

Pastoral Meat Value Chain Analysis

TRAINING REPORT

23-24 October 2008

Arusha, Tanzania

1. Introduction

After a welcome address by Pastoral Livelihoods Task Force Coordinator, participants introduced themselves and listed their expectations of the training (Appendix 1 gives a list of participants). Participants' expectations were noted on cards, pinned up on the board and then organised to identify three categories of expectation – see Box 1 below.

It was agreed that the training would address the first two categories of expectations: (i) improve participants' understanding of value chain analysis and (ii) design a research agenda and work plan. The expectation about improving understanding about the economic contribution of pastoralism would be achieved as a result of a successful application of the research methodology.

PLTF coordinator then went to explain that the workshop would use a participatory approach to design the research methodology in order to build on participants' existing experience and knowledge and to contribute to a critical mass of researchers able to carry out value chain analysis research on pastoralism in Tanzania.

Box 1: Expectations of participants

Category 1

- Understand VCA and to use it to assess trade and market issues
- Better understanding of VCA and how it will influence policies
- Understand role of key actors in pastoral VCA
- Full understanding of pastoralists VCA and how to connect it to Livestock marketing
- Understand VCA in context of pastoralism and coverage of program.

Category 2

- Action plan for VCA research
- Participatory research methodology put in Place
- Know how to conduct research and how pastoralism contribute to national economy

Category 3

- Better understands economics of pastoralism
- Gain knowledge on contribution of pastoralism through VCA and use it to explain the value of pastoralism
- Understand more about pastoralists contribution to economy of Tanzania

2. Background to the research

The proposed research responds to the situation that many policymakers do not value pastoralism because they do not fully appreciate the values and benefits it brings to the economy. This is because the available data is poor or lacking: existing government statistics tend to focus on the livestock sector and do not differentiate between different livestock systems; and is often either incomplete or is only based on estimations based on estimations. Another problem is that the data only looks at the direct values or benefits of pastoralism – meat, milk and skins/hides – and fails to recognise other indirect benefits like the contribution pastoralism makes to agriculture, tourism or conservation.

The objective of this research is thus to design methodologies to address these problems. The research will build on existing initiatives such as those by SNV, ERETO-NPP, VETAID, WISP, TNRF and others who have carried out research on livestock marketing in Tanzania and East Africa more broadly.

Participants discussed what they think are strong policy arguments that would convince policy makers of the value of pastoralism – see Box 2.

Box 2: Policy arguments advanced by participants

- Pastoralists pay taxes and buy commodities and groups; they contribute to the economy.
- Pastoralism allows for multiple use of land (low opportunity cost).
- Pastoralism makes good use of the drylands.
- Pastoralism gives greater returns per unit of land compared to other land use systems like commercial farming.
- Pastoralism employs a lot of people both within the sector and in other sectors.
- Pastoralism supports many livelihoods.
- The production and benefits forgone when pastoralists lose livestock to disease or other shocks is felt by both pastoralists and the wider economy.
- Pastoralism is a sustainable land use system that does not degrade the environment.

After the discussion, it was agreed the overall research is underpinned by two hypotheses which, if confirmed by the data, will constitute two strong policy arguments:

Hypothesis 1: *In the drylands of Tanzania, meat produced under mobile pastoral systems is more efficient than that produced under other systems such as ranching in today's context of increasing competition for land, limited service delivery and climate change for meeting local livelihood objectives and supplying domestic and export markets.*

Hypothesis 2: *In the drylands of Tanzania, meat produced under mobile pastoral systems has low opportunity costs with respect to wildlife based tourism and conservation and small-scale family farming.*

In order to confirm or refute these hypotheses, a number of Research Questions will be addressed. These will include:

- What is the added value of meat produced under mobile pastoral systems to local, national and regional economies?
- What is the added value of meat produced under ranching systems to local, national and regional economies?
- What are the relative costs, benefits and opportunity costs of meat produced under mobile pastoral systems versus ranching and/or meat imports?

The workshop will address the first research question. Subsequent trainings will be given to design methodologies to address the other two research questions.

3. Defining Value Chain Analysis

After some discussion of participants' own understanding of value chain analysis, we looked in more detail at the meaning behind each of the words: **Value Chain Analysis:**

- **What is value?** In conventional economics value is usually defined as *the amount of money the product is worth*. This definition provoked a lot of debate among participants for they felt it would

not adequately capture all the values of pastoralism or that for some values it would be very hard to attach a monetary value. After some discussion it was agreed that **measuring value** is very subjective and culturally specific and that it is sometimes difficult to know if something has more value than something else. In some cases you can attach a monetary value to a particular benefit (e.g. formal employment) in others cases it is more difficult (e.g. pleasure of having a particular cow that is admired by the community).

Generally, conventional economics seeks to attach a monetary value to benefits in order to be able to compare benefits/values derived from one type of service or good with another service or good. But this is more difficult to do when trying to value the benefits of subsistence economies like pastoralism because some goods/services not marketed (thus difficult to attach a monetary value); money is not necessarily valued in the same way as in large urban areas.

- **What is a chain?** It can be defined as: *a sequence of activities, actions, things, etc.*
- **What is a value chain?** It is a *sequence of activities through which a product passes acquiring additional value as it passes through each step or stage of the chain.*
- **What is value chain analysis?** It represents an examination of the value of a system or enterprise to find the stage at which value is added and how value can be enhanced.

4. Identifying different boundaries

Referring back to the core research question (what value added does meat produced in pastoral areas bring to local, national and regional economies?) participants discussed and agreed to fix the boundaries of the research project. These boundaries concern four areas of the research:

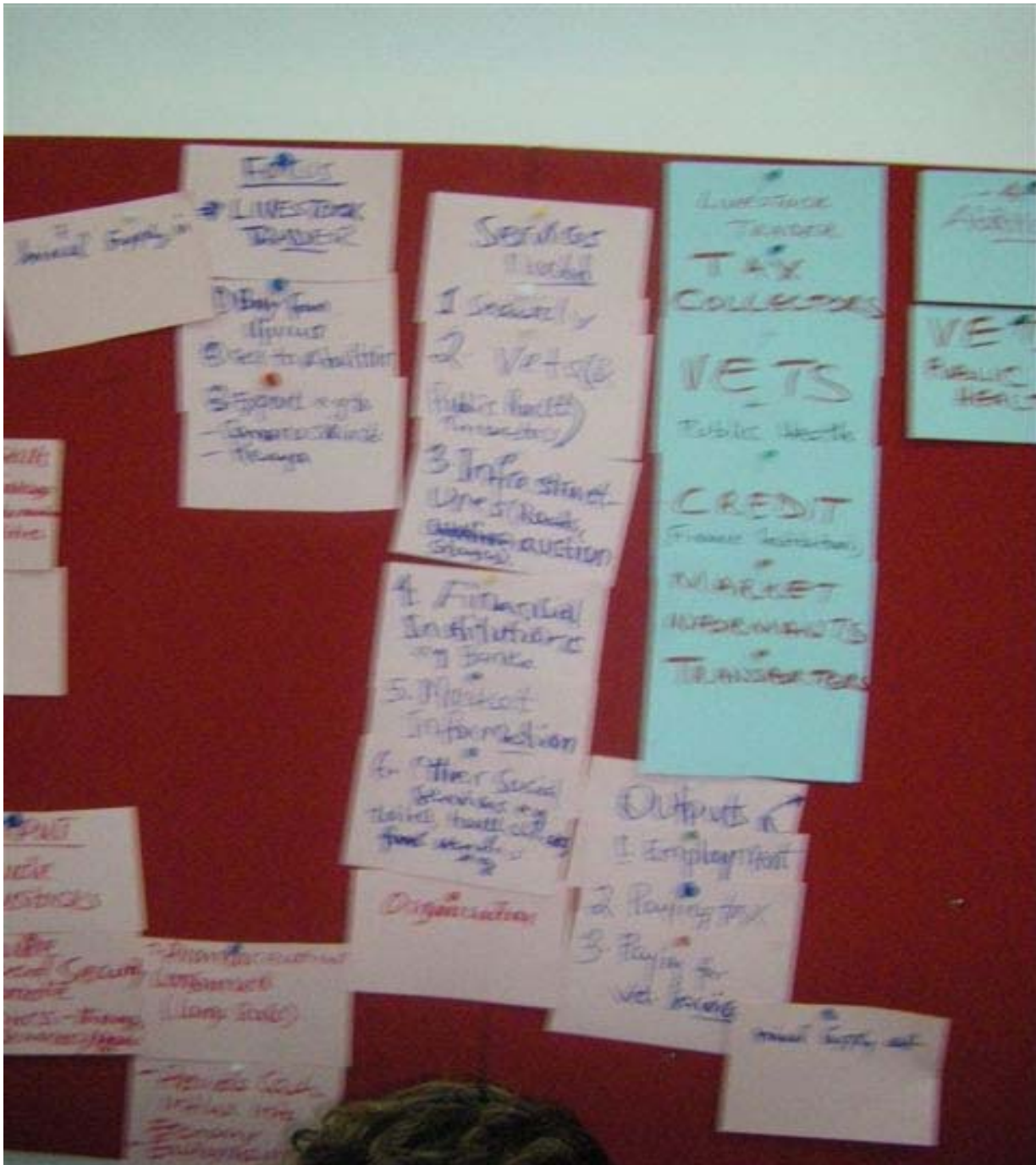
- **What product do we focus on?** We agreed to focus on meat: beef, goat and mutton. The research will not look at chickens, pigs, etc. as these are not very important in pastoral areas.
- **Where in the value chain do we want start and end our research?** We agreed start our research with the producers and end with the consumers.
- **Where do we want to work?** We agreed to start our research in Arusha Region.
- **When do we want to carry out the research?** We agreed that it is important that the research questions and approach takes account of seasonality and inter-annual variability. This is because pastoral livestock sales and livestock market prices are affected by seasons and inter-annual variations (e.g. drought)

5. Chain mapping

In three sub-groups, participants carried out a chain mapping exercise. This consisted of:

- Identifying the key actors involved in the value chain of meat from the producers to the consumers
- Identifying the activities they carry out and the inputs (resources, services) they need to carry out their activities
- Identifying the outputs they produce as a result of their activity.

Appendix 2 presents the results of the exercise



Below is a summary:

The actors include:

- Pastoralists including breeders
- Community-level middlemen (*iljurusu*)
- Livestock traders at formal markets
- Abattoir
- Specialised distributors who distribute to:
 - Butcheries in urban areas for domestic outlets (hotels, restaurants, *nyama choma*, etc.)

- Processing companies for export or for domestic outlets (supermarkets, hotels, etc.)
- Individuals

In order to do their job, the above actors receive services and inputs from a range of other actors including:

- Professional technical staff: government and private vets, researchers,
- Government staff such as public health inspectors
- Modern and traditional institutions for transport: truckers and trekkers (*irporkwa*)
- Institutions for credit, market information

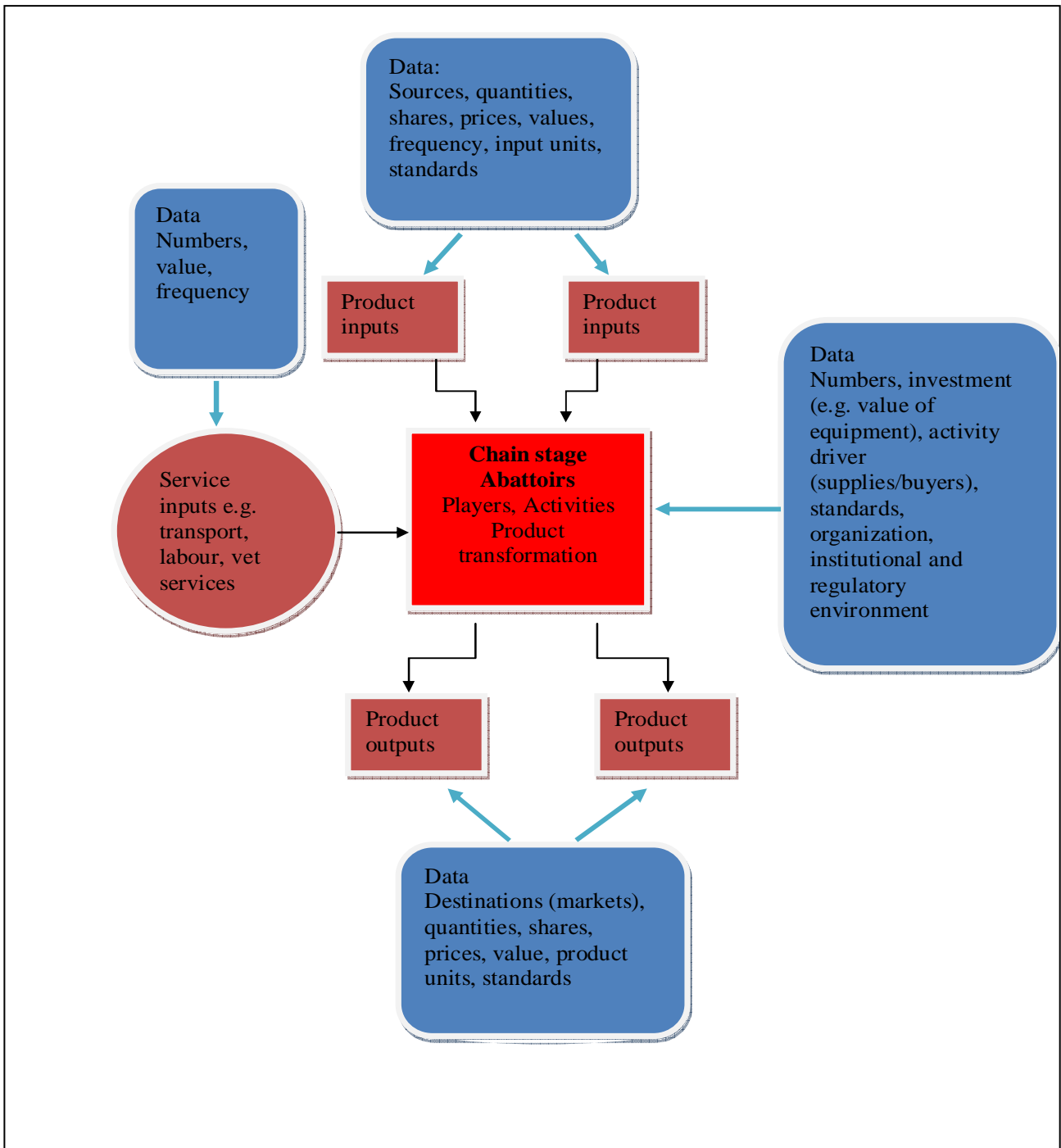
6. How is value created along the chain?

Following on the chain mapping exercise, participants identified the different values in the meat chain, and the ways in which value is created. The various ways in which value is created or added to the product as it moves along the chain, to the meat sector and to other sectors were discussed in the following categories:

1. Investments made by players
 - Buildings, vehicles, equipment etc
2. Transformation, sorting, packaging
3. Employment
 - Paid and unpaid
 - Own, family, hired
4. Market for inputs and services
5. Taxes, improvement of infrastructure, demand for goods and services from other sectors.

The notion of value as going beyond just monetary measurements was again highlighted as participants discussed especially the livelihood systems that are supported by pastoral producers, but which are non measured on monetary terms.

The participants were then introduced to the method of estimating and quantifying total value in the chain. This involved focussing on one actor or stage in the chain as a centre of value and assessing how value is created at this stage through the inputs, outputs, processes and services at this centre. The abattoir was used as an example of the centre of value. The meeting identified some of the examples of inputs, outputs and processes at this stage using information from the chain mapping exercise and a pre-developed example (see figure below). Examples of the types of data that can be used to quantify these were also identified.



Finally, an explanation was provided by the facilitator on how values estimated at each centre of value can be aggregated to estimate the total value in the chain. It was also explained that the data requirements formed the basis of the data collection exercise.

Participants were given for overnight reading a checklist of data required to estimate value at the different stages of the chain i.e. producers to final retailers.

7. Designing the research questionnaire

Participants divided into three groups to study the draft checklist of information and data to be collected from the different actors in the value chain (see Appendix 3). Each group was asked to review the checklist

to see if the data to be collected was relevant to the research objectives, whether it was feasible to collect the information and to identify any gaps. The results of the groups are presented below.

The following amendments were agreed:

Producers' checklist

- Combine bullet points 2 (assets) with bullet 6 (livestock ownership); recognition that collecting data on livestock numbers is difficult and sensitive. Possibility to use free public vaccination campaigns to access such information.
- Under bullet point 5 (types and quantities of resources) need to get information on how pastoralists access pastures, water and minerals (negotiation, payment, etc.); identify the opportunity costs of other land use systems (e.g. army installations in Monduli). Also need to value/cost conflict mitigation.
- Bullet point 7 (value attached to livestock) – recognition that monetary value is probably of lesser significance to pastoralists and that they would attach a range of other values, which need to be captured (and quantified if possible) by the research.
- Bullet point 8 (products from livestock) – recognition not just meat but also manure, milk, ghee, butter, blood, cream, hides, skins, horns/hooves, tails, urine.
- Bullet point 9 (sale of meat and livestock) – recognition pastoralists sell livestock rather than meat.
- Bullet points 12, 13 and 14 (expenditure on livestock and marketing, market behaviour) – need to recognise seasonality of expenditure; payment of taxes. Also need to ask pastoralists about the challenges and opportunities of marketing.

An important point of discussion is the need for the research methodology to recognise that climatic and environmental variability in the drylands of Tanzania is **NORMAL**; that there are dry and wet seasons and wetter and drier years, and that this will impact on the productivity of livestock reared in pastoral areas as well as the quantity and quality of animals sold by pastoralists. This implies that the value of the benefits from pastoralism will also vary and fluctuate from season to season and from year to year depending on the climatic conditions.

This has important implications for the policy messages we want to make to policy makers. Such fluctuations in value may be considered to be a weakness of pastoral system by policy makers who are interested in maximising productivity of the livestock sector and ensuring a constant supply of meat to domestic and export markets. It is thus important to frame the research and subsequent policy message in terms of the capacity of pastoralism to continue to operate and generate value within a wider range of climatic variability (due to mobility) than ranches.

In view of the above, it will be necessary to collect data on the following:

- Historical data on rainfall patterns
- Historical data on livestock market supply differentiated by source and livestock prices
- Historical data from actors along the supply chain to enable us to identify the relative proportion of livestock from pastoral and ranching in dry and wet years.
- Data from ranches on livestock productivity and off-take rates in dry and wet years

Livestock trader's checklist

- The general order of the questions from the checklist should be made logical for the interviewing process

- Bullet (Organization of business) should be changed to (Type of business)
- Under sub-bullet (out-going products...) data collection should also include other non-meat products at butcher and abattoir levels such as skins, horns etc which have value.
- The bullet (number of people in the business...) should be removed, and the preceding bullet should include paid and unpaid employees to take care of the deleted bullet. Also to include loans, subsidies under this bullet.
- An additional bullet on challenges facing players and their coping strategies was suggested.
- The bullet (organization of players in the business) was replaced by a question on whether or not the actor belongs to an association, forum or organization of similar actors.

A new bullet on fluctuations in the flow of products by season or rainfall and climatic patterns was added.

Abattoir, butcher, etc. checklist

- The checklist for this segment was the same as the one for the livestock traders, and the amendments suggested for both are combined above. What will differ are the questions and the methods of collecting the information from the various players.

9. Interviewing tips

Producers

- Be well-prepared before going to the field
- Have a community entry plan
- Proper introductions: objectives, background, imperatives of the study
- Methodology: focus groups, direct interviews, use of PRA, etc.
- Respect the people and their cultures, beliefs, etc.
- Use of appropriate language
- Flexibility: fit into people's timeframe, consider different times for interviewing men and women, etc.
- Research fatigue – some communities over-researched
- Timing – consider availability of people according to the day, season, etc.
- Need to work as a team, if you use a translator agree with them not to answer on behalf of the community, etc.

Livestock traders

- Be prepared in introduction of the research objectives and its importance
- Timing-should fit into respondents programme
- Use simple and proper language
- Be clear in asking questions-no too ambitious
- Be appreciative and humble
- Guide the interviewer during interview
- Avoid embarrassing questions to the respondents
- Provide feedback to the respondents after research findings
- Involve district, village government, Ministry of Livestock and Fisheries, Ministry of Natural Resources

- Create amicable environment for the exercise

Abattoir, butcher, etc.

- Need to pay respect to the respondent culture and values
- Need for proper preparation i.e. entry plan, proper introduction, explaining research objectives and the benefits to the respondents
- Use of proper research methodology i.e. focus group, direct interview and use of PRA tools
- Use of simple and proper language
- Need to be very flexible-fit into respondents programme
- Build proper rapport –setting the environment amicable
- Provide guidance to the interviewer during the exercise
- Avoid embarrassing questions which may annoy the respondents
- Involve district, village government, Ministry of Livestock and Fisheries, Ministry of natural resources

10. Planning the research

Research Team

- The participants elected their own local coordinator. Almost unanimously, Daniel Ouma was elected. They all agreed that this is consistent with his current role at the coordinator of the Pastoral Livelihoods Taskforce under which this research falls.
- All participants indicated they would like to participate in the actual implementation of the research. They see their participation as a rare capacity building opportunity.
- Local technical support to be provided by Raymond Mnenwa (Sokoine University of Agriculture)

Immediate activities planned

1. Meeting to finalize data collection methodology (2 days before end November)

- Participants
 - Raymond
 - All researchers
- Meeting to focus on:
 - Dates for field testing
 - Locations
 - Sources of information
 - PRA techniques training

2. Testing of research tools (total 10 days)

- 2-3 districts in Arusha region
 - Longido – IIED/KDSC/SNV
 - Ngorongoro – ERETO, VetAID, PINGOs
 - Simanjiro/Monduli – CORDS/VetAID
- Producers to consumers in district capital (4-5 days)
- Arusha City (2-4 days)

- Secondary data
- Abattoir, slaughter places
- Traders/transporters
- Hotels, restaurants, lodges, schools
- Nyama Choma, mama nitilia

3. *Meeting for feedback and preliminary analysis (2 days)*

4. *Workshop to review, re-train, plan full research (3 days during first week of February 2009)*

- Ced and James MacGregor to participate

Resources

- Time: Honorarium for fully employed and compensation for time for those not working
- Costs: Per Diem – to use TNRF rates
- Transport: CORDS, Vet Aid, SNV, Pingos may provide vehicles and project budget to contribute fuel
- Equipment: None required in the testing phase

MoU contents

- Partners involved and their roles
- Under PLTF taskforce
- Ownership of products
- Principles of working – sharing costs, resources, consensual decisions, sharing expertise (PRA)

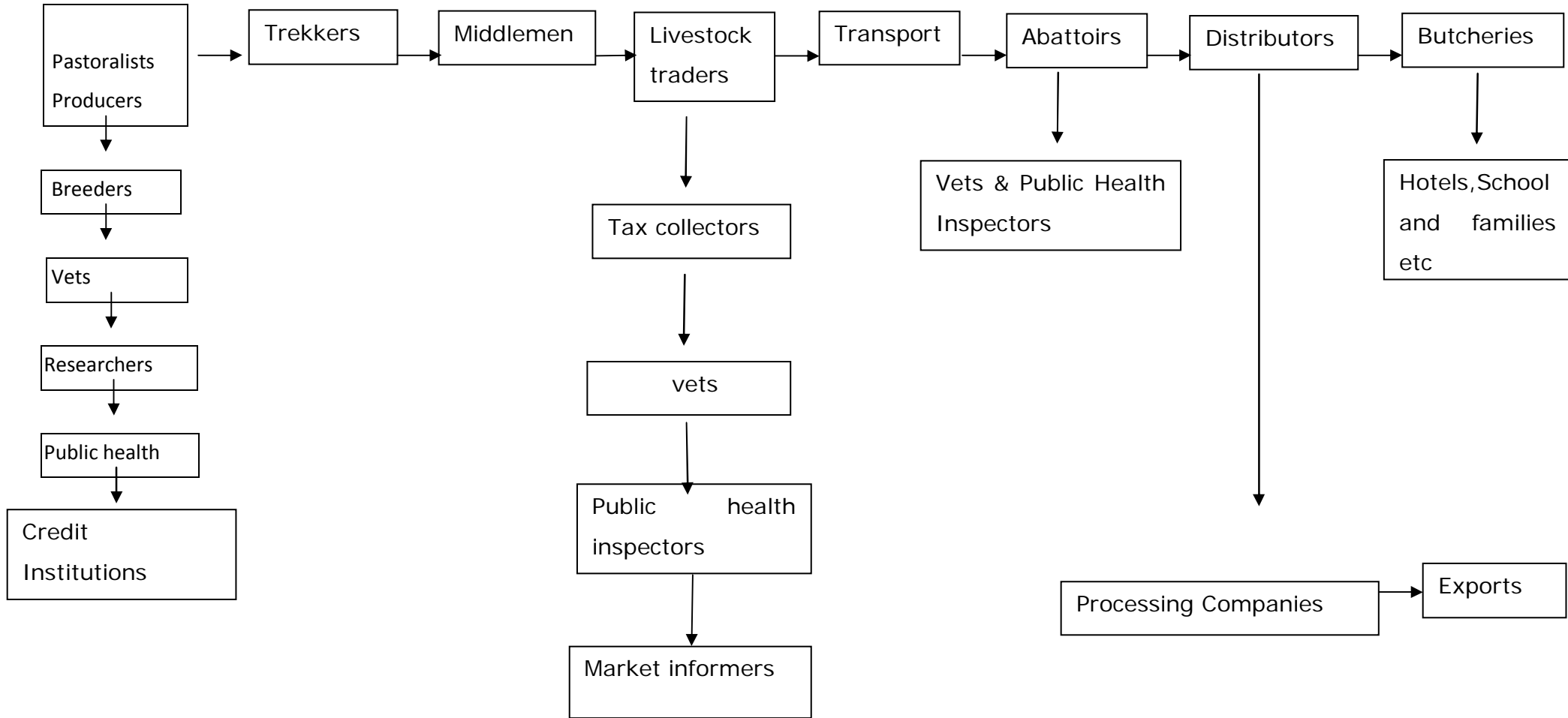
Tasks

- Daniel to inform task force on research (by 31 Oct)
- MC/RM/CH to finalize research methodology (by 7 Nov)
- IIED to do budget and sub-contract TNRF (by 7 Nov)
- TNRF/IIED propose MoU (by 7 Nov)
- Daniel to organise first meeting (meeting by 15 Nov)

Appendix 1: List of Participants

	NAME	ORGANISATION	EMAIL ADDRESS	
1	Cedd Hess	IIED-UK	Ced.hesse@iied.org	+441316247043
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14	Raymond Mnenwa	SUA	krmnenwa@yahoo.com	0754584044
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Appendix 2: Mapping of the Value Chain



Activities, inputs services and outputs of actors along the chain

Producers (Pastoralists + Breeders)

Activities, services and inputs needed

- Veterinary services
- Labour
- Grazing land(in most cases at no cost)
- Consumers
- Market access
- Security
- Animal health and market information
- Credit facilities

Outputs

- Livestock produced

Middlemen

Inputs, activities and services

- Identifies the price of livestock
- Purchases livestock
- Negotiate prices
- Market skills
- Credit facilities
- Transport
- Security

Output

- Provide Livestock

Livestock Traders

Activities, inputs and services needed

- Exportation of livestock
- Selling livestock to abattoirs
- Buy livestock from middlemen
- Need market information
- Credit facilities needed
- Need security
- Need good infrastructure

Output

- Livestock supply out
- Pay taxes
- Employment creation

Distributors

Activities, inputs and services required

- Supply of meat
- Need skilled manpower
- Need meat/products to supply
- Need licences to operate
- Market outlets
- Credit facilities
- Transportation

Output

- Meat supply
- Creation of employment
- Taxes paid

Abattoirs

Activities, inputs and services needed

- Slaughtering of livestock
- Processing
- Well equipped and licenced building
- Skilled manpower
- Health services
- Livestock and vet services

Output

- Meat, skins, hides, manure, hooves, etc
- Pay taxes
- Employment

Butcheries

Activities,inputs,services needed

- Selling of meat
- Well equipped building
- Licences
- Labour
- Animal health services

Output

- Meat cuts
- Pay taxes
- Employment

Processing companies

Activities,inputs and services needed

- Meat processing to different products
- Packaging of meat products
- Need credit facilities
- Licences needed
- Well equipped building
- Skilled labour

- Market outlets needed

Outputs

- Meat products
- Employment
- Improved infrastructure
- Pay taxes

Appendix 3: Checklists for actors along the value chain

Checklist for producers segment

- Personal/household profile
- Assets and their value
- Livelihood activities
- Sources of income and relative importance of livestock versus other sources
- Types and quantities resources used in livestock production
 - ✓ Land: types, ownership/control, where (shifting and frequency of shifting, decisions on shifting)
 - ✓ Labour: hired, own household, gender (age, sex)
 - ✓ Veterinary (values)
- Livestock ownership (types and numbers)
- Value attached to livestock (if you were going to sell/buy, how much would it cost)
- Products from livestock: quantities and destinations e.g. local consumption, sale (local markets, distant markets, traders), gifts to others.
- Sale of meat and sale of livestock for meat (types, frequency, numbers, destinations)
- Market conditions for sale: price (who determines), quality effect of seasons and good/bad years on livestock prices...
- Reasons for selling
- Expenditure on livestock (general)
- Expenditure incurred in selling livestock to meat markets
- Market behaviour re. livestock sales – type of cattle sold (age, sex, quality), when, why, who sells to whom and why, role of price in selling, changes in patterns over last 10-15 years

In addition to the respondent-specific information above, the following information will be collected for this segment from secondary sources and from key informants:

- Number of households/livestock producers in area
- Trading centres including both informal and formal markets, frequency they are held, volume of sales, volume of animals brought but not sold, effect of seasons etc.
- Local prices of meat and other products looking at effect of seasonality
- General availability of services to support local livestock owners
- Level of organization of meat/livestock marketing by producers including formal and informal

Checklist for traders, butcheries, slaughter houses, nyama choma and retailers segments

- Personal information
- Nature of involvement: full time or part time
- Period of involvement and how they became involved and why
- The actual key activity of this player in the meat business or livestock trade

- Seasonality of activities?
- Organization of business: family, sole trader, association etc including links to pastoral households, links to other traders in Tz and elsewhere.
- Fixed premises for business?
- Assets for business and their value
- Diversification: other activities apart from livestock/meat trading and why and does it change
- Use of assets for other non-meat/livestock activities
- Products handled by trader: meat/livestock
 - ✓ Incoming products: sources, quantity/day/week/month, price per unit, transformation, value-adding activity
 - ✓ Outgoing products: form, quantity/day/week/month, price per unit, destinations and share to each destination
 - ✓ Share of products from pastoral sources at present and in the outlook
- Who sets price and quality (for incoming products and outgoing products)
- Any standards set at this segment: how are they set and agreed on
- Resources employed in business and cost of the resources including labour
- Number of people in the business unit of respondent: paid and unpaid
- Industries/services supporting business
- Regulations enhancing or constraining business
- Organization of players in the business
- Level of competition and how changing (How many other players are in this area?)
- Preference of products from pastoralism against other sources
- Contributions they make to taxes

In addition to the respondent-specific information above, the following information will be collected for this segment from secondary sources and from key informants:

- Estimate of number of traders in the area (size categories of traders and their number and quantities traded)
- Any designated trading areas?
- Level of organization of players in this segment
- Legal status of players (sources: local authorities and legislation)
- Maybe livestock sold in Kenya or elsewhere in Tanzania (e.g. trucked to Dar es Salaam)