



# **Proceedings of the Introductory Workshop on the Community-based Animal Health and Participatory Epidemiology (CAPE) Unit**



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	Page
<b>Summary</b>	i
<b>1.0 WORKSHOP OBJECTIVES</b>	1
<b>2.0 PRESENTATIONS BY THE PAN AFRICAN PROGRAMME FOR THE CONTROL OF EPIZOOTICS</b>	1
2.1 The Pan African Programme for the Control of Epizootics (Dr Rene Bessin)	1
2.2 The Community-based Animal Health and Participatory Epidemiology (CAPE) Unit	
2.2.1 The Origins of the Community-based Animal Health and Participatory Epidemiology (CAPE) Unit (Dr Andy Catley)	3
2.2.2 The Outputs and Strategies of CAPE (Dr Tim Leyland)	4
2.2.3 Community-based Animal Health Delivery Systems: Is there a role for veterinary faculties? (Dr Andy Catley)	6
2.3 PACE Epidemiology Unit: Strategies of particular relevance to pastoral areas and CAPE (Dr Gavin Thomson)	7
2.4 Strategy of the PACE Economics Unit (Dr Emmanuel Tambi)	7
2.5 Data Management Unit: Strategies of particular relevance to pastoral areas and CAPE (Dr Berhanu Bedane)	9
2.6 Veterinary Legislation and Privatisation Unit (Dr Yvon Le Brun)	11
2.7 A Situation Analysis of Community-based Animal Health in Chad (Dr Delia Grace)	12
<b>3.0 SITUATION ANALYSIS OF VETERINARY SERVICES IN PASTORAL ECOSYSTEMS</b>	15
3.1 East Horn Ecosystem (Afar Communities)	17
3.2 East Horn Ecosystem (Somali Communities)	20
3.3 Greater Serengeti Ecosystem	25
3.4 Karamajong Ecosystem	31
3.5 West Nile and East Nile Ecosystems	35
3.6 Western Eritrea/Eastern Sudan Ecosystem	41
<b>4.0 OVERVIEW OF LEGISLATION</b>	43
<b>5.0 FINAL SESSION</b>	44
5.1 Queries for workshop participants	44
5.2 Final remarks	45
<b>List of participants</b>	46

## Summary

The Community-based Animal Health and Participatory Epidemiology (CAPE) Unit is a sub-unit of the Pan African Programme for the Control of Epizootics (PACE). The CAPE Unit was established in January 2001 and is located in the OAU/IBAR offices in Nairobi, Kenya. This workshop was organised to introduce the CAPE Unit to senior government veterinarians working with PACE and explain the linkages between CAPE and PACE. The workshop was also an opportunity to present CAPE's objectives, obtain up-to-date information on veterinary services in pastoral areas, and identify priority needs in relation to CAPE and PACE activities. The CAPE Unit focuses activities in the Greater Horn of Africa region.

The workshop participants included staff from the PACE Programme in Nairobi (Coordination, Epidemiology, Economics, Privatisation and Legislation, Data Management and Communications Units), National PACE Coordinators, District Veterinary Officers, and representatives from veterinary schools, veterinary boards/councils, veterinary associations and donors.

The five main outputs of the CAPE Unit are as follows:

- Output 1**      Establishing (or supporting the establishment) of innovative self-sustaining animal health care systems in pastoral areas, capable of controlling epizootic diseases and providing surveillance information for epizootic disease control.
- Output 2**      Strengthening IBAR's capacity as a regional body, to champion change in formal and informal institutions that shape animal health service delivery in pastoral areas
- Output 3**      Promoting policy changes and legislation to create an enabling environment for community-based animal health services
- Output 4**      Collecting and presenting relevant data and information in support of wider policy changes
- Output 5**      Producing and circulating information on best practice guidelines for the establishment of self-sustaining animal health services in pastoral areas

CAPE activities are transboundary and focus in pastoral ecosystems of strategic importance for rinderpest eradication (e.g. West Nile and East Nile Ecosystems; East Horn Ecosystem) and/or are characterised by limited development of primary-level animal health services. Typically, these areas are remote with poor infrastructure and varying levels of conflict. Due to positive past experiences with community-based approaches to veterinary service delivery in these areas, CAPE will support both field level and policy level work to further develop community-based initiatives. CAPE will also collate and disseminate information on community-based delivery systems to policy makers and others, and promote research within veterinary schools and other institutions. CAPE is particularly keen to address sustainability issues and define roles for community-based approaches in privatised veterinary services.

Workshop participants conducted a situation analysis of veterinary services in key pastoral areas of the Greater Horn of Africa and presented useful baseline data (e.g. population data, veterinary infrastructure, policy environment) on an ecosystem basis. The situation analysis led to the identification of important deficits in service delivery and preliminary discussion on how CAPE can complement national PACE programmes. There is now a need for CAPE to work with PACE (centrally and at national level) to prioritise and elaborate activities in more detail, and ensure effective coordination with national PACE programmes. This can be achieved through a series of regional and national-level meetings with PACE and other stakeholders.

# 1. OBJECTIVES OF THE WORKSHOP

- Objective 1* To introduce CAPE, present the project objectives, key activities and senior staff.
- Objective 2* To describe the linkages between CAPE and the Pan African Programme for the Control of Epizootics (PACE).
- Objective 3* To work with workshop participants to conduct a situation analysis of veterinary services in the 5 main pastoral ecosystems to be covered by CAPE.
- Objective 4* To identify specific CAPE activities and outline opportunities for partnerships with target institutions and organisations.

## 2.0 PRESENTATIONS BY THE PAN AFRICAN PROGRAMME FOR THE CONTROL OF EPIZOOTICS

### 2.1 *The Pan African Programme for the Control of Epizootics (Dr Rene Bessin)*

#### Overall objectives of PACE

- Alleviation of poverty among livestock keepers by increased animal production and productivity
- Production and productivity of animal resources are sustainably increased.

This will be measured by increased off take in livestock sector, increased quality or yields of livestock products and increased trade opportunities.

#### Expected results

- Enhance national capacities to sustain epidemio-surveillance.
- Improve delivery of veterinary and animal health services.
- Fight against rinderpest and control of other epizootics.
- Pan African co-ordination of animal health services

#### Main issues addressed by PACE

- REINFORCEMENT OF NATIONAL CAPACITIES
- Establishment of NESN
- Strengthen laboratories capacities.
- Equipment of veterinary services
- Training in specific fields
- Transfer appropriate technology
- Promote capacity building

## **Improve distribution of veterinary services and drugs**

- Privatization by improvement of relationship between private and public sector.
- Change of regulatory framework by adaptation and enforcement of laws
- Adoption and establishment of sanitary mandate by using private veterinarians and commissioning of services to NGOs
- Adoption of new approaches by using CAHWs

## **Eradication of rinderpest**

- Assist countries to fulfil OIE requirement of freedom from rinderpest.
- Prepare emergency preparedness plans
- Establish Emergency Fund
- Establishment of Performance Indicators and quality assurance
- Establish wildlife disease surveillance to ascertain no circulation of rinderpest virus.

## **Fight other major epizootics**

- CBPP, PPR, RVF, ASF, FMD
- Promote joint and cross border actions
- Develop regional and sub regional activities
- Improve and promote international cooperation (OIE, FAO, IAEA)

## **Structure of the PACE programme**

CONTINENT:	Programme Coordination Unit.
REGIONAL :	Coordination Units for West Central and Eastern Africa
COMMON SERVICES:	At the two Coordination levels
NATIONAL :	National coordinations implement national programmes

## **The PACE Community-based Animal Health and Participatory Epidemiology Unit**

*CAPE is essentially a continuation, expansion and refinement of OAU-IBAR 's PAR-VAC project. It is a sub-unit of the PACE programme in that its objectives, purpose and outputs are all complementary to those of the PACE programme.*

*The Outputs of CAPE are described in presentation 2.2.2 below.*

**OPERATION OF THE CAPE UNIT** – unit is managed and implemented by the OAU-IBAR under the PACE Unit with a broad range of partners from NGOs, Govt Departments, International Agencies in some of the remote and marginalised pastoral areas of nine countries; CAPE 's TA will act as team leader and report to the PACE Programme Coordinator.

## 2.2 The Community-based Animal Health and Participatory Epidemiology (CAPE) Unit

### 2.2.1 The Origins of the Community-based Animal Health and Participatory Epidemiology (CAPE) Unit (Dr Andy Catley)

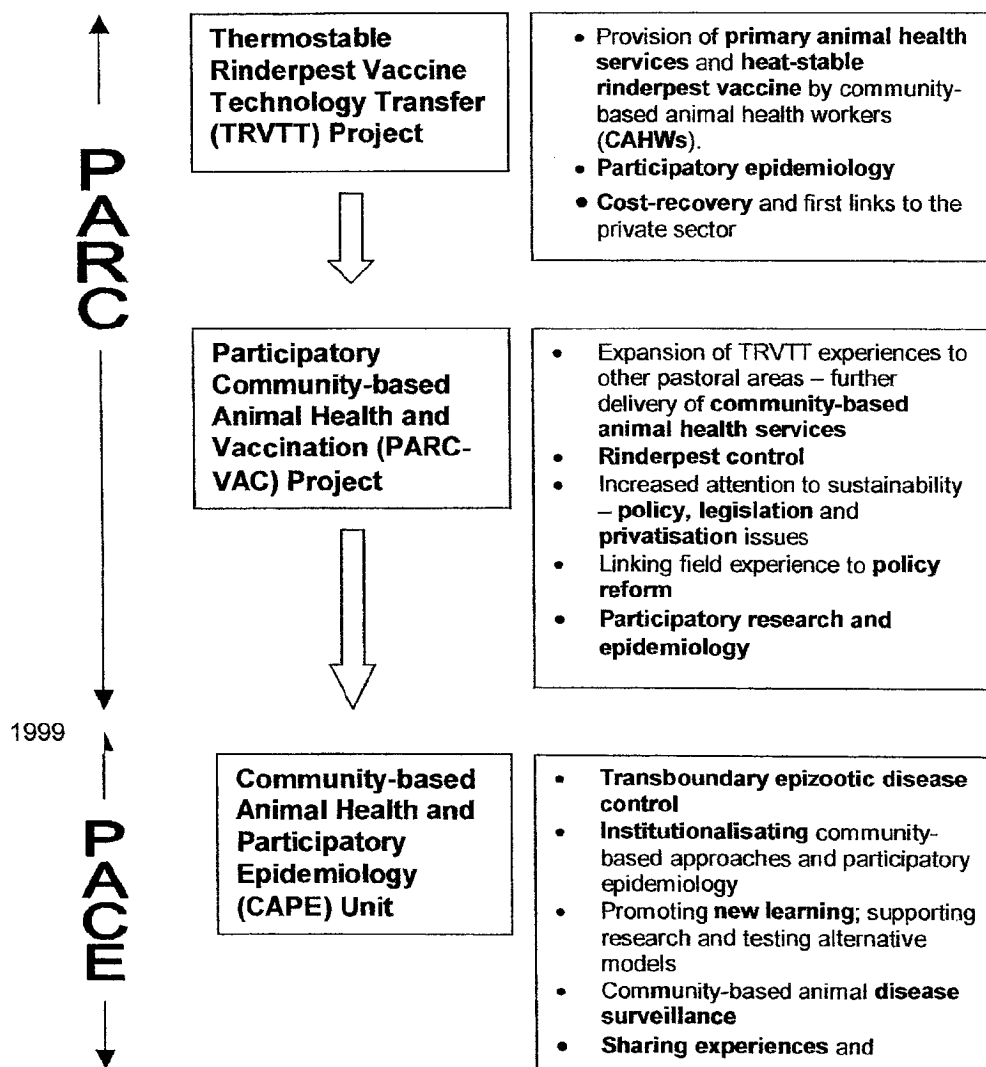
Two main bodies of experience contributed to the development of CAPE:

#### *Work by NGOs*

- Particularly in pastoralist areas.
- Based on principles of appropriate technology and community participation.

#### *Work by the Pan African Rinderpest Campaign*

- Provision of basic services and delivery of heat-stable rinderpest vaccine.
- Afar region (Ethiopia); South Sudan; Karamoja (Uganda); Turkana and Pokot (Kenya).



## 2.2.2 The Outputs and Strategies of CAPE (Dr Tim Leyland)

The purpose of the CAPE Unit:

**To help create new sustainable systems for animal health service provision in pastoral areas of the GHA to control livestock diseases in the region**

This purpose will be achieved according to five outputs.

**Output 1** Establishing (or supporting the establishment) of innovative self-sustaining animal health care systems in pastoral areas, capable of controlling epizootic diseases and providing surveillance information for epizootic disease control (in particular Rinderpest).

*Strategies:*

- *The inter-active participation of pastoral peoples*
- *Utilisation of proven technologies and methodologies*
- *Fill the gaps where:*
  - *technologies are lacking*
  - *methods need to be refined*
  - *services are lacking (in collaboration with national projects and NGOs). Develop a proven model or range of options (models) that existing government approaches can adopt and that inform policy revision*
- *Actively involve key partners and institutions at all stages*
- *Draw on expertise housed in other PACE Epidemiology, Privatisation/Legislation, Economics and Data Management*

**Output 2** Strengthening IBAR's capacity as a regional body, to champion change in formal and informal institutions that shape animal health service delivery in pastoral areas

*Strategies:*

- *Build upon IBAR's track record, 10 years of pastoralist experience and the IBAR's stated long term ambition to be a centre of excellence for the region*
- *Build upon IBAR's recognised policy mandate and ability to work across international borders*
- *Utilise institutional change and policy development specialists*

An example of OAU/IBAR's policy work

### **Policy Harmonisation Workshop, Mombasa, 1999**

Each of our countries has some kind of livestock policy. The levels of development of such policies and their contents differ. The important thing is for those diverse policies to be harmonised. OAU / IBAR should take a lead in this. The OAU/IBAR could facilitate this process by:

- Collecting and analysing existing policies
- Producing a guide for the development of appropriate policies
- Disseminating this guide to all the countries so that those that wish to localise and adapt it, can do so.

OAU/IBAR can then assist materially and with advice to support the countries to affect the changes.  
*(Moved for adoption by Senegal and seconded by Uganda)*

**Output 3** Promoting policy changes and legislation to create an enabling environment for community-based animal health services

*Strategies:*

- *Fully utilise IBAR links to high level national policy makers and International agencies*
- *Assist key players involved in policy reform to learn more about and evaluate CAH systems in the pastoral areas of the GHA*
- *Define and develop a critical mass of experience in order to inform policy*
- *Effectively disseminate research findings and produce scientific publications*
- *Utilise IBAR's recognised ability to organise regional workshops to promote training, networking and awareness raising activities*

**Output 4** Collecting and presenting relevant data and information in support of wider policy changes

*Strategies:*

- *Consult other CSUs particularly the Data Management Unit to ensure efficient data management*
- *Recognise that there still a need to learn more about private and veterinary supervised CAH systems, which remain largely 'unproven'*
- *Recognise that there is a need to learn more about the impact of CAH systems on the poorest of the poor and women pastoralists*
- *Test models/approaches in various operational contexts*
- *Ensure research design is rigorous (particularly when participatory and formal methods are combined)*
- *Build on past experiences in livestock and other sectors*
- *Learn more about sustainability and participation issues before 'scaling up'*

**Output 5** Producing and circulating information on best practice guidelines for the establishment of self-sustaining animal health services in pastoral areas

*Strategies:*

- *Utilise PACE services of Communications Unit*
- *Recognise lack of understanding of community-based approaches among veterinary profession and utilise a variety of methods to 'educate vets' about CAHW systems;*
- *Utilise peer pressure to influence policy*
- *Build on OAU/IBAR capacity to organise large-scale international meetings*
  - *Invest time in writing up and disseminating experiences effectively*

## **Overview of CAPE Components**

The funding components of the CAPE Unit are:

- Rural Livelihoods Department, Department for International Development UK
- OFDA/USAID (PARC-VAC Project)
- REDSO/USAID (Border Harmonisation Project)
- EC – EDF (PACE)

## **Ecosystems**

The CAPE Unit aims to work in remote pastoral areas of the GHA region. These areas are affected by limited development activities, poor infrastructure and in some cases, conflict. The ecosystem approach recognises that important pastoral areas in the region are characterised by transboundary movement of communities with similar ethnic and cultural links. Effective livestock disease control in these areas requires a transboundary approach to ensure that coordinated and harmonised control measures are established on both sides of a border.



The original project proposal for CAPE specified five pastoral ecosystems viz. West Nile Ecosystem, East Nile Ecosystem, Karamojong Ecosystem, Greater Serengeti Ecosystem and East Horn Ecosystem. However, according to resource availability and epizootic disease control priorities on a regional basis, CAPE activities are not restricted to these five ecosystems alone.

### **2.2.3 Community-based Animal Health Delivery Systems: Is there a role for veterinary faculties? (Dr Andy Catley)**

Some traditional roles:

- Training veterinarians (undergraduate and postgraduate)
- Research

#### **Research opportunities: Diseases verses Delivery**

In human health, research on primary level service provision is a well-established area of professional research.

The London School of Hygiene and Tropical Medicine, Department of Public Health and Policy produces two journals:

- *Health Policy and Planning*
- *Journal of Health Services Research and Policy*

This department complements 'hard science' research on tropical diseases conducted in other departments

Division of International Health, Liverpool School of Tropical Medicine

- Specialises in health services research
- Multidisciplinary - social science, epidemiology, mathematics, development studies, health promotion, human resource management, gender specialists.
- Senior academic posts related to primary-level services e.g. Professor of International Community Health.

*Are there opportunities for veterinary research centres to work on community-based delivery systems?*

- Some European centres are already starting to do this e.g. CTVM, VEERU, Berlin
- But what about African centres?

#### **Some possible research topics:**

Effective training approaches and methods for CAHWs

Financial sustainability of CAHW systems - government vs. private vs. 'other'

Policy review and analysis - related to political and economic contexts

Technical competence of CAHWs

Gender issues

Participatory epidemiology

#### **Training of veterinarians?**

Are there opportunities to develop training courses on community-based (and other delivery systems) for veterinarians?

If so, how might this process be initiated?

Should this be linked to existing courses on topics such as privatisation, practice management etc?

## **2.3 PACE Epidemiology Unit: Strategies of particular relevance to pastoral areas and CAPE (Dr Gavin Thomson)**

### **Major objectives of the PACE Epidemiology Unit (PEU)**

Assist in establishment of effective epidemiological networks both within and between participating countries (including laboratory support)

Facilitate the eradication of rinderpest from the remaining foci in Africa (pastoral areas)

Assist in deriving better measures to control CBPP

Identify and assist in devising more effective control strategies for other diseases that constrain livestock development and access to markets

### **Composition of the PEU**

- Main and counterpart epidemiologists
- Epidemiologists for Central, Eastern & Western Africa
- Wildlife specialists for Central/Western Africa and Eastern Africa
- Laboratory specialist (IAEA)
- Linkages with other PACE Units including CAPE

### **Areas of common interest between CAPE and the PEU**

#### **Rinderpest**

- Surveillance in pastoral areas, esp. southern Sudan and Somalia and adjacent parts of neighbouring countries.
- Policy (potential conflict between global rinderpest eradication & assistance to pastoral communities).

#### **CBPP**

- Impact of endemic CBPP in the various agro-ecological zones in PACE's operational area?
- Is mass vaccination against CBPP an appropriate control strategy?
- If not what's the alternative?

#### **Other issues**

- What other diseases constrain pastoralists and what can be done to control them better?
- Influence of animal diseases on access to regional and international, especially intercontinental markets
  - Rift Valley fever
  - foot and mouth diseases
  - role of wildlife

## **2.4 Strategy of the PACE Economics Unit (Dr Emmanuel Tambi)**

### **Why economic studies?**

Economic studies of animal diseases avail information for policy and decision makers to set priorities, design more effective control programmes, allocate resources more efficiently and distribute benefits equitably among potential beneficiaries.

## **Mission of Economics Unit**

The mission of the PACE Economics Unit is to develop and provide information to improve decision-making in animal disease control at the individual, national and regional levels.

## **Strategy**

### ***Components of the Strategy***

1. Core-functions of the Economics Unit
2. Building capacity to undertake economic studies at national and regional level
3. Influence decision-making (individual, Ministry, donor and other institutions)
4. Collaborate with PACE Common Services Units and other external institutions and organizations
5. Enhance capacity for economic impact assessment at IBAR
6. Outsourcing for complementary socio-economic studies

## **Core-functions of the Economics Unit**

### ***Socio-economic studies***

- Quantify economic losses caused by animal diseases identified in the PACE National Programmes and rank them according to priority.
- For the priority diseases identified, carry out *ex-ante* cost-benefit analysis and determine the cost-effectiveness of alternative control measures.
- Assemble data (economic, epidemiological, etc) on CBPP, ASF, RVF, PPR and New Castle Disease and develop methodology for their economic impact assessment.
- Determine the cost of establishing and running a sustainable epidemio-surveillance system at national and regional level.

### ***Case and pilot studies (selected countries)***

- Establish the investment needs required for private veterinary practice and assess the potential market for veterinary drugs in selected countries.
- Determine the cost of delivering animal health services in pastoral areas using community animal health delivery systems and evaluate the potential gains to be derived therefrom.

### ***Building capacity to undertake economic studies at national and regional level.***

- Organize national and regional workshops to train national staff on methods of economic impact assessment.
- Transfer existing methods of economic impact assessment to National PACE Programmes.

### ***Influence decision-making at Ministry and donor organizations level.***

- Demonstrate to and convince national authorities and donor institutions of the losses due to disease and the benefits of their control.
- Convince donor institutions to invest in disease control and national governments to increase and sustain financial contributions to disease control
- Analyze national capacities for sustainable financial contributions to PACE and propose a mechanism for such contributions.

### ***Collaborate with PACE Common Services Units and other external institutions and organizations.***

- Build capacity for economic analysis at OAU/IBAR.
- Enhance and institutionalize a sustainable capacity to carry out economic analysis at OAU/IBAR (East and West Africa Regional Co-ordination Units)
- Outsourcing for complementary socio-economic studies
- Identify consultants for complementary socio-economic studies and establishing TOR for them

## **Activities**

- Evaluate economic losses from CBPP and estimate the costs of and potential benefits of alternative control measures
- Calculate the costs of setting up and running a sustainable national epidemio-surveillance network (selected countries)
- Evaluate the costs and benefits of animal health delivery services using different methods of CAHW delivering systems (northern Kenya and Uganda)
- Estimate and compare the investment needs required and the potential returns to be derived from a private veterinary practice in urban and rural areas
- Organize a regional workshop to explain and distribute economic impact assessment model developed during PARC to national staff (countries already funded)
- Visit authorities in PACE member countries to explain the necessity of making financial contributions to PACE
- Make an inventory of the existing human resource capacity for economic analysis in PACE member countries and contact potential resource persons for data collection and complementary socio-economic studies.

## **2.5 Data Management Unit: Strategies of particular relevance to pastoral areas and CAPE (Dr Berhanu Bedane)**

### **Structure and Function**

The Data Management Unit is one of the seven Common Services of PACE and comprises a professional officer, a network administrator and data entry clerk (to be recruited). The Unit aims to establish an information system, which will assist PACE, at national and regional levels, to eradicate rinderpest and develop appropriate strategies for the control of other major epizootic diseases.

### **Mission statement (Overall strategy)**

Establish an information system, which assists PACE (National and Continental Programmes) to eradicate RP and control major epizootic diseases and serve as a base for IBAR's future information system.

### **Specific strategies**

- 1) Lay a foundation for the establishment of a sustainable animal health & production information system, which makes use of modern information technology and approaches enabling IBAR to prioritise, plan, make decisions, advise users and monitor activities related to animal resources.
- 2) Provide information on the epidemiology of rinderpest in member countries by creating appropriate data collection methods from national veterinary services, CAHW/NGOs & other sources.
- 3) Collect data which enables PACE to monitor activities of member countries geared towards the final eradication of rinderpest and their progress along the OIE pathway.
- 4) Collect and analyse baseline, epidemiological, and economic data on major livestock diseases for setting control and/or research priorities.
- 5) Assist member countries to build capacities to establish/strengthen the management and dissemination of information on animal health and exchanged it with neighbouring countries.

- 6) Harmonise and standardise collection of data and management of information related to animal production and health with international organisations (i.e. OIE, FAO EMPRES, FAO RADISCON) operating in Africa.
- 7) Build capacity of staff working for national programmes in areas of information management and create eventually an African network of animal health information.
- 8) Foster a cross border information management skills transfer between member countries.

## **Approaches**

### *At global level (OIE, FAO, Panafitosa, ILRI, etc.)*

- Harmonise activities and standardise data collection from countries
- Liaison for information exchange and experience sharing

### *At continental level (PACE/IBAR)*

- Create a system and establish routines for data collection, processing and information generation and dissemination.
- Harmonise activities of PACE Common Services regarding information management.

### *At country level (PACE Member countries)*

- Involve staff from National Programmes in planning activities (establish routines)
- Assist countries in the establishment of the identified information system.
- Assist in building capacity of staff from member countries in information management and the use of information technology
- Promote the transfer of information management skills between member countries.

## **Strategy for Pastoral Areas: CAPE and DMU**

### *Why special focus in pastoral areas?*

- These are areas where vulnerable poor communities, relying basically on their livestock, live.
- Total eradication of rinderpest is one of the main objectives of PACE. The remaining two foci in Africa are suspected to be in the Pastoral Areas.
- Due to poor veterinary services delivery and information flow, these areas are strong hold of major epizootic diseases.

### Need for alternative approach:

- Collection of data needs an alternative approach.
- Since there is extensive movement of livestock, location specific data render very little or inaccurate information.
- Collected data cannot be transmitted through the conventional channel, at least from the start.
- Data at District and Provinces or any political or administrative boundary level is less significant.

## **Experience from West Nile Ecosystem**

Planning rinderpest surveillance was a problem.

- Conducting rinderpest history survey coupled with herd inspection (when the history proves recent infection) was not possible.
- Cattle population estimate at district or province level was difficult to collect.
- Data collected on the movement patterns of pastoralists enabled planning the survey.

### ***Desired outputs***

- Collect data for better understanding of the system and plan intervention.
- Introduce a sustainable livestock related data collection and transmission system.
- Generate and disseminate information relevant to pastoral communities including early warning information.

### ***Strategies***

- Make use of Veterinary supervised CAHW for the collection of data within the scope of existing community structures.
- Employ PRA techniques to collect baseline and ad hoc data.
- Widen the scope of data collection to major spheres of life affecting the livelihood of pastoralists.
- Improve the quality of data collected from pastoral areas through training and frequent supervision of CAHW.
- Research on how to integrate data collected from pastoral areas to the national information system.

### ***Activities (based on previous experiences)***

- Better understanding of the pastoral system (organisation, culture, needs, movements patterns, etc.).
- Identification of data to be collected.
- Simplify data collection methods to enable CAHW handling it without losing the ultimate goal of integrating it to national system.
- Identify and train actors and establish system (when, where and how to collect data, transmit, and receive feedback).
- Integration of data to national system.
- Information feedback to the community.

## **2.6 Veterinary Legislation and Privatisation Unit (Dr Yvon Le Brun)**

### **Privatisation problematics**

#### **PACE principal objective**

Alleviation of poverty by increasing the level of animal production

#### **PACE secondary objectives**

- ❖ *Rinderpest eradication*
- ❖ *best knowledge of animal diseases*
- ❖ *reinforce efficacy in fight against diseases*

#### **Need to consider :**

International context

Increase in international trade

Strengthening of international sanitary certification regulations

- Need for updating, harmonizing (standardizing in some case) national sanitary regulations
- Necessary to prepare African countries to develop national standards adapted to new international sanitary requirements
  - Creation of quality, flexible and upgradeable veterinary services

**OAU/IBAR/PACE Privatisation Policy** – support the development of vet teams able to play a major role in:

1. Implementation of national sanitary policy (prophylaxies and epidemiosurveillance); delivery of official certificates

2. Supplying Animal Health Services
  - Individual care
  - Audit in zootechnics
  - Retailing veterinary drugs and intrants

### **Expected impacts**

1. African countries are following the privatisation policy proposed by OAU/IBAR and its recommendations for implementation
2. Reinforcement and re-centering of activities of governmental veterinary services
3. Transfer of veterinary practicing and drugs distribution to private sector with the wider coverage (put animal health networks in place).
4. Involvement of private sector professionals in legal sanitary activities (vaccination campaign and epidemiosurveillance).
5. Better involvement of stockholders in the management of animal health.
6. Obtention of cost recovery
7. Harmonization (or compatibility) of sanitary legislations between the different countries of PACE zone allowing better trade conditions

### **Links with CAHWs**

- Weakness of the market in some areas
- Reluctance of vets to work in remote areas
- Insecurity
- Under monetarisation of stockholders

Therefore, CAHWs working under the responsibility of vets are highly relevant.

### **Needs in legislation**

- Foster an updating of legislation that follows new national policy that integrates CAHWs.
- CAHWs should be mentioned in veterinary practice act, drug act and sanitary reglementation for epidemiosurveillance and medical prophylaxia.

### *Furnish a legal framework for CAHWs*

- Authorisation to hold, inject and sell different types of drugs.
- *Authorisation to practice some regulated acts of veterinary medicine.*
- *Obtain their recognition by professional veterinary associations (Veterinary Boards).*

### **Conclusions**

CBAHW appear as essential for a success of implementation of new animal health policy at national level, integrating the role of private sector and public veterinary services.

Bearing in mind the type of interventions conducted in animal health and the sums that stockholders are ready to invest in individual veterinary medicine, this is the only response for many areas to extend an economically viable veterinary services delivery system.

## ***2.7 A situational analysis of community-based animal health in Chad (Dr.Delia Grace)***

### Key indicators

- 54% of population below the poverty line
- 40% of under 5's malnourished
- Life expectancy 49 years

### Importance of Livestock

- 40% of value of agriculture sector

- Officially the second major export after cotton
- Livelihood for 40% of the population.
- 75% of livestock keepers are pastoralists
- Processing livestock products key activity for women
- Socio-cultural importance, underpins nomad system.
- Draft animals for settled agriculture

#### Pastoralist priorities

- Solving conflicts between nomads and settled
- Animal Health
- Human Development -Education, Health
- Insecurity, corruption

#### Effects of policy change on the livestock sector

- Export prices double
- Change in trade patterns
- Domestic livestock product markets increase
- Successful PS involvement in vaccination
- State costs frozen
- Greater availability of medicine
- Greater choice of animal health suppliers
- (25 vets, 5 pharmacy chains, 20 branches, 3000 +CAH)

#### CAH experiences in Chad

##### Over 25 years of experience:

- Over 3000 CAH trained
- Many different models
- State led approach to CAH
- Supportive policy in place
- Standard, national, accepted, training method

##### Four main CAH models in Chad

- Free market CAH
- Linked to private vets
- Training and visit
- Community groups

##### Free Market - 'license to kill'

- Sustainable
- Provides cheap treatment, close at hand
- Provides livelihood for CAH
- High potential for harm



- Anecdotal evidence quality is low

Linked to private vet - reality doesn't live up to theory

- Preferred in theory
- Private vets are not primarily clinicians
  - vaccinators, campaign drive
  - pharmacy sales
- Private practice is fragile

Mass education of livestock owners T&V a failed paradigm

- Greater coverage
- No evidence for demand, no evidence for impact
- Widely perceived as less effective than group methods

Groups-Classic DOP – the dominant and most successful model

- Community groups with CAH
- Structured, standard, national approach
- Closely linked SVS
- Regular follow up
- Cost recovery
- Group management and oversight
- Most successful model in Chad
- Over 3000 CAH trained
- Legislative and policy support
- Dedicated government department
- High demand for training
- CAH appreciated

Why are they re-assessing CAH in CHAD?

- Too expensive, not sustainable
  - when funding stops, follow up stops, and state supervised system disappears
  - less than 5% of livestock keepers reached
- Never worked well with nomads
- Anecdotal evidence positive but impact never convincingly demonstrated
- Recentring of the SVS

CAH What hasn't worked well in Chad

- Train and release
- Command and control – a very rigid, tightly regulated system of supervision
- Doing too much at once – linking with credit, and co-operative financial management

- Doing too little- CAHs who aren't trained / allowed to provide services which the illegal competition give (e.g antibiotic injection)
- Micro - Management by state vets – at most 1 state vet can fully support 50-60 CAH in groups there aren't enough SVS resources to cover Chad using this model.
- Management by private vets- private vet practice is fragile in Chad.

The main policy constraint in Chad is Regulatory Escape

- 80% of drug sales illegal (+ human)
- 2/3 of cattle exports unofficial
- >60% of slaughter escapes regulation
- >50% of economy informal

Does this matter?

- Public protection from incompetence & dishonesty
- Unfair competition, bad drives out the good
- Inefficiencies
- State can't collect revenue, can't provide services

CAH: What has worked well in CHAD

- Long term commitment and strong relationship with communities
- Communities make decisions
- Monetary incentives for CAHWs
- Policy and legislative support

What's happening now

- Re-evaluation of CAH – but not rejection, all key actors see CAH as important, but the current methods need to be improved
- New approaches & refinement of existing
- Dealing with regulatory escape
- A Pastoral Code

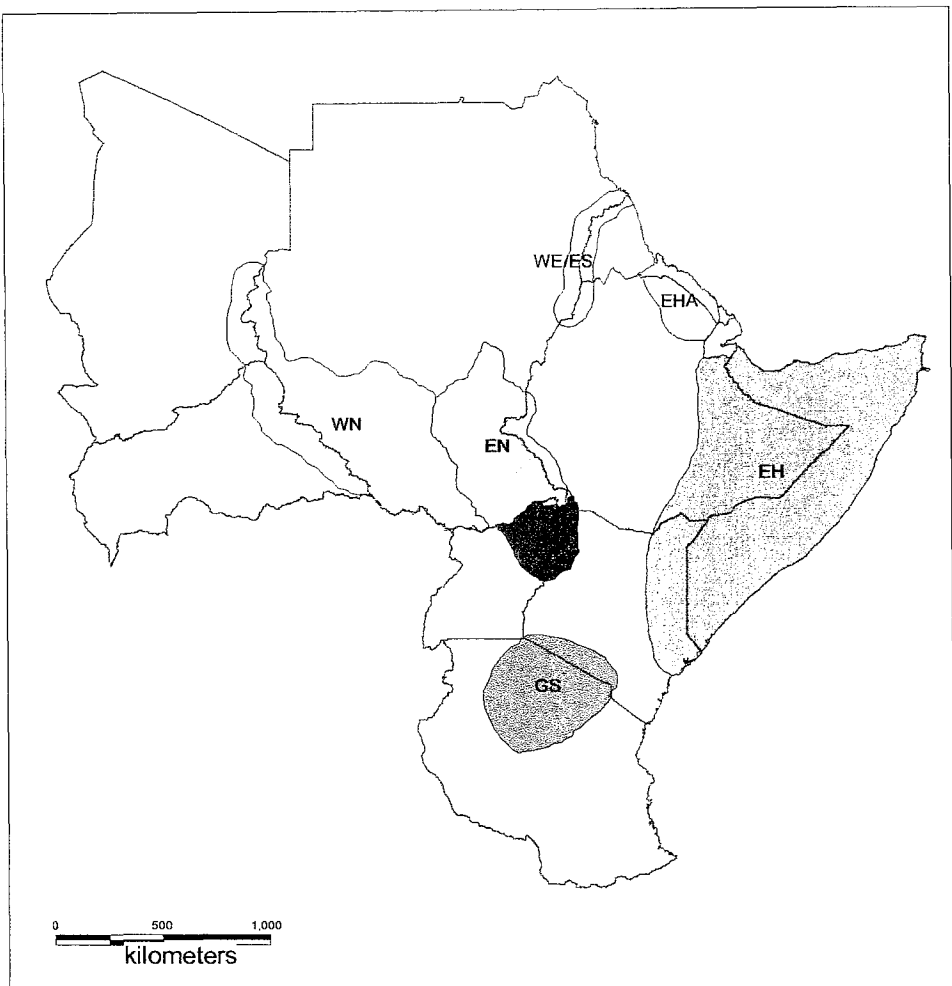
Conclusions

- CAH can be part of the solution; it can also be part of the problem.
- CAH is a means to an end and not an end to itself.

More livestock without better equity, governance and human development, may just result in more poor & marginalised livestock keepers, struggling to make a living.

### **3.0 SITUATION ANALYSIS OF VETERINARY SERVICES IN PASTORAL ECOSYSTEMS**

During the workshop, working groups were formed to conduct a situation analysis of veterinary services in pastoral ecosystems. Based on feedback for workshop participants, the original CAPE ecosystems were expanded to include an areas covering western Eritrea, eastern Sudan and the north west corner of Ethiopia, as illustrated below.



GS	Greater Serengeti
K	Karamajong Cluster
WN	West Nile
EN	East Nile
EH	East Horn
EHA	East Horn (Afar communities)
WE/ES	Western Eritrea/Eastern Sudan

In order to ensure that the situation analyses are based on up-to-date information, we are requesting participants to carry documents to the workshop which include information on the following topics:

***Basic data***

Human and livestock populations, infrastructure, communications; security factors.

***Veterinary services***

Existing veterinary services (public, private, NGOs, other) – personnel, infrastructure, activities, coverage and gaps; priority animal diseases.

***Policies***

Existing policies e.g. national economic policy (privatisation), pastoral development policies, veterinary policies affecting service delivery in the ecosystems.

**Transboundary issues** Existing border harmonisation arrangements for disease control.

**PACE planned activities** Activities in the ecosystems planned via PACE (or other) programmes.

**Constraints and Opportunities** When the above information has been compiled and analysed, each working group should then refer to the CAPE Outputs, identify opportunities for collaboration and prioritise these opportunities.

### 3.1 EAST HORN ECOSYSTEM (AFAR COMMUNITIES)

Table 3.1  
Basic data for Afar areas

	Ethiopia – Afar Region	Eritrea – Danakil (Arata and Central Danakil sub-zones)
Human population	1,200,000	75,000
Livestock population:		
Cattle	3,600,000	82,062
Goats	2,900,000	571,417
Sheep	2,000,000	103,047
Camels	871,832	53,971
Equines	192,242	21,198
Poultry	65,000	6,052
Bees	3,550	100
Livestock infrastructure:		
<u>Clinics</u>		
* public	20	4
* private	1	-
* NGOs	4	-
	(FARM Africa, CARE Awash, Action Contre La Faim, Afar Pastoralist Devt. Assoc.)	
* slaughterhouses		1
* quarantine stations	1	1
* ponds	-	-
* vaccination centres	12	10
	40	
Geographical coverage:		
- Government	✓	✓
- Projects	✓	✓
* NLDP	✓	✓
* PACE	✓	✓
* range devt	✓	✓
* DLDP	-	✓
- NGOs	✓	-
- private sector	1	-
- vets	11	1
- AHAs	12	4
- AHTs	145	2
- paravets (CAHWs)	250	15
- traditional healers		(Arata sub-zone 8, C.Denkel 7)
	100	0
CAHW activities		
- Government	-	✓
- NGO	✓	-
- project	✓	-

## **Information gaps and learning needs for CAHW systems**

- \* Level of training
- \* Activities performance
- \* Sustainable provision of drugs
- \* Level of supervision
- \* CAHW sustainability
- \* Harmonizing meeting

## **Border harmonization**

- \* Dies not exist at present

## **Activities under PACE**

- \* Training and equipping
- \* Close supervision
- \* Sero-surveillance
- \* Refresher course

## **Prioritisation of needs**

1. Control of epizootic disease
2. Training of more CAHWs
3. Data collection
4. Improve supervision and monitoring
5. Awareness creation
6. Information dissemination
7. Linkage between vets and livestock owners

## **How do these needs relate to CAPE outputs?**

- The pastoralist gets basic vet services
- Creation of enabling environment

## **Partnership between CAPE and local players**

- \* Information exchange
- \* Standardise curriculum
- \* Harmonize vet legislation and policies
- \* Share experience between countries
- \* Creation of suitable technologies
- \* Conducting workshops
- \* Training and capacity building
- \* Assign CAHW Coordinator for the ecosystem

## **Priorities for East Horn Ecosystem - Afar communities**

### **1. Epizootics**

- Sheep pox, CBPP
- FMD, PPR, CCPP

### **2. Data/research/case histories**

CAHWs can collect information on disease outbreaks, livestock baseline data, sustainability of CAHW programmes and veterinary services.

### **3. Capacity building/training**

- Refresher course for CAHWs
- Training of trainers

- Training of supervisors
- Training of elders/clan leaders

#### 4. **Training CAHWs**

Through government, PACE and NGOs, with the participation of livestock keepers. Regional awareness raising and testing of models is a role for CAPE. University curricula to include CAHW approaches.

#### 5. **Standardising approaches**

There is a need to:

- standardise and harmonise training curriculum
- standardise activities of CAHWs
- conduct border harmonization meeting
- organise meetings and seminars
- exchange of information within/other eco-system

#### 6. **Exchange information (networks)**

- radio
- border harmonization meeting
- when there is an emergency situation
- when there is disease outbreak
- livestock movement for market/grazing

#### 7. **Policy revision/review**

The key actors are governments and OAU/IBAR. Need to organise meetings and exchange information.

#### 8. **Marketing**

- establishing livestock market
- rehabilitate the old markets
- identify and organize market routes
- establish export-oriented markets

#### 9. **Media/awareness raising**

Via,

- \* Radio
- \* Posters, flip chart
- \* Schools

#### 10. **Communications**

- \* Radio/Fax/Tel

#### 11. **Emergency preparedness**

- \* Early warning
- \* Early reaction

#### 12. **Strengthening surveillance**

- \* Identify active disease surveillance districts
- \* Increase surveillance areas

#### 13. **Technical harmonisation**

- \* Training
- \* Meeting

\* Exchange information

#### 14. Wildlife/livestock interaction

- \* Reporting
- \* Vaccination
- \* Sero-surveillance

### 3.2 EAST HORN ECOSYSTEM (SOMALI COMMUNITIES)

Table 3.2  
Basic data for Somali areas

	North east Kenya	South east Ethiopia (Region 5)	Somaliland	Somalia
Human population	991,000	3,600,000	2,000,000 (?)	
Livestock population:				
Cattle	953,000	4,637,000	750,000	Figures not available
Sheep	1,260,000	937,000 (?)	12,000,000	
Goats	1,152,000	3,650,000	1,500,000	
Camels	637,000	790,000 (?)		
Donkeys	212,000	40,000		
Poultry		2,720,000		
<u>Veterinary services</u>				
Public sector				
- veterinarians	20	20	22	
- diploma holders	6	25	15	
- certificate holders	40	42		
(Animal Health Technicians)				
Private sector				
- veterinarians	1	7	25	
Farmer training centre	3	1		
Health posts/clinics		16	26	
Laboratories	2	1	1	
Pharmacies	10	12	24	
Dips		25		
NGOs	16 (trained 610 CAHWs)	3 (SCF-UK, SCF-USA, GTZ)	7 (VetAid, UNHCR, CARE, Terra Nuova, IFAD, Oxfam UK)	
Projects	1 (Arid Lands Resource Management)	3 (SERP, NLDP, PACE)	see above	
Hawkers		Exist on a large-scale		
Traditional healers		Exist but numbers are decreasing		

## **Information and learning needs for CAHW systems**

1. Number of CAHWs required.
2. Criteria for CAHW selection – age, level of literacy, community participation past experience (e.g. in ethnoveterinary practice etc.).
3. Standard of training and follow-ups.
4. Level of preparedness to operate - vet drugs and reliability of supplies, equipment and backup support.
5. Supplementary activities – herding, small trading activity in villages/pastoral camps; other e.g. human health.
6. Delivery system - permanent location, periodic visits to close-by livestock catchment areas transhumant pastoralist accompanying migratory movements etc.
7. Existing relations with pastoral associations, private vets, vet depts., NGOs/donors etc.
8. Degree of success – management and financial records; duration of service and other sustainability issues.

## **Border harmonization**

### Kenya-Ethiopia

Interactions between vets stimulated under PARC (periodical meetings and exchange of information e.g. Moyale).

### NE Kenya – Southern Somalia

Donor funded projects meetings; health interventions at livestock trade level (vaccination, etc.).

### Somaliland/Puntland/Ethiopia

Vet. professionals on either side of the border are known to each other but no working relationship due to limited or no vet activities across the border.

### Central/southern Somalia/Ethiopia

Information not available

## **PACE activities already planned**

### Kenya

- vaccination along the border with Somali; sanitary cordone
- disease surveillance
- border harmonization with svps
- veterinary investigation laboratory/Garissa

### Ethiopia

- eradication of rinderpest
- control of other epizootics
- capacity building
- privatisation
- specific activities in Somali National Regional State – not available



## Somalia

- implementation strategy and activities and activities to be submitted to veterinary authorities and SVPs

### **Needs in relation to CAPE Outputs**

#### CAPE Output 1: Develop primary-level veterinary services needs in pastoral ecosystem

##### *NE Kenya/Southern Somalia*

Put a system in place in southern Somalia to carry out animal health services. CAPE to support:

- Local Administrations/Institutions
- Kenyan/Somali local NGOs working across the border
- SVPs training and supervising CAHWs

##### *Somaliland/Puntland*

- inventory and evaluation of earlier CAHW activities
- support and rectify where there are deficiencies (e.g. training, provision of basic supplies, etc)
- institutionalise (linkages to vet. professionals, legislation, etc)
- ensure source(s) of vet. drug supply and availability at community level (national vet drug policy)

#### CAPE Output 2: Promoting policy changes and legislation

##### *NE Kenya*

Revision of legislation already in progress via KVB efforts

##### *Somaliland/Puntland*

Able to adopt policy changes and legislation

- study experiences of other countries
- review the existing veterinary code
- redraft the vet. acts and regulations
- organise meetings with stakeholders to arrive at a common consensus
- support legal/legislative bodies

##### *Southern Somalia*

Institute and/or strengthen:

- pastoral institutions/organizations
- local administrations (?)
- veterinary associations/networks: support them and rely on them to promote policies and legislation

#### CAPE Output 3: New learning for policy change

Impact assessment of:

- privatization schemes at the veterinary professional level in nomadic area
- CAHW delivery programmes

Development of a communications and information dissemination system

The livestock owner/herder will continue at all times to treat his animals:

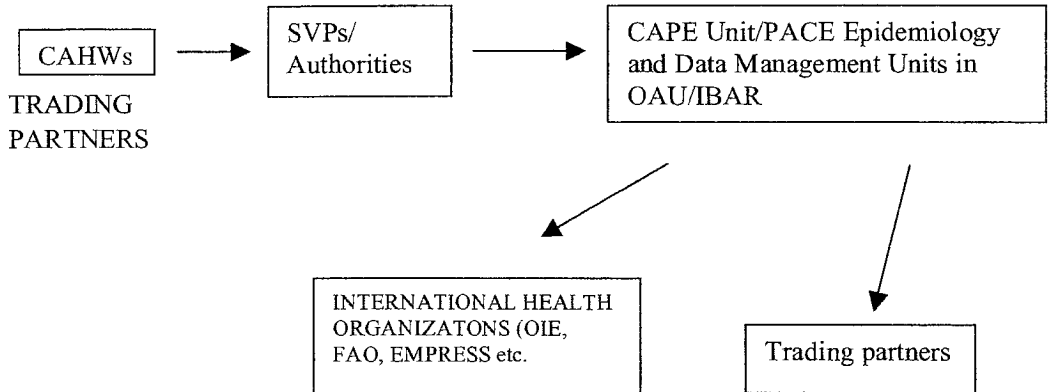
- generate baseline data on this inevitable reality
- evaluate options to overcome any negative consequences, i.e. livestock extension service

### **Cross border harmonisation**

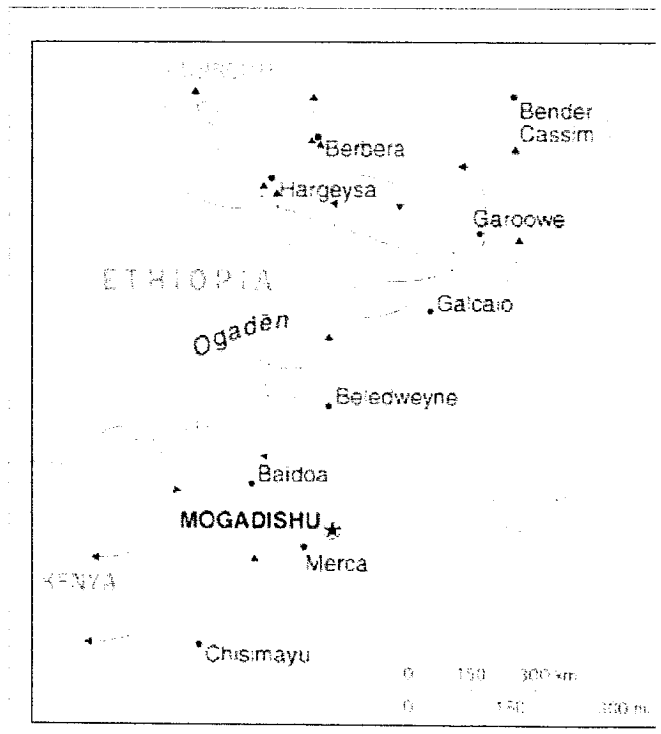
There is a need for harmonisation with respect to:

- livestock movement patterns, disease patterns, marketing dynamics, etc.
- cross-border/horizontal collaborative activities (common programmes, legislation, etc.)

Livestock trade and certification issues also need to be considered. For example, in Somalia there is no official body for transferring animal health information to trading partners and international agencies. One possible flow of information is:



Livestock movements in Somali areas related to trade



**Priorities for East Horn Ecosystem - Somali Communities**

**1. Epizootics**

- Rinderpest – to be controlled and eradicated
- CBPP – baseline data need on epidemiology, prevalence and spread
- RVF – epidemiological research
- CCPP

## **2. Data, research and case histories**

CAPE to develop regional experience in participatory epidemiology and speed up academics' ability to do PE. Also need to:

- harmonise conventional and participatory techniques; develop appropriate tools
- translate epidemiological data from communities to scientists and vice versa
- increase flexibility and speed of data collection

(also see 14.)

Research topics include disease control and marketing.

## **3.&4. Capacity building and training related to CAH services**

Training is required for NGOs, MoA, vet schools and private vets. Trainers of trainers courses required for vets. Subject matter to focus on epizootic disease control.

CAPE's role is:

- Formulation of objectives for training
- Provide support to pastoral communities along with stakeholders and harmonise the relationship.

## **5. Standardising approaches**

CAPE/PACE to promote border harmonisation

## **6. Exchange information/networks**

- VHF radios always required
- Intervention of OAU/BAR across boundaries within ecosystem
- Co-ordination offices within ecosystem to have communication network among themselves and CAPE/PACE co-ordination unit. CAPE to provide inventory at community level within the ecosystem.

## **7. Policy review**

In Kenya, this is ongoing.

## **8. Marketing**

Improve marketing via disease control.

- empower the pastoralists to access local and international market information network
- CAPE to establish national and regional internationally-acceptable regulatory system.

## **9. Media/awareness raising –refer to 6**

## **11. Emergency preparedness – refer to 1,2,3 and 5**

## **12. Strengthening surveillance- refer to 1,2.3 and 5**

## **13. Technical harmonisation – refer to 5**

## **14. Wildlife/livestock interaction**

Via PE, CAPE to create awareness of the role of wildlife/livestock interaction in disease control to the community and vet professionals.

### 3.3 GREATER SERENGETI ECOSYSTEM

Table 3.3  
Basic data for Greater Serengeti ecosystem

	Livestock population				Human population
	Cattle	Sheep	Goats	Other	
<u>Kenya</u>					
Migori	N/D	N/D	N/D	N/D	N/D
Kuria					
T/mara	317,997	56,376*?	449,401	10,507	172,000
Narok	508,751	745,090	593,650	95,784	363,000
Kajiado	441,244	450,591	491,984	56,208	405,000
Machakos	300,000	85,000	190,000	1,007,000	-
Makueni	215,000	90,000	250,000	513,000	-
Total	1,267,992	1,252,057	1,335,035	162,499	
(Country total)	(3,000,000)	(5,600,000)	(7,400,000)		(29,000,000)
<u>Tanzania</u>					
Mara	1,291,600	129,000	620,000	1,395,100	
Arusha	1,477,600	722,168	1,477,600	1,247,500	
Kilim	464,100	327,788	862,600	1,228,600	
Mwanza	1,450,400	199,300	764,300	2,623,800	
Shinyanga	2,262,800	488,300	1,187,700	2,771,500	
Singida	1,944,300	511,852	798,800	1,352,000	
Dodoma	1,587,100	242,314	788,145	2,100,400	
Tanga	653,500	246,262	736,700	1,673,800	
Morogoro	237,800	97,971	272,200	1,519,800	
Total	11,369,200	2,964,955	6,898,045	15,912,400	
(Country total)	(15,600,000)	(3,400,000)	(10,700,000)		(30,000,000)

Table 3.4  
Location and supervision of CAHWs in the Greater Serengeti ecosystem

Location	Agencies and CAHWs	Supervision
<u>Kenya</u>		
Kajiado	EU/DFID/GOK - 775 plus	1 vet
Makueni	ITDG - 100 plus University of Nairobi - 24 IFAD?	1 PR/DVO 1 PR/DVO
Transmara	GTZ - 77	DVO
Machakos	None	
<u>Tanzania</u>		
Arusha	VetAid - 24 FARM Africa - 47 HPI - 200 SNV/DRDP - 57 AWF/INUAT MAR - planned Ereto - DANIDA - planned	DVO/VO (PR) VO (PR) T/R, DVO DVO, ?T/R
Mwanza	AHSP - 32 HPI - ?	DVO/PV
Sinyanga	AHSP - 65 DRDP - 90	DVO/PV T/R/DVO

Table 3.5  
Veterinary infrastructure in Greater Serengeti ecosystem

Regions	Infrastructure												
	black market	markets	lab/VIC	training institute	research	private vet practice	district vet office	cattle dip	cattle crush	CAHWs	State vet office	Pub/pr gvt/dip	NGO/project
<u>Kenya</u>													
Nairobi	✓	✓	2 lab	2	5	20	1	✓	✓	0	6	10	2
Transmara	✓	✓	0	0	0	2	1	✓	✓	77	5	10/4	0
Narok	✓	✓	0	0	0	1	1	✓	✓	24	5	12	4/1
Kajiado	✓	✓	0	0	0	2	1	✓	✓	42	8	58/13	2/1
Mig	✓	✓	0	0	0								
Kuria	✓	✓	0	0	0								
Makueni	✓	✓	0	0	0								
Machakos	✓	✓	0	1	0								
Mara	✓	✓	0	1	0	1	4	✓	✓	226	5	127	1/1
<u>Tanzania</u>													
Arusha	✓	✓	1	3 CAHW	2+1	20	10	✓	✓	200	11	230	6
Kilimanjaro	✓	✓	0	0	0	7	5	✓	✓	50	4	205	1
Mwanza	✓	✓	1	1	1	6	7	✓	✓	40	6	116	3/1
Shinyanga	✓	✓	0	1 CAHW	0	5	5	✓	✓	149	6	150	2/1
Singida	✓	✓	0	0	0	3	3	✓	✓	0	3	83	1
Dodoma	✓	✓	1	1	2	3	5	✓	✓	?0	6	136	2
Taivga	✓	✓	0	1	1	8	6	✓	✓	?50	6	161	1/1
Morogoro	✓	✓	0	2	1	10	4	✓	✓	?30	6	126	3/3

## **Policy**

### Kenya

- Existing policy very old.
- Policy for private practice exists.
- Policy for CAHWs and drug distribution under review.

### Tanzania

Policy as detailed in the Agriculture and Livestock Policy, 1997. Policy exists for private practice, paravets, CAHWs and livestock keepers.

New Ministry in Tanzania may lead to new policies.

## **CAHW gaps**

### Training

- which institutions?
- methods
- efficacy
- primary and secondary level needs
- quality/standardization of curricula
- trainers quality
- Training of trainers – certification needed?
- accreditation of institutes/certification

### Legal registration/legal review

- supervision
- code of conduct

### Socio-economic

- marketing – media – communications
- advertising? relaxed  
(monitoring/eval – farmer reception)
- financial viability – sustainability
- networking
- institutional relationships; acceptance – at all levels
- international trade (OIE/WTO (SPS)
- environmental issues
- training – hazardous chemicals
- livestock population control

### Gender

- care of sick animals
- poultry
- schooling – acceptance and action

### Border harmonisation

PARC started it – but it stopped. Need for PACE to facilitate.

## **Progress with national PACE programmes**

Kenya - proposed and under review/negotiation

Tanzania - draft proposal submitted under review/pace/ew/got

## Needs in relation to CAPE Outputs

### CAPE Output 1: Develop primary-level veterinary services needs in pastoral ecosystem

In order of priority:

- =1. Research
- =1. Completion of establishment of models (credit mechanisms; extension media)
- =2. Networking
- =2. Regional harmonisation (training, roles, policy, legal, border, trade)
- =2. Sharing or resources
3. Monitoring
4. Analysis and evaluation of delivery systems and models
5. Championing the spirit of community service for public good

### CAPE Output 2: Promoting policy changes and legislation

- research
- evidence
- case studies
- media presentation
- resources for policy review/revision

Facilitate exchange of ideas between all levels of stakeholders

## **Priorities for Greater Serengeti Ecosystem**

### **1. Epizootics**

In order of importance:

1. Rinderpest – controlled. On OIE pathway towards DFFD; high risk from adjacent GHA ecosystems
2. CBPP - widespread in TZ (disaster status)
3. FMD - rampant/epidemic/international trade
4. Newcastle disease - gender/women empowerment
5. Rabies – resurgence; public health importance; wildlife

### Activities

- Enable community participation (farmers, CAHWs, pastoralists) in clinical surveillance, mobilization and control.

### Opportunities

Presence of NGOS, trained CAHWS, government's goodwill, interested donors livestock herds and their owners. Abundant natural resources

### Key Partners

1. Governments
2. NGOs - VetAid, HPI, Farm Africa, AWF (Kenya, ITDG)
3. Projects - AHSP, DRP, MARAF (Kenya – GTZ, IFAD)
4. Institutions - training and research

### Timeframe

Year 1 to throughout CAPE life

### **2. Data collection, research and case histories**

- collect data on baseline situation

- monitoring data

#### Who collects information?

- CAHWS
- Paravets and vets
- CAPE consultants
- Partner institutions
- Governments/local governments

#### Timeframe

- immediate-baseline
- monitoring data continues

#### Priority research topics

- disease epidemiology
- training of CAHWS: efficiency & effectiveness
- selection, standardization
- business aspects; cost benefit analysis
- skills and technical expertise evaluation

#### Key Partners

- Projects/NGOs
- National Research Institutes
- SUA & UON
- CAPE can commission programs in these institutions

#### Timeframe

- year 1 to 3

### **3. Capacity building**

Who to train? CAHWS, CAHW supervisors, local authorities, trainers, training of trainers

Subjects Diseases, epidemiology

Who to train? PACE co-ordinators, universities.

Subjects Community epidemiology, primary animal care, limits of intervention

### **4. Training CAHWS**

#### Done by:

- partner NGOs/projects, local governments
- training institutions for CAHWS harmonized , identified, strengthened; TZ: SAHLs, munduli Farmer T.C., Mabuki, Kizumbi
- Ke: institutions

How? Through CAPE facilitation

### **4. Standardization of approaches**

CAPE to facilitate training institutions and other stake holders to develop a standard, uniform curricula and syllabus including entry regulations. Time frame - Year 1,2

### **5. Exchange info/networking**

- inventory of interested partners by name
- workshops – ecosystem, e-mail, websites, films, visits, leaflets, newsletters, village meetings



- When? Year 1 to long-term what areas all areas
- CAPE to network institutions and key personnel.

## 6. **Policy revision review**

### Key actors

- Ministries; planning departments
- Professional boards TVB, KVB
- Professional Associations – KVA, TVB
- Farmers associations
- Farmers/pastoralists
- Local governments
- NGOs & projects
- Academia

### **How to engage**

CAPE to become a partner and facilitate.

Cape can facilitate the participation of younger generation of up-coming professionals and para professionals by involving academia. Fostering interactions through networking, workshops, sponsoring community work in institutions, study tours exchange of legislative documents.

Time frame – Year 1 to 2.

## 7. **Improved marketing**

### How?

- Impart knowledge of epidemiology of diseases affecting trade to traders and farmers/pastoralists
- Encourage farmer/pastoralist groups, cooperatives
- Local authorities provide markets
- Improve quality of products
- Providing marketing information
- Follow up on compliance to SPS agreements

### Key stakeholders

- farmers/pastoralists
- local governments
- training institutions
- CAHWs

### 3.4 KARAMAJONG ECOSYSTEM

Table 3.6  
Basic data for Karamajong ecosystem

	Moroto	Kotido	Toposa	Turkana	Pokot	Nyangatom
Human population	362,791	200,000		447,000	309,000	20,000
<u>Livestock population</u>						
Cattle	400,000	430,000	300,000 h/c	175,000	275,687	40,000
Sheep	700,000	300,000	1,400,000	1,084,050	361,230	50,000
Goats (shoats)		120,000	(shoats)	2,168,100	274,015	80,000
Camels	3,000	-	5,000	144,960	1351	-
Donkeys	30,000	50,000	20,000	42,830	7331	20,000
Poultry	250,000	300,000		10,000	15,000	10,000
<u>Veterinary infrastructure</u>	3 Dips (F); 9 (NF) 22 crushes(p)	2 Dips (p) (NGO)13 crushes	Nil	0 Dips 12 crushes (M&P )	12 Dips 18 crushes(P)	Temporary crushes
NB. no training or research centres	6 dams(p) 5 tanks (p) 6 w/mills (p) 1 lab(NGO) 1 H/G	2 Dams (p) 4 W/mills 2 Holding grounds		6 water pans 1 H/Ground		
<u>Actors</u>						
Government	6VO, 2AHO, 1VA	2VO, 4AHO, 3VA		5VO, 1LO, 4 LHA	6VO, 2LO, 20LHA	
NGOs	5 vets		1VO, 6VA	3VO, 3LHA, 2LO	1VO, 5LHA, 2LO	Same as Toposa
Private	1AHA, 1VA, 4 drug shops 20 hawkers	2 chemists 15 hawkers		4 chemists 30 hawkers	2 chemists 10 hawkers	
Traditional healers	27	~100	many	~70	~60	
<u>CAHWs</u>	68	20	40	115	9	20
- vaccination	✓	✓	✓	✓	✓	✓
- treatments	✓	✓	✓	✓	✓	✓
- surveillance	✓	✓	✓	✓	✓	✓
- extension	✓	✓	✓	✓	✓	✓
- vector control	✓	✓	✓	✓	✓	✓
- training	'99	'98	✓	✓	✓	✓
- husbandry	✓	✓	✓	✓	✓	✓
<u>NGOs</u>	LEP - Pokot, Bakora HCP - Pian, Jie CHIPS - Bokora CVM/WC - Bokora, Pokot SVI - Chekwi, Iilri KPIU - all LWF - Bokora, Pian Matheniko (Herders' training) Oxfam - Jie			SNV - Loki, Kakuma, Oropoi, Lokichara, Alale, Kasei VSF/B - Turkwel, Loima AMREF - Lokichoggio ITDG - Lokitaung S/district WV - S. Turkana (restocking), Chepararia, Alale OXFAM - Lokitaung s/district ELCK - Sigor, Kapenguria		

## **Information gaps and learning needs**

- Research why retention rate is low
- Harmonize training curriculum (ecosystem)
- Evaluation of the trainees
- Appropriate monitoring/supervision
- Level of entry
- Role of traditional healers
- Sustainability of CAHWs
- Incentives for vets (public/private) to work in the ecosystem
- Affirmative action for the pastoral areas e.g. paraveterinary training institute for the ecosystem
- Training needs assessment
- Lack of integrated approach
- Marketing information and structures
- Internal harmonization meetings
- Appropriate ratio vet:CAHW (for sufficient supervision)

## **Existing border harmonisation arrangements**

CAPE programmes - pastoral community harmonization for Turkana and neighbours

- elders workshops: 8 already held
- youth workshops: 6 already held
- women workshops: 8 planned
- chiefs and leaders: 2 planned

## **Activities planned:**

Dialogue workshops for community leaders and CAHWS + NGOs.

- vaccination for RDP and surveillance for other epidemics
- workshops for government vets on surveillance
- refresher course for CAHWS; training to increase CAHWS
- review of the laws; harmonization of the curriculum

## **Main needs in Karamajong Ecosystem**

- a) Improve supervision and monitoring of CBAHW'S by Government vet
- b) Facilitate training of more CAHWs for surveillance and vaccination
- c) CAPE to facilitate the establishment of private veterinary practitioners in the ecosystem (20 PVPs)
- d) Link CAHWs to a private vet.
- e) Provide a communication system within the ecosystem (Base and mobile radios)
- f) Facilitation of finalization of the policy reforms and review the existing laws to accommodate the CAHWs and the paravets
- g) Support livestock providers' FORA meetings/workshops
- h) Set up a format for monitoring

• The main needs in the ecosystem are in harmony with the CAPE outputs

• Main partnership opportunities with the local players & CAPE

- Training more CAHWS
- Improvement of animal health delivery system
- Improvement of marketing
- Review and reform of policy and legislation
- Establishment of PVPs in the pastoral areas
- Opportunities for research
- Harmonization of the training curricula for CAHWs

- Improvement of communication

## Priorities for Karamajong Ecosystem

### 1. Epizootics

Rinderpest - vaccination during 2001; thereafter surveillance  
 CBPP - vaccination and surveillance  
 FMD - vaccination and surveillance  
 CCPP – surveys and vaccination  
 PPR –surveys and vaccination

Control of these diseases is also an entry point for control of tryps and tick-borne diseases.

### 2. Data collection, research and case histories

Veterinary officers (public and private), paravets and CAHWs should be involved in data collection. Data on disease status of CCPP, PPR, tryps is required. Data on livestock production, marketing and census also needed.

<u>Research topics</u>	<u>By who?</u>
Marketing system	DVO, consultants
Attraction of service providers into ecosystem	CAPE
Affirmative action	CAPE
Retention rate of CAH	NGOs, teaching int., consultants
Impact assessments for different models of service delivery	CAPE
Role of biting flies in transmission of trypanosomosis	NGOs
Appropriate monitoring and supervision	PACE, CAPE
Role of ethnoveterinary medicine	NGOs

### 3. Capacity building/training

<u>Trainee</u>	<u>Subject</u>
Public/private vets	TOT, disease surveillance
Paravets	Community-based delivery system; policy review and analysis

### 4. Training CAH

To be conducted by NGOs in the ecosystem in liaison with DVOs, based on standard curricula reviewed by vet boards, vet associations, universities.

### 5. Standardised approaches

Can occur within and across ecosystem via co-ordination/harmonization meetings.

### 6. Exchange of info/networks

#### Topics for information exchange:

Outbreaks/Quarantines  
 Data/Research findings  
 Vaccinations  
 Cattle rustling  
 Livestock marketing  
 Joint workshops/seminars

Policy and legislation

Weather

Livestock movements

#### How to exchange information?

- Sharing reports
- Joint meetings (ad hoc/regular)
- Use of communication equipment e.g. radios etc
- Via monthly/quarterly reports

### **7. Policy revision/review**

#### Actors

Line ministries, vet boards, Associations FVM, Drug authorities, PHARM, Cos, Farmers' Associations

To be facilitated by CAPE and donors.

### **8. Improve marketing**

Follow up recommendations of consultant

### **9. Media/awareness raising**

Via audio-visual, drama groups, extension workers, farmers' groups

### **10. Communication**

Establish radios (HF), DVOs, field officers, OAU/IBAR/Line Ministries system.

### **11. Emergency preparedness**

This is a role for PACE

### **12. Strengthening surveillance**

Roles of PACE and CAPE

### **13. Technical harmonisation within and between ecosystem**

Roles of PACE and CAPE

### **14. Wildlife/livestock interaction**

Role of PACE/wildlife authorities

### 3.5 WEST NILE AND EAST NILE ECOSYSTEMS

Table 3.7  
Human and livestock population estimates (million head)

Region	Livestock population					Human population
	Cattle	Sheep	Goats	Camels	Poultry	
Bahr al Ghazal	3.7	4.0	4.8	-		2.3
Equatoria	1.5	2.9	2.8	-		1.3
Upper Nile	1.5	3.5	2.8	-		1.5
South Darfur	3.4	3.5	2.5	0.07		2.8
West Darfur	3.3	3.4	2.9	0.3		1.6
South Kordofan	2.1	0.8	1.5	0.2		1.1
West Kordofan	2.8	4.5	1.7	0.5		1.1
Total	18.3	22.6	19.0	1.07	36.0	11.7

Table 3.8  
Veterinary staffing levels in West Nile and East Nile ecosystems

Region	Public vets	Private vets	NGO vets	CAHWs
Bahr al Ghazal	2	-	FAO 1 El Birr 1 Other NGOs 13	north 86 south 350
Equatoria	2	-	north 5 south 7	north 196 south 150
Upper Nile	9	-		
South Darfur	20	10	north 14 south 12	north 68 south 300
West Darfur	6	5	-	
South Kordofan	5	2	-	20
West Kordofan	11	5	3	120
Total	55	22	44	1390

**Table 3.9**  
**Veterinary services in West Nile and East Nile ecosystems**

Region	Public sector	Private sector	NGOs	Research	Training	Laboratories
Bahr al Ghazal	Wau, Raja and Aweil PACE (Wau), SRRA	Wau (1) pharmacy	<i>El Birr</i> Unicef; VSF-B; VSF-CH; VSF-G; SCF UK; Oxfam; ACROSS, NPA.	Wau Soba lab.	Bahr al Ghazal Maralal Lou Soba lab. NGOs/PACE FAO	Wau (Soba)
Equatoria	<b>Juba, Kapoeta, Torit</b> SRRA PACE (Juba) PACE (Kapoeta)	Terekera Yei, Niodo Accomplish	El birr, Niodo Accomplish, Oxfam Unicef Vetwork, DOT NPA	Juba University Soba lab.	Juba University Soba lab. NGOs/PACE FAO	Juba Lokichoggio (Kenya) Soba lab.
Upper Nile	Malakal, Bor, Pibor Bentiu, Renk, Wandoba PACE (Maralal) PACE (Bor, Pibor, Bentiu)	Malakal	Al birr, Oxfam FAO, GAA VSF-B, ACORD, ADRA, VSF-G VSF-CH, SCF UK, Across, World Relief	Soba lab.	NGOs, PACE, FAO	Pibor, Soba lab. Lokichoggio Wadakona
South Darfur	RASS, FRRA, SRRA Nyala, Buram, Dein idd El Fursan, El Birdi, Khas, PACE	80 pharmacies	-	Nyala university Nyala vet research lab.	Nyala university Nyala vet research PACE	Nyala/pa Dien Ummdafok
West Darfur	Zalingie, Garasila Genena, Forbaranga PACE (Genena) Ummdukhum	5 pharmacies	-	Soba lab Nyala lab	PACE	Ummdukhum
South Kordofan	Dilingi, Kadoguli, Abujibeha, Rashd Abbasia, Kologi, Katobi	5 pharmacies	-	El Obeid vet lab, Soba vet lab	PACE	El Obeid, Abujibeha Soba
West Kordofan	Fula, Babanusa, Abei, Abuzlabi Mugelad, Sunut, Nuhd Ggubesh	25 pharm	El Birr, FAO GAA	Soba lab. El Obeid lab	PACE, FAO, NGOs	Abei, Sunut El Fula

## **Recent and ongoing CAHW activities**

### **PACE/FAO/NGOs (all ecosystems)**

- disease reporting
- vaccination
- treatment
- diseases investigation
- information dissemination
- national immunization days (nid)
- guinea worm control
- extension and conflict relief within community
- meat infection
- reporting malpractice (adulteration of drugs)

### **Private pharmacies**

- West Kordofan, Upper Nile
- agents for private practitioners

## **Information gaps and learning needs**

Need to improve and refine the system:

1. standardization of practices (vaccination, treatment, disease monitoring, training)
2. improvement and standardization of supervision of the cahws
2. maintaining unified information flow and feed back
3. develop standards and guidelines
4. review the role of ldcc and vccs regarding management, privatization, reporting
5. continue co-ordination at national and regional levels
6. explore the reasons for drop-outs and find alternatives for sustainability
7. gender considerations

## **Existing border harmonisation arrangements**

Western Equatoria/northern Uganda – southern Sudan and northern Uganda authorities

Toposa/Turkana/Ngatong- meetings between elders, youth, women and chiefs

Jie/Dodoth/Toposa/Didinga/Turkana – meetings between elders, youth, women and chiefs

Turkana/Pokot/Tepeth/Makaniko - meetings between elders, youth, women and chiefs

Turkana/Ngatong/Merilee - meetings between elders, youth, women and chiefs

? technical harmonization

## **Activities already planned under national pace programmes**

1. Rinderpest Eradication
  - Provisional declaration of freedom
  - Expansion of active disease search
  - Maintenance of emergency preparedness
  - Strengthening sanitary cordon
  - Improve livestock movement monitoring and control
2. Establishment of animal health information network
3. Establishment of disease surveillance network
4. Control and spontaneous eradication of major epizootic disease



5. Strengthening veterinary services
6. Establishment and strengthening of community based animal health services to control epizootics
7. Implement full cost recovery for vaccination and treatments leading towards privatization

## Policies and legislation

There is no institutionalized legislation to regulate the services. UNICEF, FAO, PARC/PAE and NGOs have been developing guidelines and standards to harmonize and regulate animal health services.

There are regulations for private practice legislation were set effective in 1995. No legislation covering CAHW practice. There are only guidelines and regulations.

## Priorities for West Niles and East Niles ecosystems

### 1. Epizootics

Table 3.10  
Priority diseases in southern Sudan ecosystem

	Cattle	Shoats	Poultry	Camels
1	Rinderpest	CCPP	ND	Tryps
2	CBPP	PPR	Fowl cholera	Mange
3	ECF	Poxes		Brucellosis
4	HS	Abortion		
5	Tryps	Mange		
6	Anthrax			
7	Skin diseases			
8	Tick borne disease			

\* NB. Rabies, bovine TB, bovine brucellosis, AHS, RVF.

### 2. Data/research/case histories

- Services delivery
- Community needs
- Diseases reporting (regular, emergency/outbreaks)
- Samples collected, tested results, confirmation and feedback
- Livestock movement
- Livestock marketing (livestock and grain prices, slaughter figures, availability and prices of drugs)

#### Who to collect ?

CAHWS, supervisors, veterinarians (Public & Private) and community members.  
Samples collection, testing, results, confirmation and feedback by CAHWS, supervisors, lab. personnel, veterinarians and researchers.

#### Research prioritization

Utilize CAPE opportunities to undergo research on:

- Effective control of ECF
- Incidence of RVF
- Epidemiology and control of LSD

- Epidemiology and control of CBPP
- Epidemiology and control of tick borne diseases
- Epidemiology and control of PPR
- FMD serotyping and control measures

### 3. Capacity building

Who: CAHWS, supervisors, veterinarians, community members  
 Subjects: Technical, business skills, legal policy framework

### 4. Training

Through: Government, Universities, NGOs, labs.  
 How? Workshops and on-job training  
 Support training, community-based planning, monitoring and evaluation

### 5. Standardizing approaches

Within ecosystem: Rinderpest eradication training, drug use policy, epizootic diseases control strategy

Across ecosystem: Rinderpest eradication, drug use pdig epizootic diseases control strategy  
 Exchange of information/networks

How? Coordination meetings, harmonization meetings, visits, samples exchange, reports exchange, Regional meetings.

When? Timely and continuous

Areas: Within ecosystem and across ecosystem

### 6. Exchange of information/networks

Via coordination meetings, harmonisation meetings, visits, sample exchnage, reports exchnage, regional meetings.

### 7. Policy revision

#### Key actors

Local level: CAHWS, supervisors, veterinarians, community members

National level: Government Ministries, NGOs and UN Agencies

Regional level: PACE, National PACE, and UN Agencies

How to engage in processes already started? Maintain and enforce existing fora at national and regional levels.

### 8. Improve marketing

- Gathering and dissemination of marketing information
- Control of cattle movement
- Standardize certification
- Holding grounds
- Identifying problems and needs
- Infrastructures
- Watering points, dips, crushes
- Cross borders harmonization
- Movement permits

## **9. Media/awareness raising**

Design appropriate package for dialogue and local media stations.

## **10. Communication**

Networking using available means.

## **11. Emergency preparedness**

To be achieved through:

- Maintenance of cordons of intensive surveillance
- Immediate access to national and regional emergency funds and vaccine banks
- create awareness
- Organisation of workshop and training at national and regional levels

## **12. Strengthening surveillance**

- Provision of logistics
- Analytical system
- Data and information management
- Feedback information system

## **13. Technical harmonization within and between ecosystems**

Regular meeting of policy, decision makers and technical personnel to resolve issues relating to:

- Livestock movement
- Livestock diseases
- Legal and policies
- Livestock marketing
- Disease reporting
- Taxes and charges
- Privatization
- Rinderpest eradication strategy

Requires clear channel of information sharing

## **14. Wildlife/livestock interaction**

Attachment of wildlife epidemiology specialist to the ecosystem to:

- Carry out studies on prevalence of wildlife/livestock diseases
- Prepare emergency response strategy

### 3.6 WESTERN ERITREA-EASTERN SUDAN ECOSYSTEM

Table 3.11  
Basic data for Western Eritrea-Eastern Sudan ecosystem

	Eritrea	Ethiopia	Sudan
Human population	860,000	729,000	4,290,000
Livestock population			
Cattle	375,590	518,000	4,2000
Sheep	906,000	205,600	7,100,000
Camel	268,000	20,000	900,000
Goats	2,300,000	354,900	5,500,000
Equines	890,000	44,300	300,000
Poultry	860,000	1,480,000	1,000,000
Total livestock	5,599,590	2,622,800	19,000,000
Total livestock population for the ecosystem = 27,222,390			
Veterinary infrastructure			
Vet clinics	18	11	13
Laboratory	-	-	4
Research centres	1	-	1
Drug dispensary	2	-	20
Animal q <sup>h</sup>	2	-	2
Vaccination centre	8	-	2
Private clinic	-	3	40
Pharmacy	-	-	70
Training centre	2	-	-
NGOS	-	-	1
Government vets	8	12	90
Private vets	-	-	30
Vet assistant	13	24	24
Skilled labourers	-	-	47
Hawkers	-	+	+
Healers	-	+	+
Animal health tech.	15	238	-
Paravets	-	7	-
CAHWs	40	In training	75 (Oxfam 50 VOK 15 ARS 10)

#### Activities of CAHWs

- vaccination
- deworming
- elementa
- clinical service
- information supply
- to gov<sup>n</sup>

#### Information gaps for CAHWs

- sustainable provision of drugs, equipment and other facilities
- close supervision, harmonization and standardization of the services on delivery system
- lack of feed back of activities, need for data for the epidemiology of diseases

- improvement, harmonization and standardization of CAHW and unclear concept of CAHW
- strengthening surveillance and emergency preparedness

### **Learning needs**

- strengthening the existing system of training specially for technical and para-vets
- review of the activities performed by CAHW and assess them to provide policy makers with necessary information

Border harmonisation arrangements - satisfactory under way among three countries in the newly suggested ecosystem

### **The main needs in the newly suggested ecosystem are:**

- to create awareness among livestock owners
- to develop linkages between animal health persons and to stock owners
- to collect data to control epizootic diseases

### **Opportunity for partnership b/n CAHW & other actors**

- conducting workshops, training, capacity building etc

## **PRIORITIES FOR WESTERN ERITREA/EASTERN SUDAN ECOSYSTEM**

### **1. Epizootics**

CBPP, tick borne diseases, CCPP, FMD, LSD, and HS.

### **2. Data collection/research and case histories**

Data to be collected by CAHWs, stockmen, vet assistants, VOs, DVOs, PVOs and headquarters. Topics include incidence and type of diseases, control measures taken and locality.

Problem solving research dealing with problem in the ecosystem include:

- Development and improvement of vaccine
- Improvement of diagnostic methods of relevant diseases
- Methods of delivery system

### **3. Capacity building and training**

Required for government, educational institutions and private sector. Specific issues include:

- Epidemiological approach
- Disease surveillance and reporting system
- Certain strategies for control
- Delivery of veterinary services
- Supporting regional, central labs by rehabilitation

### **4. CAH services**

At primary level:

Herdsmen, local people in the village, stock men employed by the Government. They should be frequently reviewed and refresher courses should be given.

For technicians:

Post Secondary education for 2 years – diploma holders. Then authorized to work in the field. Faculties will standardize and set the curriculum. Continuous education for all sectors (vets. & technicians) done by educational institutes.  
Supervision of the work through official channels

**5. Standardising approaches**

- Training, vaccines, delivery of veterinary services, regulation
- Co-ordination meeting, workshops

**6. Information exchange/networks**

- Common format report
- Regular
- Animal health status report

**7. Policy review**

- Government agencies
- Consultancy via mutual agreement with government

**9. Media awareness**

- Radio, TV, poster, pamphlets, public talks, to tribe chief (talk) extension services

**10. Communication**

- Mobile radio, extension services

**11. Emergency preparedness and strengthening surveillance**

Refer to PACE

**12. Technical harmonization**

Refer to PACE

**13. Wildlife**

Refer to PACE

## **4.0 OVERVIEW OF LEGISLATION**

During the situation analysis, working groups were requested to summarise the status of legislation on three issues viz. community-based animal health, private veterinary practice and regulation of veterinary medicines. Findings are presented in Table 4.1 and indicate that in most areas with a stable government, legislative change is at least being planned and at most, new legislation is in place. Therefore, legislative reform is already being considered or supported by countries in the GHA region and there are opportunities for CAPE to facilitate processes which are already underway.

Table 4.1  
Status of legislation by country

Status of legislation	Legislation on:		
	Community-based animal health	Private veterinary practice	Regulation of veterinary medicines
New laws and regulations work well		Sudan (South Kordofan, West Kordofan, South Darfur, West Darfur)	Sudan (South Kordofan, West Kordofan, South Darfur, West Darfur)
New laws just starting	Sudan (South Kordofan, West Kordofan, South Darfur, West Darfur)	Eritrea	Eritrea
Review of laws in progress	Ethiopia, Kenya, Tanzania, Uganda	Ethiopia, Kenya, Tanzania	Kenya, Tanzania, Uganda, Ethiopia
Review of laws is planned	Sudan (Upper Nile, Bahr el Ghazal, Equatoria)	Sudan (Upper Nile, Bahr el Ghazal, Equatoria)	
Old laws in place – seen as inadequate	? Somalia	? Somalia	? Somalia
No laws	Eritrea, Sudan (Eastern)		

## 5.0 FINAL SESSION

### 5.1 *Queries from workshop participants*

#### What is CAPE's definition of a 'pastoral ecosystem'?

For the purpose of designing CAPE activities, a pastoral ecosystem is defined by:

- Geographical remoteness and transboundary nature;
- Ethnic, linguistic or cultural links between pastoral communities in the ecosystem;
- Large areas with relative small but mobile human populations;
- Marginalisation with respect to development – limited veterinary, human health, education, communications and other services;
- Varying levels of conflict from local livestock raiding to civil war.
- Strategic importance with respect to regional epizootic disease control.

In accordance with the views of participants from Eritrea and Sudan, a sixth pastoral ecosystem was identified comprising the remote western border areas of Eritrea, the eastern area of Sudan and the north west corner of Ethiopia (see map, section 3.0).

#### Can CAPE consider zoonoses?

CAPE is part of the PACE Programme, which focuses on epizootic diseases such as rinderpest, CBPP, FMD and others. With the resources available, it seems unlikely that CAPE would tackle zoonoses such as TB, brucellosis or rabies. If pastoral communities prioritised zoonoses during the establishment of community-based animal health services, then CAPE or its partners should look more closely at these problems. The development of community-based services might provide delivery systems which could facilitate research on zoonoses or provision of advice to livestock keepers.

## Comments from Sudan

Regarding marketing, Sudan has had some success with establishing slaughter facilities in pastoral areas. Other countries could learn from the Sudan experience. CAPE should also involve the Pastoralist Union when it works in Sudan.

### Who should be training primary-level veterinary workers?

CAPE is promoting systems which links CAHWs to private veterinarians (or veterinary assistants). This approach is intended to improve the financial sustainability of services and ensure veterinary supervision of CAHWs. CAHWs should be trained locally, in their own communities and according to local disease priorities. This requires flexibility in training and knowledge of particular areas on the part of the trainers. Therefore, private or government vets 'on the ground' should be the main trainers of CAHWs. There is probably limited role for universities in training CAHWs (although there are other roles for universities regarding CAHW systems).

### Will CAPE be working on a national basis or ecosystem basis?

CAPE aims to work on a transboundary ecosystem basis. This requires working with different national-level players simultaneously.

## **5.2 Final remarks**

The workshop provided CAPE with some up-to-date information on animal health activities and facilities in pastoral areas, and showed how national priorities were very similar to those of CAPE and PACE. The workshop also clarified the roles of CAPE and the relationship between CAPE and the PACE Common Services.

There is now a need for CAPE to work with PACE (centrally and at national level) to prioritise and elaborate activities, and ensure effective coordination with national PACE programmes in the transboundary pastoral areas. This can be achieved through a series of regional and national-level meetings with PACE and other stakeholders, such as NGOs and veterinary schools. At policy level, CAPE will further develop the policy and legislation work developed by PARC-VAC (e.g. in Kenya) and DFID-funded projects (e.g. Tanzania and Uganda) as appropriate. CAPE will also explore options for supporting policy and legislative reform for CAHW services in other countries in the GHA region.



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