

# REALITY CHECK - MOZAMBIQUE

(Year 1 - 2010)

Listening to the views of households and communities living in the Newcastle Disease Control Programme area



## FOREWORD

Current international development discourse focuses on the importance of working and providing assistance directly with poor and marginalized communities and households at grassroots level. Development practitioners and policy-makers agree on the need to further strengthen and improve their understanding of how individuals and households perceive and experience local realities and change resulting from different development processes.

This report on the Reality Check for the 'Strengthening Livelihood Options for Vulnerable Rural Households in Mozambique', brings together two highly innovative grass-roots and community-based approaches: adapted village poultry technology and the Reality Check Approach.

The project which focuses on improved village poultry management is based on new research and science increasingly adapted to impoverished communities. The Reality Check Approach, first developed under the Swedish International Development Cooperation Agency in Bangladesh, is a listening approach that enables poor individuals and households to voice their perspectives and understanding of their realities and the changes they experience.

It is our hope that these two innovative approaches in international development work will create new opportunities for poor communities and individuals to access relevant technical and management innovations, leading to enhanced entrepreneurship, expanded and sustainable economies and social interactions. The Reality Check Approach provides opportunities for better understanding of the context in which interventions are being made and well as the experience of these interventions so that necessary adjustments can be made by the project and policy makers. We hope that both these approaches will be further expanded and applied in other communities and areas that face new and important economic and social challenges.

## TABLE OF CONTENTS

<b>ACRONYMS AND GLOSSARY OF TERMS .....</b>	<b>3</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>4</b>
<b>SUMMARY .....</b>	<b>5</b>
<b>1. INTRODUCTION.....</b>	<b>7</b>
1.1 Overview of the project.....	7
1.2 Background to the 2 year Reality Check Approach.....	7
1.3 Introduction to the 2010 Reality Check Approach Report .....	8
1.4 Methodological Approach.....	8
1.4.1 <i>Methodology in Brief</i> .....	8
1.4.2 <i>Site and Household Selection</i> .....	10
<b>2. MAIN FINDINGS.....</b>	<b>11</b>
2.1 Manifestations of Poverty in the Project Area .....	11
2.2 The importance of poultry rearing for the HHH .....	13
2.3 The Knowledge and Practice of Poultry Rearing among HHH.....	15
2.4 Dealing with Mzungu (Newcastle disease).....	19
2.5 Observations on Project Process .....	20
2.5.1 <i>Village Selection</i> .....	20
2.5.2 <i>Selection, Training and Motivation of Vaccinators</i> .....	20
2.5.3 <i>Experience of Vaccination Campaign (July 2010)</i> .....	21
2.5.4 <i>Advice for Families keeping Poultry</i> .....	23
2.5.5 <i>Village Level Meetings</i> .....	23
2.5.6 <i>Involving Leaders</i> .....	24
2.6 Household Nutrition.....	24
<b>3. CONCLUSIONS.....</b>	<b>26</b>
<b>REFERENCES .....</b>	<b>Error! Bookmark not defined.</b>
<b>ANNEX 1 Reality Check Approach Methodology.....</b>	<b>27</b>
<b>ANNEX 2 Village Profiles.....</b>	<b>30</b>
<b>ANNEX 3 Descriptions of Host Households.....</b>	<b>32</b>
<b>ANNEX 4 List of people engaged in conversations about poultry rearing.....</b>	<b>37</b>

## ACRONYMS AND GLOSSARY OF TERMS

AusAID	Australian Agency for International Development
EC	European Commission
FHH	Female Head of Household
HHH	Host Households
ICA	Information Communication Activities
INGO	International Non Governmental Organisation
<i>machamba</i>	People's cultivated farmland
<i>mzungu</i>	Literally 'white person', local name for Newcastle disease, but also used for other diseases of chickens
MHH	Male Head of Household
ND	Newcastle disease
<i>nyamssoro</i>	Spiritual healer
RCA	Reality Check Approach
SDAE	Serviço Distrital de Actividades Económicas (District Services of Economic Activities)
Sida	Swedish International Development Agency
SWAp	Sector Wide Approach
<i>Xi-Changana</i>	Local language used in the Province
<i>xifakonte</i>	Potassium permanganate
<i>Xikhalo</i>	Variety of chicken prized for its powers when used in traditional spiritual ceremonies; characteristic short feathers
<i>xima</i>	Thick porridge made of ground maize (main staple in rural areas in Mozambique)
<i>xivulai</i>	a plant used to treat <i>mzungu</i>

### Exchange rates (September 2010)

1 USD = 35.85 MZN (Mozambique Metical)  
 1 AUD = 34.95 MZN (Mozambique Metical)  
 1 EUR = 49.75 MZN (Mozambique Metical)

## ACKNOWLEDGEMENTS

This Reality Check has been made possible by the commitment, enthusiasm and teamwork of many. We would like to express our gratitude and to give credit to those who have been directly involved in developing the Reality Check Approach. The Reality Check Approach is an initiative of the Swedish Embassy in Bangladesh and Sida (Swedish International Development Agency) and was launched in 2007 where it was undertaken as a five year longitudinal study looking at the Health and Education Sector Wide Approaches. The approach and methodology was developed by Helena Thorfinn (Sida Head Office), Esse Nilsson (Sida Head Office) and Dee Jupp.

This is the first time the Reality Check Approach has been adapted for use in Africa. The Reality Check study for the Newcastle Disease Prevention Programme is being carried out by a team led by Dr. Dee Jupp and comprising Dulce Sambo, Raimundo Nhamussumbe, Daniel Benigna Lopes, Dercio Ivan Luis, Ivete Macamo, Antonio Timbane, Ernesto Nguenha and Tanya Radosavljevic. Ana Zandamela provided her expert knowledge. Joost Verwilghen is the Project Manager and Dr Hans Hedlund has provided advisory support.

The Reality Check study is only possible thanks to the many families living in poverty in Mozambique who welcome members of the study team into their homes. We thank these families in all six villages for contributing their valuable time and allowing the team members to live with them and share their day to day experiences.

It is our sincere hope that this study contributes in some way to improving the understanding of those developing and implementing programmes to control Newcastle disease.

## SUMMARY

1. The Newcastle Disease Prevention Programme started in February, 2010 and will continue until October, 2011 (20 months).
2. The Reality Check Approach builds on the traditions of listening studies, which have the purpose of *'listening to, trying to understand and convey poor people's reality'*. The Reality Check in Mozambique is being undertaken to provide information on how the investment in Newcastle disease prevention is being translated into the experienced reality of people living in poverty in the project areas. It is planned to be a two year longitudinal study (2010-2011) where the research team members interact with the same communities and households during consecutive Septembers in order to identify changes and to build an in-depth understanding of felt impact of the programme.
3. The study is undertaken in six villages; two from each of two different districts and one each from two further districts in Mozambique where the project is active. Each team member spent a minimum of two nights and two days staying in the homes of three families living in poverty (19 households in total). This immersion by the research team members enables the best possible conditions for building trust and interacting with all members of the host family and their neighbours, for building on conversations over several days and for complementing conversations with direct observation and experience.
4. The study districts differ; district 1 is the most remote and surrounded by bush but otherwise has similar characteristics to district 2 in that people are mostly subsistence farmers and have poor access to water and services, whereas district 3 and 4 study sites can be regarded as semi-urban with more diversified income earning opportunities, better communication and good access to water and services.
5. Findings suggest that for most of the HHHs, chickens do not have much importance in terms of livelihood strategies but they keep them because *'they take care of themselves'* and *'they are easy'*. The HHHs mostly kept under 20 chickens and some only had two or three. None of our HHH expressed aspirations to have more chickens as part of an income earning strategy. In Districts 1 and 2, chickens are regarded as readily liquefied assets which can be sold or exchanged for small (but in practice occasional) immediate household expenses. Despite the importance as 'cash', our HHHs tell us that chickens are mostly kept for honouring guests when they visit (cooked or given as leaving gifts). Maintaining these social obligations is very important for all our HHHs irrespective of their relative poverty. Few of our HHHs eat the chickens except on special occasions such as birthdays, Christmas and New Year, or when the chickens die from Newcastle disease or when there is little else to eat with the *xima* towards the end of the dry season. Eggs are very rarely eaten. Apart from a small number of HHHs following strict Church principles and some of the more urbanised HHHs in District 3 and 4 most of our HHHs used chickens for ceremonies (honouring the dead on their death anniversary, baby naming etc) and for help with anxiety, lack of confidence etc. *Xikhalo* chickens and roosters are preferred for this and many of our HHHs kept at least one *Xikhalo* just in case it was needed for this purpose.
6. Various husbandry practices were explored with the study families which indicated a reluctance to provide overnight housing for poultry as it attracts predators and appreciation that chickens look after themselves by scavenging. Some care of young chickens is taken and any chores related to chicken rearing tend to be shared by women and younger children. Women rarely regard the chickens as theirs and rarely make the decisions about them. There is a conspicuous 'missing middle' generation in many of families (due to death or out migration) so HH comprise elderly and young. In these

circumstances chickens may have an increased significance as easily liquefied assets for emergency medical and education needs.

7. People seem rather familiar with Newcastle disease and its timing and symptoms but are confused by the vaccination campaign. The *Xi-Changana* word for 'vaccination' (*ku thlava*) literally means 'a prick' and people do not understand why the ND vaccine is administered by eye drops. Many think that rather than a preventive measure this is curative medicine, which they are more familiar with being administered this way. As experienced in the past, many refuse vaccination saying 'it kills chickens' or it is unnecessary if you only keep a few. Some vaccinators refused to vaccinate young chicks.
8. Much of the advice provided in the new flip charts is regarded as inappropriate by families; they have good reasons not to house chickens at night, cannot afford to make separate accommodation for sick chickens (cheaper to kill and eat them), cannot dig holes to bury dead chickens as soil too dry, cannot access the materials suggested for chicken houses, can do nothing about most of the sources of contamination so feel it is pointless to know this.
9. Vaccinators seem de-motivated by the lack of uptake of the vaccine, the difficulty in reaching and /or persuading enough HHH to become adopters and the low costs of the vaccine which makes this work financially unviable.
10. The study raises the following policy implications:
  - i. The project should accommodate the views of households on the value and relevance of keeping chickens. This implies that project activities and advice should be in line with this. Improved husbandry should not add financial or time burdens inconsistent with the value given to rearing chickens.
  - ii. Information provided to those rearing poultry needs to fit with existing experience rather than introducing new and potentially confusing concepts and terminology. For example, most households know and have even experienced *mzungu*, they recognise the connection with *moya* and usually kill diseased chickens swiftly. New messages should be kept simple and to a minimum e.g. '*do not transport a diseased chicken*', '*burn dead chickens*', '*vaccinate all chickens*'. Other messages, albeit based on good science (such as vaccinating 80%) are not easily explained or assimilated and too many messages leads to information overload and increases the potential for misinterpretation.
  - iii. Chickens are more significant for some members of the family than others; where there is the 'missing middle' i.e. adults of conventional work age have migrated or died, children and the elderly may give more value to chickens as they are easily converted into ready cash for minor emergencies (school expenses, medicines, pocket money) while other (larger) livestock is kept in trust for others or is not kept at all. This suggests a possible niche for the project in targeting children (perhaps through school) and older people for assistance.
  - iv. The motivation and continuation of vaccinators in the programme needs urgent attention. They need help to develop strategies to persuade people of the efficacy of vaccination and to extend the services they can offer so that they can earn a meaningful income from these activities. Their credibility needs to be strengthened by endorsement from authorities and clear affiliation.

## 1. INTRODUCTION

### 1.1 Overview of the project

The Newcastle Disease Prevention Programme started in February, 2010 and will continue until October, 2011 (20 months). The programme aims *'to contribute to food security and poverty alleviation through the improvement of poultry husbandry practices and the control of Newcastle disease (ND) in village chickens'* through five key strategies:

1. Appropriate vaccine and vaccine technology;
2. Effective extension materials and methodologies targeting veterinary and extension staff as well as community vaccinators and farmers;
3. Simple evaluation and monitoring systems of both technical and socio economic indicators used by both communities and supervising agencies;
4. Economic sustainability based on the commercialisation of the vaccine and vaccination services and the marketing of surplus chickens and eggs; and
5. Co-ordination of activities.

The project assumes that *'village poultry plays a crucial role in rural households, particularly in times of crisis'*; that poultry provides a *'key source of animal protein and micro-nutrients ...contributing to family nutrition'* and that poultry production is *'an important source of income ... in many poor rural households.'* Newcastle disease (ND) can devastate flocks but can be prevented by regular vaccination. The project seeks to raise awareness of prevention of ND and better husbandry at community level through trainings, meetings, ICA and four monthly vaccination campaigns, to ensure supply of quality vaccine and to facilitate inter-organisational co-ordination.

### 1.2 Background to the 2 year Reality Check Approach

The Reality Check initiative was established by the Embassy of Sweden in Bangladesh in 2007 as an important contribution to their Country Strategy for Cooperation with Bangladesh (2008-12) and focused particularly on primary health care and primary education in Bangladesh. These two sectors are supported by large programmes (known as Sector Wide Approaches or SWAs) to which Sweden contributes. In 2009, the approach was adapted for use in the Basic Education Programme supported by the Australian Agency for International Development (AusAID) in Indonesia. This current study is the first time that the Reality Check Approach has been used in Africa and the first time that it has been used in a project rather than programme context.

The Reality Check Approach builds on the traditions of listening studies, which have the purpose of *'listening to, trying to understand and convey poor people's reality'*. Listening studies differ from other forms of study in that they give agency to participants, thereby offering an opportunity for citizens' voices to be directly linked to those involved in designing programmes. This Reality Check in Mozambique is intended to provide information on how the investment in ND prevention is being translated into the experienced reality and perceptions of people living in poverty in the project areas. Efforts are made in the report therefore to present these voices and experiences as accurately as possible without overlaying our own interpretation.

This Reality Check is planned to be a two year longitudinal study (2010-2011) where the research team members interact with the same communities and households during consecutive Septembers in order to identify changes and to build an in-depth understanding of felt impact of the programme.



The study is undertaken in six villages in the four different districts in Mozambique where the project is active. Each team member spent a minimum of two nights and two days staying in the homes of three families living in poverty (19 households in total). This immersion by the research team members enables the best possible conditions for building trust and interacting with all members of the host family and their neighbours, for building on conversations over several days and for complementing conversations with direct observation and experience.

The study both complements and supplements other forms of study undertaken within the project, but has its own special characteristics. The findings from the Reality Check may confirm those already indicated by other forms of study and will confer on these another dimension of credibility since they are revealed as a result of in-depth qualitative conversations. The study may also supplement other forms of study by highlighting information less readily obtained through conventional studies and providing nuanced interpretations of quantitative data.

### **1.3 Introduction to the 2010 Reality Check Approach Report**

This report presents the findings from the first year of the 2 year Reality Check Approach for the Project. These findings have emerged from field work carried out in September, 2010 and from subsequent inter-team dialogue and analysis.

The next section is a brief explanation of the methodology which explains what makes the study different from others. This is followed by a discussion of the context of the programme and an overview of the Newcastle Disease Prevention Project. The main findings from the Reality Check Approach are presented under the headings: manifestations of poverty in the study districts and villages, the importance of poultry rearing for host households, practice of poultry rearing, experience and management of ND, family nutrition and observations of the project process. The final section provides conclusions and implications for programme policy and practice.

## **1.4 Methodological Approach**

### **1.4.1 Methodology in Brief**

A full description of the methodology can be found in Annex 1.

Reality Check Approaches adopt an approach similar to a *'listening study'* where study team members spend time with families living in poverty and have conversations with different family members, their neighbours and different local service providers. However, the Reality Check Approach always involves living with the family for several days and nights. The host family is referred to as the host household (HHH) and neighbours are referred to as focal households (FHH). Each team member interacts with their HHH and at least two FHH. In this Reality Check a total of 19 HHH<sup>1</sup> (see Annex 3 for a brief description of these) were included in the study (and conversations held with more than 200 people about chicken rearing and a further 360 about village life, see Annex 4).

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<sup>1</sup> A further 7 HHHs were included in the pilot in the non project area.



**Team members help with chores as a way to ensure that normal routines are not disturbed and to further opportunities for informal conversations while doing chores together**

The Reality Check Approach is not a conventional evaluation where achievements are assessed against a set of normative programme intentions. Rather it is an appreciation of the day to day reality as experienced by people living in poverty and the Reality Check Team is acutely aware that to be able to do this well, they must suspend judgment and reduce the influence of external bias on their conversations. There is thus a need to let the study participants take the lead in directing conversations while the team needs to maintain this ideal with a careful balance of external expectations.



**Children's views are encouraged through drawing pictures**



**'I have drawn a chicken because I love to eat them'**



Box 1 on the next page describes some important features of the Reality Check Approach which distinguish it from other methodologies.

**Box 1: What makes the Reality Check Approach different from other studies?**

The Reality Check Approach both complements and supplements other studies but has its own characteristics as follows;

- a) It is longitudinal; tracking change over time;
- b) It is qualitative (seeks answers to how? and why? rather than what?, when? and how many?) and deliberately explores a range of experiences;
- c) It uses informal conversations, not interviews, to put participants at ease and enable greater openness;
- d) It includes participants whose voices are less often heard (elderly, infirm, young, persons with disabilities) because it focuses on the whole household and not on forums such as focus group discussions;
- e) It uses immersion (staying with families living in poverty) so that the researchers can better understand the context in which conversations are held;
- f) It involves shadowing members of the family as they interact with formal and informal service providers or following up on their comments about service providers by having informal chats with them which enables these voices to also be heard.

In sum, the Reality Check Approach, where the team stays with the community for several days, allows researchers to be particularly attentive in recording different perspectives and other perspectives, relating these to actual life conditions (immersion and observation) and to following up earlier conversations (rarely possible in other forms of study).

**1.4.2 Site and Household Selection**

Locations were selected in the four working areas of the project. The villages within these four districts were purposively selected based on the following criteria:

- Complement the quantitative study being carried out by an INGO during the same time period as the Reality Check, i.e. the same general locations sharing common characteristics but not the same villages;
- Mix of villages which were close to district market towns and those which were far away; and
- Villages in districts which are considered to be more remote (so four villages were selected in districts 1 and 2 and only one in district 3 and one in district 4).

Description of the selected villages is provided in Annex 2.

The HHHs were mostly identified a week in advance of the study by two team members from each team during a pre-visit. During this half day visit, they talked with people in the village and gathered recommendations for households and families to stay with during the main study, based on our need to stay with poorer households which were actively involved in poultry rearing. As family nutrition was also a concern of this study, preference was given to households with children. In all villages, the village leader or administrative secretary was met as a courtesy. The purpose of the study was shared and discussions of the village demographics were held. However, the team members ensured that households were not selected by the leadership. Rather the team member walked round the village to get a sense of the socio-economic mix and visited the potential households. The team also tried to ensure that the HHHs selected were representative of the majority and were not those which villagers considered to be well off or well connected. The mix of HHH included:

- Households headed by elderly persons, with their children and/or grandchildren;
- Female headed houses (widows and abandoned women); and
- Widower.

Each team member stayed with their own HHHs for a period of at least two nights and two days in each location. Details of the HHHs can be found in Annex 3.

## 2. MAIN FINDINGS

### 2.1 Manifestations of Poverty in the Project Area

Much of Province in which the project is located is regarded as semi-arid and farming is mainly subsistence farming (maize, millet and sorghum), supplemented by beans, tomatoes and cabbage in the rainy season. Only in the less dry areas and riverine locations are fruit trees plentiful together with opportunities to grow a more diverse range of vegetables, even in the traditionally dry season. Districts 1 and 2 are arid with low productivity whereas Districts 3 and 4 support a more diverse agriculture, with surplus to sell. Charcoal collection and timber cutting supplement incomes in District 1 and 2 respectively, whereas Districts 3 and 4 (which are semi-urban in many ways) support a variety of income earning opportunities. Many families in all four districts have members who are working legally or illegally in South Africa. In Districts 1 and 2, there seem to be more working in the informal sector. These are unofficial migrants who are generally not sending home remittances but may bring gifts on visiting. This contrasts with Districts 3 and 4 where those living in South Africa are more likely to be formally contracted (in construction, mining, and drivers) and tend to send regular remittances of cash or kind.



**Typical arid conditions found in districts 1 and 2**

District 1 is very remote, with dirt road access and a paucity of public transport. Whilst access is slightly better in District 2, it still limits the opportunities for commercial activity although in both districts traders do visit to purchase charcoal, timber and livestock. More trading activity is apparent in Districts 3 and 4 and government credit is available for small business development activities. Prices of items such as washing powder, soap, salt, sugar are highest in District 1 (presumably because of higher transport costs to a more remote area) and least in Districts 3 and 4 (see Table 3).

The concentration of secondary schools in larger towns and villages in Districts 1 and 2 has resulted in few continuing education beyond primary level, whereas Districts 3 and 4 have higher education attainment levels. More children have dropped out of school or never attended school in District 1 and 2 than in Districts 3 and 4. Our HHHs indicate that this is often because the children *'do not feel like going to school'* rather than reflecting parents' wishes.

In Districts 1 and 2, the study villages water sources were primarily wells and swamps with few pumps and collecting water took much time each day (1-3 hours). By contrast the study villages in Districts 3 and 4 had good access to public pumps or wells within the village. Even though some queuing was required, the time taken to collect water is much less than in District 1 and 2 villages.



***Access to water in districts 1 and 2 is a major problem with long and difficult journeys and poor water quality.***

***In contrast District 3 has good access to water and enough to support kitchen gardening activities.***

Although the villages included in this study had no access to public electricity supply, many households in District 3 and a few in District 2 have their own or rented solar panels which power radios and TVs (and re-charge mobile phones). Mobile phone network coverage is extremely limited in District 1, slightly better in District 2 and good in Districts 3 and 4.




**Table 1: Summary of comparative poverty of study locations**

Villages in District	Location	Water source	Main occupation	Other income sources	Houses	Electricity
1	Deep bush, very remote, poor access to district town. No mobile phone network coverage. Few educated beyond primary	Wells	Subsistence farming, charcoal collection & selling	Relatives in informal sector in South Africa- no remittances	Traditional mud and straw, no pit latrines. Few, if any house assets. Main assets are livestock and land	None
2	Rural and remote with slightly better transport communication to district town than District 1. Intermittent mobile phone network coverage. Few educated beyond primary	Swamp	Subsistence farming, timber collection and selling	Relatives mostly in informal sector in South Africa- some formal sector supporting families here	Traditional mud and straw, some pit latrines. A few house assets e.g. tables, chairs. Main assets livestock and land.	Some solar panels powering radios
3 and 4	Semi-urban, better roads, reasonable access to district town and other amenities including secondary school. Mobile phone network	All HH have access to pumped or well water within the village	Diversified agriculture, some cash crops, non agriculture based work	Relatives in South Africa mostly in formal sector making regular remittances	Mixture of block houses and traditional mud and straw. All have pit latrines. Many house assets e.g. furniture, electrical equipment etc. less emphasis on livestock.	No mains electricity but many solar panels, generators powering TVs, radios, charging mobile phones etc

Details of the six villages are provided in Annex 2.

The whole team reviewed the different manifestations of poverty and made the following ranking of villages based on relative poverty. There is a big divide between the top four ranked villages in Districts 1 and 2 and the two villages in Districts 3 and 4 which are much less poor. The main determinants used to rank the villages in Districts 1 and 2 (i.e. those indicators where there was a discernible difference) were remoteness and terrain which impact on the quality of life (in particular time spent in water collection and inaccessibility of services) as well as having close relatives in formal employment in South Africa.

**Table 2: Assessment of Relative Poverty in the Study Villages**

	Poorest  Least poor					
Village	B1	A2	A1	B2	A3	B4

Note: A and B stand for the research teams and the numbers correspond with numbers given to districts

## 2.2 The importance of poultry rearing for the HHH

For most of the HHHs, chickens do not have much importance in terms of livelihood strategies but they keep them because *'they take care of themselves'* and *'they are easy'*. The HHHs mostly kept under 20 chickens and some only had two or three. In Districts 1 and 2, chickens are regarded as readily liquefied assets which can be sold or exchanged at the 'farm gate' easily (but in practice occasionally) for small immediate household expenses. Some said that they were kept to sell in case of small emergencies such an urgent need to buy conventional or traditional medicines. In villages in District 1 and 2, there are regular traders from the district towns, Zimbabwe and other places who come house to house, often to buy charcoal or

timber but will buy chickens at the same time<sup>2</sup>. It seems they do not come specifically for purchasing chickens. HHHs also sell to meet the local demand for various ceremonies. Cash payments are used to purchase such things as soap, washing powder, sugar, salt, rice, items for school (such as stationery and uniforms), traditional medicines, new or used jerry cans, toothpaste, body lotion, clothes etc. Sometimes outside traders bring goods they know will be in demand for exchange (cloth, water carriers, salt, fresh vegetables etc). In Districts 3 and 4, our HHHs did not keep chickens to sell but kept them solely for their own consumption. Although one woman told us that the regular outside traders (buying fruit, cashew, alcohol) might *'even buy chickens sometimes'* and sales might be made for small cash crises e.g. if *'short of sugar'*. Table 3 provides some information on what the money from selling a chicken can buy.

It would seem that in poorer HHHs living in largely 'cash-less' environments (Districts 1 and 2), cows and goats are regarded as 'savings accounts' and chickens as 'current accounts'. Where income sources are more diversified, higher HHH incomes and cash more utilised (Districts 3 and 4), chickens are less likely to be regarded in this way.

**Table 3: Current market prices of basic commodities**

Item	District 1 (MZN)	District 2 (MZN)	Districts 3 and 4 (MZN)	Comments
Chicken sold at 'farmgate'	60-70	50-60	50-60	Cocks fetch 100-130
Chicken sold in district town	100	60-150	80-185	Highest price is for cocks
Salt ( coarse) in nearest district town	20/kg		15/kg	
Sugar (brown or white) in nearest district town	40/kg	35/kg	30/kg	
Hand soap in nearest district town	30	25	20	Price per bar
Washing powder in nearest district town	90/kg	120/kg	100/kg	
School uniform in nearest district town	-	250-300	-	Basic primary school uniform-shirt and shorts/skirt
5 litre jerry can – exchange at farm gate	-	50	-	Used - new will be more

NB: District 1 is the most remote and District 3 the least remote so price difference probably reflect transport costs

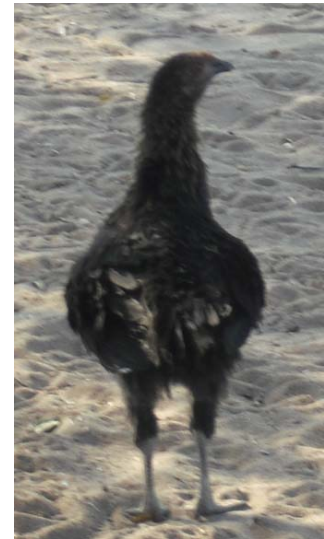
Despite the importance as 'cash', our HHHs tell us that chickens are mostly kept for honouring guests when they visit. They are easily killed and cooked for an unexpected guest. They are also given as gifts for guests to take away with them. Maintaining these social obligations is very important for all our HHHs irrespective of their relative poverty. Few of our HHHs eat the chickens except on special occasions such as birthdays, Christmas and New Year, or when the chickens die from ND or when there is little else to eat with the *xima* towards the end of the dry season. Only those who own more than 20 chickens eat chicken regularly (weekly/monthly) and these tend to be the relatively less poor families.

Apart from a small number of HHHs following strict Church principles and some of the more urbanised HHHs in District 3 and 4<sup>3</sup>, most of our HHHs used chickens for ceremonies. These

<sup>2</sup> Those from Zimbabwe exchange vegetables such as cabbage and tomatoes during the dry season when these are scarce in these districts.

<sup>3</sup> Some of these HHHs regarded these practices as *'things of the past'*. *'Our fathers used to do this but we don't any more'*

include honouring the dead on their death anniversary by sacrificing a chicken and spreading the blood on their grave or sacred place, evoking their names and calming the spirits. Roosters are sacrificed in the '*ku lhantswa muntl*' (watching the house) ceremony which is performed when the household feels they have experienced a period of bad luck or misfortune. The sacrifice is intended to appease the spirits. (See Box 2 for one example of this). *Xikhalo* chickens (see photo) are regarded as especially powerful and are the variety of choice for *nyamussoro* (spiritual healers) who are asked to help when people have anxiety, lack confidence, are depressed, jealous, cannot find a spouse or are facing transitions in their lives. The 'patient' is bathed in the chicken's blood together with a mixture of herbs and lets this dry while the *nyamussoro* evokes the spirits. Many of our HHHs kept at least one *Xikhalo* just in case it was needed for this purpose. Another variety, *naalikulwane*, distinguished by its featherless neck, is also regarded as powerful but these are rarer. Since *Xikhalo* are valued for ceremonies they also command a higher price than other chickens (about three times the value). One HHH told us that each new baby introduced to the outside world for the first time (around a month old) has a chicken gifted to them and named after them. The baby's fate is linked to the chicken, so if one dies it must be immediately replaced by another by the *nyamussoro*. Another HHH was just about to undertake a similar ritual with their month old baby and a single surviving baby chick from a brood of nine, when the baby is to be '*introduced to the ancestors*'.



***Xikhalo* variety which is believed to have special powers**

#### Box 2: Xikhalo

One of my FHH was a witchdoctor who is renowned in Maputo. He says it is better not to work in one's own village as the sorts of problems people come with are personal and confidential. He explained that people come to him for help when they feel depressed or anxious. A recent visit was from a man about to leave for South Africa for work and he wanted reassurance. He sacrifices *Xikhalo* and uses the blood and herbs to wash the body. The client lets this dry without towelling and then is provided protection.

None of our HHH expressed aspirations to have more chickens as part of an income earning strategy. In fact some indicated that having '*more chickens would be too much trouble*' as they would have to have supplementary feed and would not be able to sustain on scavenging alone. Only one FHH, who only had two chickens, indicated that she would like more '*so I can offer them to guests to eat*'.

### 2.3 The Knowledge and Practice of Poultry Rearing among HHH

The project has noted that households have indicated that they do not invest in overnight shelter for their poultry as it invites theft or because they are concerned that keeping the birds together may encourage the spread of disease (p. 15 Quarterly Report no.1, Feb-June 2010). The experience shared by our HHHs in Districts 1 and 2 concurs with the reluctance to house chickens at night but this is primarily a protection measure. Most families indicated that they have made a considered decision to ensure the chickens can fly away and protect themselves if threatened by predators. When they are cooped up in a chicken house they are sitting targets for snakes, dogs, wild cats and other predators.



***A rare example of a poultry house in District 2; most say it attracts predators***



No families raised the concern of theft or spread of disease. Only one family out of Districts 1 and 2 told us that having a house was better (see Box 3) and some had tried using houses but had abandoned them because of bitter experience. One HHH had the experience of the neighbour's dogs destroying the house (see Box 4). Another said the house attracted snakes and if they could not find eggs, they bit the hens which have since refused to go back in the house and fly into the trees *'we have given up trying to get them in the house... it is better anyway that they go to the trees'*.



**Most families in Districts 1 and 2 prefer to let their chickens roost in trees at night as they 'can fly away if predators come'**

Another said that wild cats had entered the chicken house through the roof. Another told us that the day before we came a chicken had been taken by a snake *'so it is better that they sleep in the trees'*. However, the situation is very different in Districts 3 and 4. This is a less remote and more developed area so snakes are rare and the only predators are birds. This, combined with higher household incomes, has led HHHs to prefer to house their chickens overnight in houses on the ground.

**Box 3: Good (but rare) experience of building a chicken house (village B2)**

My host family had constructed a chicken house for their chickens. The chicken house was well constructed and sturdy about 1.5 metres off the ground and had a ladder for the chickens to climb into the chicken house. One evening I observed the last chicken enter in to the chicken house and one of the children take down the ladder. I asked my host father why he kept the chicken house and he told me that it was for protection against wild animals. Hens with baby chicks are housed under a grain store for protection. My host father said that there were wild animals which come during the night and that the chicken house protected the chickens. I asked whether the family had experienced any trouble with the chicken house and my host father said that they had not.

**Box 4: Bad experience of building a chicken house (village A1)**

The HHH is not as poor as the others in this village and had a number of cows, goats and chickens as well as other household assets. They had enough money to be able to construct a chicken house. It was raised off the ground and they managed to persuade the chickens to use it, after some while. One night the neighbour's dogs came into the yard and destroyed the house, eating or killing all the chickens. Since that episode the family has decided not to repair the house and prefer that their chickens roost in the trees *'where they can fly away if attacked'*.

**Table 4: Where should chickens sleep at night?**

District	Roost in trees (# HHH)	Tried a house but abandoned it (#HHH)	Chicken house (# HHH)
District 1	5	2	0
District 2	3	1	2
Districts 3 and 4	1	0	4 (+1 housed in kitchen)

Project documentation suggests that *'women own and manage chickens'* but our conversations revealed that ownership is often regarded as the men's or the family's and decision making around selling, treating sick chickens and housing chickens (i.e. economic decisions) largely rests with the male household head. In Districts 1 and 2, even in the case

of a widow as head of the household or where the daughter-in-law is the main income earner, the decisions are devolved to sons or to father-in-law respectively. Most families leave chickens to scavenge for themselves and do not house them at night so they say *'there is nothing to do as chickens look after themselves'*. Where chores are identified such as feeding, putting in the chicken house at night and cleaning (rare) these are often done by younger children in the family. In Districts 1 and 2, the division of labour in the household where men and older boys tend to look after the cows, cut timber and collect charcoal, leaves the women and younger children looking after smaller animals (pigs and goats) and, by default, the chickens. In Districts 3 and 4, our HHHs were either female headed households or functionally female headed households because their husbands work in South Africa. The ownership, management and decision making in these cases is usually the woman's.

**Table 5: Who owns, who looks after and who makes decisions about chickens?**

Owns	Looks after	Makes decisions	Comments
<b>District 1</b>			
Grandson (9 yrs)	Grandson	Grandson	Left 5 chickens by his father when he left for South Africa when the boy was 5 years old, now has 50. Wants to prove his worth when his father returns so will not sell any. (See photo)
Family	Nothing to do	Elder widow	Before husbands death, they were his
MHH	Nothing to do	MHH	
Family	Son (15)	MHH	
Family	Daughter in law (21)	Daughter in law	
MHH	Nothing to do	MHH	
Wife	Nothing to do	?	Because man rarely at home
<b>District 2</b>			
MHH	Son (10)	MHH	
Family	Separated daughter (31)	Daughter	Daughter asks permission from father (70)
Wife	Wife	Wife and father	
Sons (14 and 12)	Sons	Sons	Sons of a widow buy what they like- used as pocket money
Family	Nothing to do	MHH and wife jointly	
Wife	Wife	MHH	Owns only in the sense that she has responsibility for them (as indicated by a group of men including the MHH) Man makes decision to sell, but wife decides use of money
<b>District 3</b>			
Husband and wife	Daughter in law	Wife	Decisions are around killing to eat as they never sell.
MHH	everyone	MHH	Widower
Late MHH	Twin sons (10yrs)	FHH	Widow, so makes decisions in absence of MHH, still considers chickens as her late husband's
FHH	Widowed daughter	FHH	Lives away in Maputo
Wife	Wife and children	Wife	The wife is functionally the household head in the absence of her husband who works in South Africa
FHH	FHH	FHH	Widow

In all four Districts, it is very noticeable that there is a 'missing middle' generation. A glance through the descriptions of the households (Annex 3) indicates many of our HHHs consist of grandparents with their grandchildren, sometimes including daughters-in-law or daughters whose husbands have died or are working in South Africa. The significance of chickens may be nuanced in these situations; livestock may be being kept on behalf of others and are therefore under trusteeship rather than ownership, livestock may have been sold to help family members go to South Africa or older people may have reduced their livestock numbers (through meeting their offspring's marriage obligations or because they feel can no longer manage to look after them). Older people can, however, manage to continue to keep a few chickens. Departing fathers may have gifted chickens to their children as a means to provide for small emergencies in their absence.

All the HHHs leave their chickens to scavenge though most also provide '*muhungo*', the husks of the maize collected in preparation of *xima*, usually done on a daily basis. Sometimes they are given *maxallani* (sorghum). Chickens eat '*mulwha*' (wood boring insects) and the gleanings from harvesting, washing dishes and garbage.

Generally, left-overs from meals are fed to the dogs and cats rather than the chickens and chickens get assertively shooed away by family members if they try to take this (notably in Districts 1 and 2 but less so in Districts 3 and 4). Several HHHs indicated that chickens like to eat flowers and this is a problem when the young bean plants come into flower in December (village B2). At this time they may contain the chickens for a few weeks. One HHH in village A3 feeds their chickens commercial poultry feed but this MHH is a salaried worker for an INGO. His chickens were not noticeably healthier or fatter than neighbours. All HHHs indicated that chickens are much healthier in the rainy season when there is more to eat and this is usually when they get broody and lay eggs. Hens in Districts 3 and 4 are actively laying eggs currently (September), whereas in Districts 1 and 2 this is anticipated to start later in the year (December).



**Nine-year-old has 50 chickens of his own. He was given 5 by his father before he left for South Africa**



**Most households leave their chickens to scavenge. Feeding like this is observed rarely in Districts 1 and 2 but more often in Districts 3 and 4**

Hens often lay their eggs on top of the family's grain stores and this is regarded as a relatively safe place, although some more concerned families say they take great care to watch the eggs so that when they hatch the chicks can be lifted down before they fall (one family pointed out a chicken with a broken leg where this had happened).

Several families showed us that they protected the young chickens with up-turned plastic drums or had fashioned small zinc barriers to protect the eggs. Some kept small chicks inside their own houses or lockable kitchens until they were big enough to roost in trees. However, all indicated that it was very hard to keep them safe as they were prey to snakes (Districts 1 and 2) and birds of prey, particularly hawks and eagles (all districts). Dogs are kept (mainly Districts 1 and 2) partly<sup>4</sup> to frighten off birds of prey but sometimes they can turn predator too (as before see Box 4). One HHH told us that if he thought there were snakes in the vicinity he will hard boil one egg as bait. The snake would swallow it and as it thrashed around trying to digest it, he would be able to kill the snake.

Hens very rarely lay unfertilised eggs as roosters are always around and only once was this mentioned by a HHH. They said that they only ate *'eggs that are left lying around'*, i.e. the ones which are not part of a brood and said this only happens rarely. Others indicated that they might eat the eggs if the hen died.

Only in village A3 did HHH provide water for the chickens. In village B4 chickens were encouraged to drink from dish washing water whereas in other villages this behaviour was tolerated but not encouraged.

## 2.4 Dealing with Mzungu (Newcastle disease)

Nearly all the HHH had experienced *mzungu* directly at some point, although three families who lived far from the village centre and somewhat cut-off from the rest of the village had not (Districts 1 and 2). For most it was regarded as a relatively new phenomenon; as one HHH head told us *'we do not know what is happening - there was no disease here but this began a year ago here - we had heard about it but not experienced it. Where has it come from? The chicken's eyes become swollen and red, they are always sleeping, they get lazy and will not walk'*.

People described the symptoms as *'hunching up'*, *'look ragged'*, *'wings droop'*, *'don't sleep'*, *'sleepy'*, *'become lazy'*, *'don't eat'*, *'eyes close'*, *'eyes swell up'*, *'watery diarrhoea'* (a few noted that the diarrhoea was green). Often people explained it by demonstrating the hunched up look of the chicken and were therefore able to distinguish it from other *mzungus* which involve the chicken shivering and sneezing. Many explained that ND *mzungu* was a seasonal epidemic (*'moya'* –literally meaning 'air') associated primarily with the end of the dry season (Districts 1 and 2 September, Districts 3 and 4 early December). One HHH member noted *'chickens do not get sick in the rainy season as the rain washes away the sickness'*.

HHH often *'do nothing'* about the illness as not all their chickens get it. One family said that they used a leafless climbing plant found deep in the bush to treat the disease. Another said they used to use crushed plants as a remedy but now they know about the vaccine (*'They [the INGO] have told us about it and we did not know before'*). Another uses crushed aspirin, paracetamol or antibiotics (intended for human consumption) mixed into their drinking water with some apparent success. Another swears by a mixture of donkey dung and aspirin. The shivering type of *mzungu* is treated with *xifazonke* (potassium permanganate) or *'xivulai'*, a plant which they used to collect to help ease stomach pain in cows but is now very hard to find. One HHH told us that *'if we go early enough to SDAE they will survive'*. The District Services of Economic Activities (SDAE) officer will come out to them and *'puts something in the water and they mostly recover'* (although in the recent experience recounted, two died). Interestingly this was the only HHH which knew of SDAE or had any dealings with them but this was because they owned the biggest number of cows (40).

<sup>4</sup> Also used to hunt small game for meat

Most HHH seem prepared to eat a sick chicken - they kill on the first signs of illness and cook straight away - but less likely to eat ones which have died. These they either throw in the bush or cook, mixed with *xima*, to give to the dogs to eat. We asked market traders in one district town (2) how they decided if chickens were alright to eat. They said that they do not sell the ones which are '*hunched up*' but eat these themselves.

## 2.5 Observations on Project Process

During the course of the RC, a number of insights into the project were gleaned. They were not collected systematically, but have more significance than anecdotes since they emerged from triangulated conversations and observations.

### 2.5.1 Village Selection

The following table (Table 6) indicates the intention of the project and some realities in implementation. We understand that SDAE was entrusted with the selection process. No HHH had any knowledge of SDAE (except one, mentioned above, who owns a large number of cows (village A1). Village leaders and Secretaries also did not mention SDAE but did mention visits by INGO staff.

**Table 6: Criteria used in Village Selection**

Project Intention	Interpretation
Willingness to engage in the project	It seems only village leaders/secretaries are engaged (if at all in the selection process). Being offered a project is an honour, so unlikely to refuse
Poultry population (supposed to be villages where people are already engaged in selling chickens, where this is important and established)	None of the villages in the study have established poultry marketing. Most HHHs keep for occasional 'ready cash', for guests and ceremonies. (Districts 1 and 2) and ' <i>to eat not sell</i> ' in District 3.
Potential for increased productivity (i.e. areas where there is sufficient food production to envisage a surplus for chicken feed- sorghum, maize and millet)	Most HHHs leave their chickens to scavenge - the fact that they ' <i>care for themselves</i> ' is one reason why they keep them. Supplementary feeding is mostly confined to ' <i>muhungu</i> ' (maize husks)
Possibility to create a ND free zone (in particular the selection of villages where ND programme has not been run before)	Two of the six villages have had long running ND vaccine programmes before, with vaccinators trained in the past.

### 2.5.2 Selection, Training and Motivation of Vaccinators

Village meetings described by villagers and held in July (see 2.4.3 below) were called to provide information about *mzungu*. '*People in green T shirts were invited by the Secretary to tell us about mzungu*'. Some of these people were recognised as being from the village and others were not. In only one case (village B4) did HHHs suggest that vaccinators had been selected by the community. '*Earlier there had been a meeting to choose vaccinators ... a neighbour said that at this meeting people suggested who was acceptable (they 'had to be women' and had to be able to read and write Portuguese)*'. Conversations with village leaders and secretaries suggest that the selection of vaccinators was done through consultation rather than at open meetings. Some of those selected were relatives of the leaders.

We met two vaccinators from the new batch trained this year and they told us that they had travelled to attend training in the district town. One, who has not been very successful at persuading people to accept the vaccine, said of the training '*the food was nice*' and '*we were treated like white people because we were given bottled water to drink.*'

The recent evaluation of vaccinators (August 2010) has highlighted the variation in economic benefit experienced by vaccinators; some made up to MZN 150 while others made a loss. The average income earned was MZN 46. The same report suggests that vaccinators spend

an average of 16 hours in total on the vaccination programme. At best this means MZN 10 per hour. The conversation held with vaccinators during this study confirms that they do not feel that the remuneration is sufficient and they tend only to visit nearby households to minimise time. Some of our HHHs explained that during visits, the chickens had to be caught or they were roosting and so the vaccinator suggested coming on another occasion. The 16 hour average time spent on the campaign seems to be a gross underestimate. One of the vaccinators does not intend to continue with this work, partly because there is insufficient monetary incentive and partly because she is facing abuse (see 2.5.3 below).

### **2.5.3 Experience of Vaccination Campaign (July 2010)**

Some HHH told us about the July 'campaign' or '*ku vacinarati huku*'. These tended to be families who lived close to the centre of the village, although not all HHHs located thus knew about the campaigns. Village meetings were held at the start of the campaign. Those living further away were not aware of these meetings. Most HHHs who knew about and/or attended these meetings spoke of the secretary or his 'workers' going house to house to inform people of a village meeting. The purpose of this meeting was not clear to everyone but '*we have to go when the secretary calls us*' or '*it is the rule*'. Some were told the meeting was to explain a new NGO project but did not know it concerned chickens. The meetings described seemed to be the one where vaccinators were introduced to the community and the vaccination programme explained. HHH members who attended said the meeting was '*long*' and there was '*much talk*'.

In some cases, HHHs who had subsequently received vaccinators in July said that they were dressed in green uniform with caps (others were not) and some came on bikes. One woman vaccinator rode an old bike which was a woman's bike (The PRA Report, 2010 notes that the bikes issued were all men's bikes which are difficult for women to ride. We can speculate that this vaccinator had either exchanged her bike or borrowed one).

In all cases, the vaccinator only came to vaccinate and provided no additional advice. The visits were quick. Some HHH were not prepared and had to catch their chickens so the vaccinator suggested they came back another day. In some cases the HHH waited in and the vaccinator did not come or the vaccinator came and they were out. As mentioned above, the PRA Report (2010) suggests that vaccinators take an average of 16 hours vaccinating chickens in any one campaign. With the large distances to be covered in some villages between households (particularly in District 1) and the problems with arranging times and having to make revisits, it is likely that this time is much more. However, the HHHs far from village centres had generally not had visits from vaccinators.

Several HHHs either refused to accept vaccination or told us that others in the village had refused, often claiming that the vaccine '*kills chickens*'. This correlation has been deduced from past experience. A woman vaccinator told us that she had only managed to persuade four families to take vaccination for their chickens (all were neighbours). '*They think the vaccine brings disease and tell me to go away .... one of the houses where they accepted vaccination only had two chickens to be vaccinated but they threatened me 'if these get sick I will go to the police station' ... nobody is interested this time (November). It is pointless to continue. I don't want people to insult me*'. One family in District 4 accepted the vaccination programme for their 50 chickens but do not trust it. After the vaccination, they mixed some xifazonke and crushed paracetamol in water and gave it to their chickens. '*When we just give a vaccination, many chickens die - this works better*'.

Unclear affiliation also led some HHHs to be wary of the vaccinators. '*Why don't they have a chicken (printed) on their shirts?*' '*Where do they come from?*' They feel that they must be '*presented by local authorities*' (something the village meeting is intending to do).

Some HHHs said that they did not bother with the vaccination because they only had a few chickens. *'Mzungu is only a problem if you have lots of chickens'*.

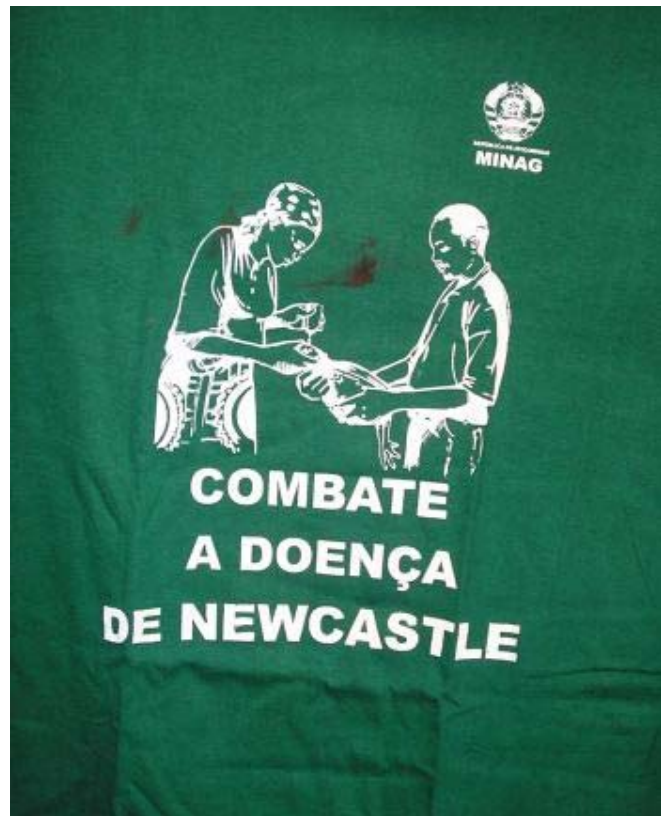
The *Xi-Changana* word for 'vaccination' (*ku thlava*) literally means 'a prick'. This has led to confusion as the ND vaccine is administered by eye drops. Many think that rather than a preventive measure this is curative medicine, which they are more familiar with being administered this way. Some of our HHHs did not understand why only healthy chickens were given the eye drops, *'why take a healthy person to hospital and not a sick one?'*

Some HHHs were confused about the timing of vaccinations; in the past these were irregular and no pattern was perceived. It is not clear why they have to have the chickens vaccinated in months when *mzungu* is not prevalent and why the vaccine needs to be given so often (unlike other vaccines they are more familiar with e.g. annual rabies vaccination for dogs, annual vaccinations for cows, one time vaccination for babies).

In two different villages, HHH told us that the vaccinator had not vaccinated small chicks as they had told them the chicks have to *'reach a certain age before vaccination'*. This is contrary to project advice given to vaccinators in their training.

A vaccinator who was trained by an INGO in 2006 and used to collect kits and attend refresher training on a regular basis has recently stopped vaccinating as he feels unwell. HHHs in this village (District 3) said that this year was the first year they can remember when there was an outbreak of *mzungu*. This seems more than coincidental. He has not vaccinated his own chickens this year. In the same village, a HHH complained that 'vets' only go where they can make money or get given gifts. He claims they dilute the vaccine so it can go further and *'they can make more money'*. In another village in District 4, people said that the vaccine used in 2005 was out of date and so many chickens died, which put people off vaccinating. Anyway, this village had not had *mzungu* since 2007, which also explains why a returning resident who came back three years ago has never heard of *mzungu*, but nevertheless had her chickens vaccinated because she saw her neighbour doing so. She said that *'activists'* from the Ministry of Health administered the vaccine *'by mouth'*.

All HHHs which had accepted vaccination indicated that they paid 50c per bird. In District 1 and 2, some HHH felt that this was *'too much'*, particularly if *'you have a lot of chickens'*. Some thought this money was used to pay for more vaccine; *'we have to pay because the money goes to 'agriculture' (meaning Government department) or 'it goes to [the NGO] to make more (vaccines)'*. Others said it pays the salary of the vaccinator, even though some said that they were *'volunteers'*. One HHH said that they had heard that you could *'pay with a chicken instead of money'*. One said that *'a proportion goes to the leader as he always takes a cut of everything in this village'* (see Box 6 below). An ex-vaccinator said that he never kept any of the money *'it all went to [the NGO]'*. For less poor HHH the cost was no problem and regarded as *'minor'* (District 3 and 4 and some HHHs in District 2).



***The logo on vaccinators T shirts was developed by the Ministry of Agriculture many years ago and has been reproduced continuously since. The image is not recognised as a chicken.***

**2.5.4 Advice for Families keeping Poultry**

The project makes a number of recommendations in their training programme for village poultry keepers which are supported by the newly produced flip chart. The following table provides a few insights into how HHHs perceive some of this advice, should it be given.

**Table 7: Perception of HHHs on Project Advice**

Project Recommends	Perception of HHH
Chicken houses for protection of the chickens; separate one at ground level for chicks and hens and raised one for roosting chickens. Inverted metal cones are recommended on the legs of the house.	In remote areas, experience with chicken houses has led HHHs to abandon this idea as they attract snakes, wild cats and dogs and chickens refuse to go in them. In the less remote villages in district 3 (where there is less bush), they have been more successful. Here they build them on ground level as snakes are not a risk. Cost would be an issue in having to construct two chicken houses. Metal cones for the house would be prohibitively expensive.
Disposing of chickens which die of ND by burying in a hole 1m deep	The Province is extremely dry and to dig a hole in the dry season would take an extremely long time. They throw dead chickens in the bush (Districts 1 and 2).
Separating sick chickens from the flock in a second house - in case the sickness is not ND <i>mzungu</i>	HHH generally know the symptoms of ND <i>mzungu</i> well, so kill and eat on the first signs of this illness. Cannot afford second chicken house (see also above)
Explains contamination channels in detail	HHH see <i>mzungu</i> as 'moya' related and would not be able to take any protective measures for the channels described anyway. HHH who had attended ND meetings came away with confused messages (saying it was 'too long' and 'boring'). NB the flip chart is 19 pages long.



**Digging hole to dispose of chickens is recommended in the new flip chart but in the arid Province this is unreasonable, burning might be a better option.**



**The new flip chart suggests building a raised chicken house as shown but people in districts 1 and 2 have had bad experience with chicken houses as they attract predators.**

**2.5.5 Village Level Meetings**

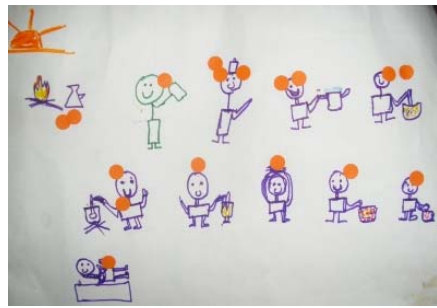
As mentioned above, several of our HHHs indicated that when the Secretary invites them to a village meeting, they feel obliged to go. We did not ascertain the time of these meetings but having lived with our HHH we recognise that timing is crucial. Families in Districts 1 and 2 are



very busy with water collection, cooking, farming, care of animals, collecting firewood, timber, charcoal, etc. throughout the day and have very little spare time. Water collection and farming activities occupy the mornings (5am - midday). Box 5 provides an example of a typical day. It is clear that HHHs have little time to engage in project activities.

### Box 5: Working all day

R is 20 years old and pregnant with her second child. Her husband left for South Africa nine months ago. The new baby is due in a week's time. We experienced her daily routine which starts before dawn with collecting firewood to heat water for the family to wash. She then climbs down the rocky and steep mountain to collect water in a 25 litre can on her head. This takes at least one hour round trip. As soon as she gets home, she washes the pots and dishes from the night before. She has to go to her neighbour to borrow a pestle and mortar to grind corn for the day's *xima*. This takes over an hour and half of hard physical work. She then cooks lunch, after which she grinds further corn for the evening meal and returns the pestle and mortar. It is now dusk and she goes to collect the second lot of water, washing dishes on her return and then prepares dinner. She heats water for the family evening baths and then sleeps when her small son becomes sleepy. She never stops all day long and this is the dry season so she is not working in the *machamba* as well.



Meanwhile, her mother in law spends time at the bar and gets drunk frequently. Her son complains through drawings he makes that he hates it when people get '*stupid with drink*'. Her Church banned her from the service while we were there. She does not do any chores around the house. She waits for her warm bath water to be brought to her by R and waters her trees with the unused water in the jerry cans with apparent indifference to the fact that R will have to collect more.

***R is 9 months pregnant and drew this chart of her daily routine. The dots indicate the number of hours she spends on each activity.***

### 2.5.6 Involving Leaders

In each of the study villages, leaders had been included in the project activities. Where vaccination campaigns had taken place, the Secretary had been active in publicising it, usually by arranging house to house visits to invite households to a village meeting to explain the campaign. The villagers' perception of the village secretary or leader varied considerably. Some were regarded as extremely supportive while others were associated with it '*for their own benefit*'. Box 6 illustrates the worst case.

### Box 6: Obstructive Leadership

Our team experienced a very suspicious and controlling leader in one of the study villages. He welcomed the team and wanted them to share a massive plate of goat and rice. But he wanted to select the HHH and organise people to accompany them everywhere. Some of the HHH who had agreed on the pre-visit to host members of the team were (mysteriously) not at home even though the dates had been confirmed with them. The leader offered to arrange new houses. Two of the team went to the house which was originally selected and found that they were followed by many of the leader's children, who hung around for hours. The HHH family said '*they have never come here before*' and felt awkward in their presence. The remaining team members were meanwhile surrounded by and harassed by the leader's acolytes. The bad experience of the team was confirmed by other stories about this leader revealed as trust was built with their HHH. According to one man, some time ago '*white people came to build a water catchment area*' but the leader did not agree with the position they had selected since it was far from his home. The project was cancelled because this disagreement could not be resolved. A young woman complained about sexual advances and said '*the man is crazy - he said things which a man with his responsibility should not say*'. Another family complained that whenever anyone wanted to start a commercial business e.g. buying and selling, '*they have to give him a part of the profits*'. One woman thinks that the payment for chicken vaccine is partly going to the leader '*as that is what he usually does*'. Others complained that he '*drinks too much*'. One woman said '*if there are benefits he keeps these himself. He only shares problems*'.

### 2.6 Household Nutrition

There was clear evidence of malnutrition in children in Village B1 (the village ranked poorest of the six), with small for age children and swollen bellies. Stunting and wasting was evident

in village A2 as well but less severe than in B1. In village A1 and B2, adults and children were more muscular and observably fitter. In B4, obesity was evident. The team also observed excessive alcohol consumption in village B1 (the poorest village) among men, some women and young boys (the ones who had not left for South Africa).

*'We eat chicken - but not this year'* (woman village B1) is typical of the experience of many of our HHHs. The relatively less poor households tend to take chicken once or twice a month, but others only eat chicken on special occasions such as Christmas or when a guest visits. Chicken may be eaten more at the end of the dry season as there is little else to eat with the *xima*. Men generally eat the leg and gizzard (often the breast, head and liver), women tend to eat the back, neck and feet, children generally eat the wings. Asked why men are given the choice pieces, we were told it is because *'men are the owner of the house'* (*mulumuzana*) and it *'makes them powerful'*. In District 4, two HHHs said that the traditional division was no longer followed; *'everyone eats what they want, the custom belongs to the past'*.

Very few of our HHHs ate eggs and those that did only do so occasionally, when the chicken *'lays one and does not move it'* or *'when the hen dies'*. Most indicate that they want to keep the eggs to hatch.

### 3. CONCLUSIONS

The Reality Check Approach has shed light on the relevance and practice of poultry rearing. Poorer HHHs keep small numbers of chickens to meet social obligations, for ceremonies, for occasional 'ready cash' and because they '*look after themselves*'. They are not valued as other animals and ducks and are not regarded as an income source. Only in less poor households are they regarded as a nutrition supplement. The chickens are often owned by the family as a whole or the male head of the household. Variation to this only holds if the woman is widowed or abandoned or has become the functional head of the household. These findings de-emphasise the premises on which the project is based i.e. that women own and manage chickens, that they are an important income source and nutritional supplement in poor households. Nevertheless, the study finds that chickens are important but for different reasons.

The Reality Check has raised some issues about the implementation of the project on the ground and flags up misunderstandings and misconceptions which may have been perpetrated for some time. It highlights the need for consideration of the contextual relevance of advice given to households rearing poultry. Many of these findings can be addressed in the re-design of training and communication materials.

#### Implications for Policy and Practice

1. The project should accommodate the views of households on the value and relevance of keeping chickens. This implies that project activities and advice should be in line with this. Improved husbandry should not add financial or time burdens inconsistent with the value given to rearing chickens.
2. Information provided to those rearing poultry needs to fit with existing experience rather than introducing new and potentially confusing concepts and terminology. For example, most households know and have even experienced *mzungu*, they recognise the connection with *moya* and usually kill diseased chickens swiftly. New messages should be kept simple and to a minimum e.g. 'do not transport a diseased chicken', 'burn dead chickens', 'vaccinate all chickens'. Other messages, albeit based on good science (such as vaccinating 80%) are not easily explained or assimilated and too many messages leads to information overload and increases the potential for misinterpretation.
3. Chickens are more significant for some members of the family than others; where there is the 'missing middle' i.e. adults of conventional work age have migrated or died, children and the elderly may give more value to chickens as they are easily converted into ready cash for minor emergencies (school expenses, medicines, pocket money) while other livestock is kept in trust for others or is not kept at all. This suggests a possible niche for the project in targeting children (perhaps through school) and older people for assistance.
4. The motivation and continuation of vaccinators in the programme needs urgent attention. They need help to develop strategies to persuade people of the efficacy of vaccination and to extend the services they can offer so that they can earn a meaningful income from these activities. Their credibility needs to be strengthened by endorsement from authorities and clear affiliation.

## ANNEX 1 Reality Check Approach Methodology

The Reality Check Approach is a method of study first developed by Dr Dee Jupp (Independent Consultant) and Helena Thorfinn (Swedish Embassy in Bangladesh) in collaboration with Esse Nilsson (Sida's Policy and Methodology Department, Stockholm). This approach was first put into practice in Bangladesh in 2007 as an initiative of the Swedish Embassy in Bangladesh and Sida (Swedish International Development Agency).

In Mozambique a pilot and the main study were completed in September, 2010. During these periods, the Reality Check team stayed with families living in poverty and conducted conversations with different family members, their neighbours and different local service providers.

The Reality Check has been undertaken in the tradition of a '**listening study**'. This is a term that covers a range of techniques that have been used by policy researchers, activists, and market researchers to engage in depth with the views of service users and clients. Listening studies have three main strengths: a) engaging in more depth than conventional consultation exercises normally allow; b) representing a wide range of diverse views on complex issues, and c) creating an arena in which frequently ignored voices can be better heard.

It is primarily a qualitative study with focus on 'how' and 'why' rather than 'what', 'when' and 'how many'. It is not intended to provide statistically representative or consensus views but deliberately seeks to explore the range of experiences of people living in poverty. It complements other forms of research by providing valid, up to date, people-centred information.

Reality Check Approach is always intended to be a longitudinal study and it is expected to track changes and people's perceptions and experience of these changes, in the case of this study in Mozambique with regard to poultry rearing. Repeating the study in the same locations, at approximately the same time each year and, as far as possible, with the same households it will be possible to find out what change occurs over time.

In this study, team members live with host households for two nights and two days in each location<sup>5</sup>. The focal unit of the study is the **household**, rather than individuals or wider groups. A household focus provides insights into household dynamics including those constructed by gender and age. It enables a better understanding of how information is shared and how decisions are made and acted upon.

While living with these households, team members adopt an approach which draws on the ideology of participatory processes which encourages non extractive forms of engagement. The emphasis is on a number of characteristics which differentiate Reality Checks from many other qualitative studies such as a strong focus on two-way conversations, shared and visualised analysis, listening and observation.

**Conversations** are conducted at different times of the day/evening and with different constellations of household members throughout the period of the study member's stay. Conversations have the advantage over interviews and some other participatory approaches of being two-way, relaxed and informal, and can be conducted as people continue with their chores and other activities (with the study member helping where appropriate) and so keeping

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<sup>5</sup> This is regarded as a minimum time for Reality Checks and others involve longer stays of 4-5 days

disturbance to normal routine to a minimum. The study adopts the principle of sensitivity to people's routines and flexibility in relation to timing of conversations.

In the field, as well as conversations, the teams use a range of **visual approaches** which emphasise the use of diagrams, dramatisation, and illustrations (drawings and photographs). These tools, many derived from the PRA family of tools are used to assist with the conversations, rather than as a goal in itself, often serving as an ice breaker as well as a useful means to provide easier and more comfortable ways for the families to share ideas.

Conversations are complemented by **observation**. As the team members spend several days with their host families, there is ample opportunity to observe and experience day to day life. Inter and intra household dynamics can be understood and provide important contextual information for interpreting conversations. Living with host families builds trust and informality is promoted providing the best possible conditions for open communication.

The Reality Check Approach also uses participant **observation**. It draws on the recent ideas about 'immersions' as a way for 'outsiders' to live with households living in poverty and, to some extent, experience their day to day life. It provides the team with opportunities to understand the context, live (to some extent) other people's reality, experience the community dynamic both in the day and the night, observe coping strategies and witness unintended interpretations of programmes and the difference between knowing and doing.

Furthermore, in order to put the conversations with household and community members in context, the study team members observe informal and formal local service provision and engage in **conversations with service providers**. This might include, for example in this study, accompanying people to the vet, to market, to training sessions, vaccination sessions. This type of triangulation (i.e. seeking multiple perspectives) is not only used to verify information but rather to explore the range of multiple realities among poor people.

The study also uses a **cross-sectoral** approach by examining experiences of the families not only in terms of a single livelihood pursuit (in this case, poultry rearing) but also in terms of other sectors as well. Family decision-making does not follow sectoral lines but rather involves weighing up the ability to meet needs based on consideration of a range of economic and social dimensions.

Living with the poor for two nights also allows team member to insure **inclusion** by including 'small voices' and engaging with family members who rarely participate in other forms of participatory studies, in particular the elderly, young, persons with disabilities, religious and other minorities. And unlike many other studies, the Reality Check Approach also involves interaction with non-users (those that actively opt out as well as those who feel excluded).

Reality check must ensure the **confidentiality** of the host households as well as of the community where the study is conducted. This confidentiality is paramount to maintain trust from the people the team interacts with. Confidentiality is also a crucial aspect in a longitudinal study as it will prevent the unwanted attention for the families and the communities the team stays and spend their time with.

There are, of course, challenges to the Reality Check Approach. Reality Check Approach never aims to cover a large sample size for information collection. It also never aims to collect information against a pre-determined and fixed check list since the method used is more conversational, flexible, circumstantial and opportunistic. As a result, the information gathered may not lend itself to comparison across households and across locations. It may be more detailed in some areas and less so in others. Individual stories are anecdotal, yet put together

they represent multiple realities rather than consensus-based realities which result from most forms of qualitative study. Furthermore despite interacting in depth with the host households the team study members also interact with the neighbours and other people in that community. As each team members usually has conversations with at least 20 people in any given location (excluding the members of the host family), we estimate that the views of over 380 people have been gathered in the course of the 2010 Reality Check.

In addition, the Reality Check Approach never claims to be a substitute for other forms of study such as the quantitative or conventional qualitative methods. It complements and supplements these, providing a more in depth insights into the findings from other approaches and it can 'flag up' issues for further exploration using the other two methods.

The team recognises that there is a danger of distortion of information collected and jointly exercises caution not to overlay their own interpretation or biases onto statements provided by people. The team takes time to reflect on information gathered and ensures that our own normative values do not impinge on analysis. The team is always circumspect about who provides what information, realizing that people they talk to might have their own agenda and interest in sharing information. The team emphasises **triangulation** as a means to reduce the risk of being taken in by such vested interest. Statements are verified by talking to many and by direct observation and experience (e.g. if we are told the road is hazardous and difficult to walk to the market, we take the route ourselves, if we are told the veterinarian is never at his post we go and visit).

In sum, the Reality Check approach, where the team stays with the community for several days, allows researchers to be particularly attentive to recording multiple perspectives and relating these to actual life conditions (immersion and observation) and to following up earlier conversations (rarely possible in other forms of study).

## ANNEX 2 Village Profiles

Location	Description
<b>District 1</b>	
Village A1	Situated very far from the provincial town (at least 12 hours walk), this village comprises about 70-100 households. The only transport to the provincial town is donkey cart or bike along a dirt road. All are basically subsistence farmers although some have relative wealth in large cattle herds. There is one primary school and a very small market. The community is trying to raise funds for a health clinic. There are three Churches (Apostolic, Zion and God Assembly). There is a government mediation centre. There is a government water pump which, since installation in 2007, delivers water very inefficiently and costs 50c per 2 jerry cans. There is intermittent and poor cell phone coverage from some parts of the village. FAO has a bee keeping training project here.
Village B1	This village is a 3½ hour walk from the provincial town. Buses run twice a week charging 30MZN per person round trip. The village has a school to grade 7 housed in two separate buildings, a small health clinic with a resident nurse/mid wife and nurse aide. There are several churches; God's Assembly, Zion and Twelve Apostles. There are bars and a small vendors market. There are water wells sunk about 30 minutes walk outside the village which are privately owned although those who do not have their own seem to be able to use others freely. The only telephone is at the leader's house. The village is controlled tightly by the leader.
<b>District 2</b>	
Village A2	This village comprises about 120 households and is a 7 hour walk to the nearest market town. It has a new primary school (class 1-7) built with the assistance of an INGO but only 15 children per class at the moment despite providing 25kg rice per child per quarter as incentive. Most inhabitants are subsistence farmers, some of whom supplement this with charcoal collection. Many of the young men are working in South Africa either in the informal sector (hawking) or the mines. Water is obtained from natural swamp lakes and the INGO has improved the supply by constructing a catchment area. Collecting water involves a 2 hour round trip. There is a very small market selling basic items such as salt, sugar, drinks, oil and some clothing. Traders come directly to houses to buy chickens, cows, maize, etc. sometimes with cash but more often in exchange for other goods. There are three Churches; God's Assembly, Catholic and Zion. There is no telephone coverage and no health clinic (the nearest is 17 km away).
Village B2	This is a large village divided into three zones, each with its own secretary who jointly coordinate village matters. The houses tend to be far apart from each other. The main occupation is subsistence farming (maize) and recently outside traders have been purchasing timber for construction and furniture which has provided a new income source. Many young men and a few women are working in South Africa, some in the informal sector and others in construction. There is a primary school (Class 1-5) with some teachers from Maputo but the nearest secondary school is 5-6hr walk away in the district town, so only children with relatives in town continue their secondary education. The nearest health centre is in the district town. There is weekly transport (40 MZN return trip). There is no electricity but a few households have small solar panels for powering radios. There is limited cell phone network coverage. The water source is a swamp between 30 minutes and 1½ hours walk away. Animals drink and defecate here. There is a pump situated in the middle of the swamp which provides water when the swamp runs dry at a cost of 25 MZN per month. Churches include God's Assembly, Twelve Apostles and Zion. An INGO apparently provides seeds and saplings and many are aware of a 'kuku project'.

**District 3**






Village A3	Abandoned during the War, this village comprises only 60-70 houses, fewer than before as not all the families returned. It is situated in a hilly area but has daily bus and cart communication with the district town (return fare 60MZN). The village has been supported by an INGO since 2000 and as a result has three public access water pumps, a primary school (grade 1-7) and a two roomed health centre staffed by a nurse and two mid wives. The INGO continues to support with agricultural programmes (seed and sapling distribution), tree planting and provision of school lunches. The main occupation is subsistence farming supplemented by the sale of firewood. Many men from this village are employed in South Africa, some in the mining industry or as drivers. As a result some HH have solar panels, TVs, radios and mobile phones. Churches include God's Assembly, Catholic, Zion and Apostolic.
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**District 4**


Village B4	This is the most urbanised village in the study. Some 20km from the district town there is regular transport (70MZN return) on relatively good roads and some residents have cars and motorbikes. The main occupation is agriculture, but irrigation and accessible water supplies means that fruit trees proliferate and a wide variety of vegetables are grown even in the traditionally dry season. Cashew nuts, alcohol made from the cashew fruit, soap/cooking oil extracted from seeds of another local fruit are all sold to outside traders. Government credit is available for small business development. Many relatives work in South Africa in legally contracted work (mining, transport, construction) and send regular remittances. Some are engaged in informal petty trade (including cross border trading). There are 3 public wells and 2 pumps (5MZN /month usage fee to contribute to maintenance) which are well placed in village to allow easy access for all households. Many houses are built of blocks. Although there is no electricity supply, many households have their own or rented solar panels and/or generators to power radios and TVs. There is a four classroom primary school (grades 1-5) and a secondary school only 1½ km away. There is no health centre and the nearest is a 45 minute walk. Two INGOs operate in the village; one has been there for over 15 years, assisting in a variety of ways including assisting the school water supply and supply of mosquito nets. Churches include Nazarene, Old Apostles, Catholic and Zion.
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## ANNEX 3 Descriptions of Host Households

HHH	Brief Description
A1.1 	<p>The household comprises 14 people. The household head is an elderly man (about 80) who lives with his two wives (his first wife died). His youngest son (18), pregnant wife and child and two daughters in law (their husbands live in South Africa) and their children. The old man's sister also lives with them. They live in six separate houses all made of wood and packed stones with Corrugated Iron (CI) sheet roof. The household is situated at the edge of the village (the old man prefers to keep the family as a separate and self sufficient unit for security reasons). They have 40 cows, 16 goats and at least 70 chickens. Their land supports the family to be self sufficient in maize all year round.</p>
A1.2 - most poor 	<p>This household comprises 5 houses and is occupied by two widows (their husband died from a snake bite in 2002). They live with seven of their nine children, one of whom has just married (17yr old boy). Two sons are in South Africa. They keep 5 sheep and 6 goats and have '<i>lots of chickens - we never count them</i>' (at least 50). One of the women has recently completed a bee keeping course with FAO but has not started keeping bees.</p>
A1.3 	<p>The household consists of father, mother and their youngest son and a woman and man whom they employ. The father is employed as a security guard for the railway. They have 23 cows, 50 chickens and 3 ducks as well as guard dogs. They live in three houses, sleeping on the floor. There is a pit latrine. They take three meals per day (including gazelle meat). They are also the recipients of the FAO bee keeping training and have not started this. The men collect water from a dirty water source about 15 minutes walk away.</p>
A1.4 - least poor 	<p>This household comprises 5 people; the mother and father and their younger children (girl 10 yrs, boy 15 yrs) and a man they employ to help them. They have 15 cows, 21 goats around 15 chickens. They are self sufficient as they grow maize, cassava, peanuts, and tomatoes and have surplus to sell (at the gate). They consider themselves poor in the area as '<i>others have 100 cows</i>' but they have assets like a stereo set and sewing machine.</p>
B1.1 most poor 	<p>The head of household is an elderly man with three wives, although only two live here (his 2<sup>nd</sup> and 3<sup>rd</sup> wives). Two of the surviving six children (they had 10) of the second wife continue to live with them (boys aged 16 and 6). One daughter in law, who is a week away from delivering a baby lives with them. She has a small son (3 yrs) already and her husband is in South Africa. The third wife lives nearby with her 4 yr old grand daughter. The daughter in law (20) is the only income earner; she collects and sells charcoal. They have 1 pig, a rooster, 1 chicken and 3 chicks. The second wife says she has bought a goat but has not brought it home yet. The teenage boy looks after 10 of his cousin's cows. It takes 30 minutes to collect water located down a rocky valley and they use other people's wells by what appears to be friendly agreement. Troughs are set here for livestock. They have a simple grass screened bathing area which is also used as a toilet for urination during the day. They urinate close to the house at night because they are scared of snakes. They use the bush for defecation. The daughter in law has the highest level of education in the family having completed class 6. They eat 2 meals per day comprising <i>xima</i> with dry leaves or beans.</p>

HHH	Brief Description
<p>B1.2</p> 	<p>The third wife (42 yrs) of a witchdoctor lives here with her four children (one daughter from a previous marriage and two sons (9yrs and 4yrs) and a daughter (6yrs) from her current marriage). The witchdoctor lives with one of his other wives. The eldest daughter (22) has one baby (2 yrs) and her husband lives in South Africa. Both the mother and father have missing legs from a land mine. There are two houses; one was built for the mother's mother and the other for her brother who now lives in South Africa. The mother sells 'xintu' (local beer) and the elder daughter is a petty trader selling vodka, sugar, etc. All the family sleep together. They have 7 pigs, a goat belonging to the son, two chickens (one had laid 4 eggs), and two chairs. There are two water sources; one is 10 minutes walk away (a government pump for which they have to pay 50c for 2 jerry cans of water) and the other is 20 minutes away (a well which does not cost them anything). They take two meals a day comprising <i>xima</i> and beans, occasionally supplemented with cabbage purchased from Zimbabwean visiting vendors.</p>
<p>B1.3 least poor ( but still comparatively poor)</p>	<p>The household comprises 12 people. The father spends all day collecting and making charcoal, returning late each day so his wife (55) effectively runs the house in his absence. She was married before in Maputo and separated bringing her 7 children back home. Three continue to live with them; one daughter has two children (no husband), another daughter studies in secondary school and a son. A daughter in law and her two children live with them (her husband is in South Africa) as does a grandson whose mother has left to go to South Africa. The mother and father also have a daughter of their own. The family keeps 5 pigs, 3 chickens (some chicks). Their income comes from the sale of charcoal, selling pigs and chickens and some surplus from their land (2 km away). They collect water from their own well (built by a Zimbabwean for a payment of 4 cows) which is an awkward climb down in the valley. The eldest daughter has the highest level of education in the family at grade 7. They take two meals a day - in the dry season this is <i>xima</i> and dried leaves.</p>
<p>A2.2</p> 	<p>This household is situated more than 2 km from the centre of the village, with thick bush behind the house. Husband (60) and wife (40) live here with their two grandsons (10yrs and 5yrs). The husband's first wife died in 2002. They had five children; all three boys work in South Africa and the girls are married and live away. There are four houses and two grain stores. They have a large farm (possibly about 8 acres) and two bulls to help with ploughing. They barter the surplus production for tomatoes, oil, paraffin, candles, etc. At present the 10yr old does not go to school but plans to enrol next year 'to get the (INGO) rice ration'. They own a bed and 5 chairs. They eat twice per day and in this dry season this comprises dried meat and <i>xima</i>.</p>
<p>A2.3 poorest- although receiving a lot of relief rice</p>	<p>This family comprises an elderly father (70), his wife and two of their three children (the eldest son is a neighbour) and their five grandchildren (boys of 9yrs, 7yrs and 4yrs, girl 13yrs - (the daughter of their daughter who is separated) and a 9 month old baby. They live in three houses. They have 8 cows and 12 chickens. They are self sufficient in maize and beans and use the surplus to barter for cloth, salt etc. They have 2 chairs and a bench. The daughter works as a cook at the school. Three of the school-going children receive 25 kg rice per quarter from the INGO and the cook also receives this (100kg rice per month). This is probably also used for barter purposes. They take 2 meals per day. They keep 3 hunting dogs and supplement their diet with occasional rabbit.</p>
<p>A2.4 least poor</p>	<p>This house is situated in the centre of the village, close to the primary school. The family comprises husband (47) and wife (44) and two of their</p>

HHH	Brief Description
	seven children (a daughter of 15 yrs in class 6 and a son of 5yrs). The other five older children are all studying and live away from home. The mother's blind father and the father's deaf mother also live with them. They have 4 houses, a kitchen and two grain stores. They have 4 cows (although the wife says there is only 1), 10 goats (though again the wife disputes this and says they only have 4), 11 chickens and 3 dogs. They have a donkey to help carry water. They have no furniture, but own a wheelbarrow. The old grandfather makes straw mats and trays which he sells to buy beer or exchanges to get chicken to eat.
B2.1. Least poor	A widow lives with her four children who all attend primary school. She has three boys of 14yrs, 12 yrs and 8yrs and a girl of 6yrs. She also takes care of two nephews (aged 7yrs and 5yrs) whose father works in the provincial town and who both refuse to go to school. They live in 2 houses with a third under construction. She has a small shop were she sells cloth, hair extensions, washing powder etc but does not always bother to keep it stocked as it is ' <i>not so profitable</i> '. She has two <i>machamba</i> (one near and another more than 2hours walk away) where she grows maize and herbs. She has 15 cows, 2 donkeys for carrying water, a few chickens and a dog. The cows provide milk which the family takes at breakfast with <i>xima</i> . She readily sells cows when she needs money, for example to stock the shop as she plans to do in December. They take three meals per day comprising <i>xima</i> and beans. The highest level of education is the oldest boy who is repeating class 5.
B2.2 	Ten people live in this household. A couple in their 50s with three of their six children (all the elder ones are in South Africa). One married son lives with them with his wife and 2yr old child. They have twin sons of 14yrs, one of whom studies in the provincial town and the other is working with his uncle. Another son (11yrs) and three grand daughters (7yrs, 5yrs and 3yrs) also live there. There are 4 houses, a shower screen but no latrine. They have recently constructed a bar/shop with money sent back from a son in South Africa but are yet to stock it. They have 13 cows, 4 goats, 1 donkey to carry water and 7 chickens. They have 2 <i>machamba</i> which provide sufficient maize for the family throughout the year. They supplement their income with selling timber. They take 2 meals per day - in the dry season this comprises more meat (dried or chicken, or small birds hunted by slingshot) as there are no fresh vegetables. The highest education attainment is one of the twin boys currently studying in secondary school in the provincial town.
B2.3 poorest	The man (late 30s) married the younger sister (21yrs) of his late wife in 2004 and have no children. The wife's two younger sisters (15yrs and 10 yrs) live with them as well as his mother, his half brother and wife and their two children (daughter around 10yrs and son around 6yrs). A nephew (10yrs) and niece (5yrs) also live with them. There are 3 houses, a corral for cows and a chicken house. They also have a 'house for ancestors' where they hold ceremonies to honour their ancestors. They have a solar panel (brought back from South Africa when the husband was deported) which powers an elderly radio and an old bike. They have 7 cows, 7 goats, a donkey for carrying water and about 25 chickens. They take 2 meals per day with rice at lunchtime with dried meat and <i>xima</i> and broth at dinner (in dry season). They have a small plot near to the water source where they can grow onions, cabbage, tomatoes for their own consumption and a bigger plot further away where they grow maize, beans, cassava and peanuts. The men also collect and sell timber which they sell to a visiting trader who also buys chicken and maize with cash. Both half brothers have primary education to class 5.

HHH	Brief Description
A3.2. 	<p>A recent widow (40) (her husband was killed in a mining accident in South Africa in 2009) lives here with six of their seven children (the eldest works in South Africa). These are girls (14 and 12 yrs), twin boys (10yrs) and a girl (4 yrs). The elder girls and one twin boy attend grade 5 primary and the of the twin boys is in grade 4. The paternal grandmother also lives with them. The assets reflect a comment made by the mother that '<i>we lived very well in the past</i>'. They have a large radio, colour TV, three beds, solar panel, table and 8 chairs, mobile phone and donkey cart. She also owns 12 cows, 12 pigs and two donkeys with 'many' chickens ('<i>i don't know how many chickens</i>') but we estimate about 70. There are 8 houses and a block built latrine/bathing room.</p>
A3.3 least poor	<p>The father (50) is a salaried worked for the INGO which operates in the village and his wife (40) buys and sells cashew nuts in Maputo. They have one daughter (9yrs) living with them, two daughters in law (one husband is in South Africa and another is studying to become a teacher). Both have two children (one daughter has just had a baby two weeks ago). Their father and mother look after a further two grandchildren whose parents live away (also studying to be a teacher). The HHH thus comprises 12 people. They have 4 houses, two pit latrine/bathrooms screened by canes. They have TV, radio, two tables and 10 chairs, at least 2 beds, 3 cabinets and two mobile phones. They also keep 5 goats, 4 ducks and 8 chickens.</p>
A3.4. Most poor 	<p>A widower (41) lives here with three of his four children (the eldest daughter (15 yrs) now lives with her uncle in Maputo). They are boys of 12yrs and 10yrs and a girl of 5yrs. Both boys are at school in grade 5 and 4 respectively and the little girl '<i>goes to school to watch</i>' although she is officially too young to be enrolled. They have two houses and a pit latrine/shower area. The father is primarily a subsistence farmer but he was trained as a vaccinator in 2000 and subsequently in 2006. Recently he has given up as he '<i>has not been feeling well</i>'. He has 1 pig, 4 goats, 4 chickens and 4 rabbits. They have no furniture and only a small old battery radio.</p>
B4.1. Most poor	<p>The house is owned by the grandmother who mostly lives and works in Maputo. Her widowed daughter (42) lives here with 4 of her 6 children; the eldest boy (20yrs) is in South Africa, one of the twin girls (17yrs) lives in Maputo and the other is in grade 4 primary, daughter (11 yrs) also in grade 4 primary, son (8 yrs) in grade 2 primary and a two month old baby with another man (not her late husband). Her niece (9yrs) also lives with them. The mother is not forthcoming and may be suffering from mild depression. They have 5 houses, 3 cane shower areas (one with pit latrine). The 40 yr old block house has one bed but no other furniture. They have a piglet and 3 chickens. They have 2 <i>machamba</i> where they grow maize and cassava as well as many fruit trees, tomatoes, cabbage etc. They supplement their income by selling cashew nuts. They eat two main meals of <i>xima</i> and vegetables but also 'snack' throughout the afternoon.</p>
B4.2.	<p>Widow (45) (her husband died in a mining accident in South Africa in 1994). She is paid an honorarium by the INGO which has had a long term involvement in the village. She lives with her epileptic 'son' (28), a 'vulnerable' girl (10yrs) adopted to help with chores and a 5yr old niece. She is a stalwart of the Church (Council member). They have a two roomed wood/mud house with concrete foundation, a separate house for the 'son'. The house is well equipped with double beds, table, coffee tables, chest, cabinet of plates etc, large plastic storage containers, modern sewing machine, radio, stereo and she has a mobile phone. She has 4 cows, 2 goats with 2 kids, 1 pig and '<i>lots of chickens</i>' (at least 13). She has a very productive kitchen garden and a further 6 <i>machamba</i> where occasionally</p>

HHH	Brief Description
	she employs others.
<p>B4.3. Least poor</p> 	<p>A young mother (19yrs, grade 9 graduate), the second wife of a man who works in construction in South Africa (his first wife died) lives here with her younger sister (11 yrs), her new born baby, two step children (girl 8 yrs attending grade 3 primary and boy 6yrs not yet at school). The husband's nephew (15yrs studying in Grade 8) and female cousin (50yrs) also live here. The main house is made of cement blocks and comprises 3 rooms and a store. There is another house used as a store, shower and pit latrine. They have a solar panel, a non-working generator, cupboard, carpet, sofas, beds, DVD player, amp and speakers, 2 TVs. They have no livestock except two chickens, a cock and one chick. The only income source is remittances from the husband in South Africa.</p>

## ANNEX 4 List of people engaged in conversations about poultry rearing

	Village A1	Village B1	Village A2	Village B2	Village A3	Village B4
MHH	7	3	9	2	4	1
FHH	5	0	4	1	4	2
Women	4	7	11	6	11	4
Men	8	2	7	3	13	0
Boys	4	3	7	7	8	2
Girls	8	0	6	1	8	3
Vaccinators	0	1	0	2	0	0
Others e.g. school teacher, leader, secretaries	5	1	8	2	8	3
Market vendors	0	0	4	0	1	0
<b>Total</b>	<b>41</b>	<b>17</b>	<b>56</b>	<b>24</b>	<b>57</b>	<b>15</b>

NB. Some people fall into more than one category but they are only counted **once** in this table.

Many more people (a total of about 360) were engaged in conversation which provided contextual information. The above table only refers to those with whom the team had **poultry rearing related conversations**.