Bushmeat and for this reason; CAD finds it necessary to assist local communities in undertaking alternative income generating options to illegal hunting. In addition, he emphasized on the importance of farming and marketing snails as an activity that yields family income as well as contributes to biodiversity conservation. The coordinator expressed the need for mainstreaming HIV/AIDS in wildlife conservation, the reason for which CAD planned the training to highlight basic HIV/AIDS issues and the distribution of condoms to participants.

Furthermore, the Coordinator stressed the need for women to work in functional groups to attract greater benefits and facilitate CAD's extension activities. In addition, he called on participants to pay keen attention to the lectures to be given by the resource person, put it into practice and pass on the knowledge and skills gain on snail farming to other people irrespective of whether they are involved in bushmeat selling or not.

4.0 PARTICIPANTS' EXPECTATIONS

- To gain knowledge on snail farming;
- To know how to construct a snail farm;
- To understand whether the sale of snails is profitable than the sale of bushmeat;
- Know how to clean snails and how to prepare them;

5.0 TRAINING PROPER

5.1 What is Snail Farming?

Snail farming is the keeping of snails in a confined environment under human control and management. The types of snails cultivated in Cameroon are *Architina marginata and A. architina.*

This definition summarized snail farming as an activity that involved production, Management, Harvest and Sale.

5.2 Importance of Snail Farming

Again, in a brainstorming exercise, participants highlighted the usefulness and importance of snail farming. Some of important aspects of snail farming include:

* It is an alternative activity to bushmeat hunting and trading
* Provides as source of food or meat that can replace bushmeat
* It generates income for the family
* Is a source of medicine (treatment of waist pains)
* Provides employment
* Keeping snails contributes to biodiversity conservation
* Snail farming does not occupy much land and inputs as other agricultural activities;
* It makes use of organic material and hence is environmentally sound

5.3 Steps taken in Snail Farming

The steps involved in snail farming begin with the selection of suitable site, preferably a flat surface, selection of initial stock of snails, construction of pens, fencing of the site, installation of snails and the management of the snail farm. In addition, the facilitator stated the various equipment needed for farming snails.

5.4 Type of Housing for snails

There are several housing types but the common ones include: old tyres, Old basins Wooden and bamboo boxes and dug holes. *In each case, the farmer must ensure that*

there are no escape routes. Participants were however cautioned that basins and old tyres are preferred for small-scale farmers due to little capital in setting them up. However, cages and fenced pens aere good housing for type for both small and large scale production.

5.5 Snail Farming Methods

* Intensive (too much food/space). This method is practiced by large-scale commercial farmers requiring high capital.
* Semi-intensive: this is the method recommended by poor farmers
* Free range. The disadvantage in this method is that it is difficult to locate eggs, young snails and to keep out predators. Hence, the stock is not known.

5.6 Installation of Snail

During this session, the participants were advised that before installation the farmer must ensure the following:

- Select good breeding foundation stock of about 200-300 g in weight;
- Select active snails with no damage;
- Transport snails in well ventilated conditions, preferably in the morning or evening to avoid stress;

5.7 Feed and feeding

Snails feed on soft and juicy food. Such include:

* Ripe fruits (pawpaw, pears, banana etc), Soft leaves (water leaf, cabbage, green, pawpaw leaves)
* Scrape food (corn fufu, rice, cocoyams)

Note: make sure there is no salt in the food
Feed snails every day and remove old food
Provide clean drinking water at all times
Note Aestivation= period that snail seal up their mouth and rest with no food for a period of time.

5.8 Farm Management

Mr Atanga
Daily Activities

* Cleaning of feeders and drinkers;
* Keep pen clean
* Pick up and throw dead snails;
* Pick eggs
* Pick out snails with cracked shells;
* Keep records
* Observe pen for any holes

Periodic Activities

* Mulch your snails, using dry leaves;
* Water your snails;
* Repair pens
* Harvest and sell
* Control pests

5.8 Reproduction

Snails are hermaphrodite (two sex organs per snail)
Snails of the same size mate for 3 hours;
Lay eggs after 48 hours;
Eggs are laid in batches (7 eggs per batch)
Eggs hatch after 14-21 days;
Snails matures after 3 months;
Keep snails of same size in one cage or box;
Pick all eggs and keep in hatching chambers

5.9 Pest Management

No major diseases have been identified. But major pests in snail farming are black ants (very common), snakes, lizards and human being. These problems could be solved by applying a mixture of engine oil and water and constructing cages with raised floors. Because adult snails sometimes feed on young ones, it is preferable to keep them in separate chambers and always key the entrance to the cage

5.10 Record Keeping

Keeping records is an important aspect in snail farming to give an idea about the functioning of the farm at any one moment. It is important to keep record on: Number of eggs picked, number installed, young one, number dead, quantity sold, feed purchased and material / inputs
*Do the above on a daily basis

6.0 SNAIL PREPARATION FOR FOOD

Snails are widely eaten as a delicacy, particularly in west and Central Africa. They can be dressed with shell, eaten as snail pepper soup, Snail Soya or Vegetable /soup/stew.

7.0 A COST BENEFIT ANALYSIS AND AWARENESS

A hunter in the Muanenguba and Bakossi region says he can kill up to 3 porcupines in one week and make the following expenditure on the activity makes the following expenditure on going for an animal hunting:

A. Expenditure on Hunting of Three Porcupines

3 Cartridges =	1.500
Two Pairs of battery =	700
A Touch=	700
Food =	500
Day job for clearing =..	1.000
Total =	**4.400**

Income Generated by the Hunter:

In Bangem one Porcupine sells at	4.000frs
Hence 3 porcupines will sell at 4.000x3=	12.000frs
Weekly Profit made by Hunter 12.000-4.400=	7.600
In 4 weeks he makes 7.600x4=	**30.400**

Assuming he kills 3 animals each time he goes hunting

B. Expenditure on Selling Three Porcupines as Pepper Soup.

A woman buys one porcupine at	4.000frs
Hence, 3 porcupines will cost her 4000*3=	12.000
Maggi	100
Salt	100
Fuel wood	500
Labour	1.000
Total:	**13.700**

Income from Sale of Bushmeat Pepper Soup

No. of slices of meat from 3 porcupines 30 pieces x 3 x 200frs=	18.000.
Profit = 18.000-13.700=	3.300
Hence in one month, she will make a profit of 3.300 x4 weeks=	13.200FCFA

This is too little income for a household family.

C. Snail Farming

1 bucket of 400 snails currently costs=	5.250frs
1 snail lays 15 eggs, therefore 400 snails will lay 400x15=	6.000 snails
Total number of snails will be 6000+ 400 mother snails=	6.400 snails

Number of buckets of snail=6400/400 = 16 buckets

Selling at 5,250frs a bucket means 16 buckets will sell at 16x5.250frs=84.000FCFA

Profit of 84000-5250= 78.750 FCFA

From the above analysis, it shows that snail farming is a more profitable venture than hunting and sale of bushmeat.

At the end of this exercise, participants expressed much surprise that an activity they regard as mean tends to yield more benefit that what they are actually involved in (hunting and sale of bushmeat)

8.0 PRACTICAL DEMONSTRATION AND INSTALLATION OF SANAILS

The Stocking Density was explained as follows:

- 100 snails / m^2 for adults
- 1000 eggs /m^2
- 300 young snails /m^2

During the practical exercise, participants learnt how to construct a simple snail farm. Aspects treated here included: measuring farm dimensions, construction and netting the cage, installation of sails, shading of the snail farm and farm security. Over 200 snails were installed in the newly constructed cages by the women after drawing demonstration lessons from the consultant.

8.1 Brief Lectures on HIV/ADS and Distribution of Condoms

Another component of the workshop was a brief sensitization on family planning and HIV/AIDS prevention. Aspect such as prevention, HIV-testing and stigmatization of victims were addressed. In addition 100 packets of condoms were distributed about 50 persons including all the workshop participants and public observers.

9.0 CLOSING

The president of the Muambong wildlife committee, Mr. Sibe Pius, thanked CAD for organizing this very important training workshop which he said will go a long way to help in curbing rural poverty and hunting if gains are realized. He equally urged those that have been trained to help train others back in their respective communities. In his closing remarks, the Project Coordinator, Martin Etone, congratulated all the participants for accepting this laudable initiative and promised CAD's readiness to train and supply materials to interested snail farmers for whom this initiative is intended to substitute wildlife exploitation in the Bakossi forest regions of Cameroon.