PACE
Somali Component

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AFRICAN UNITY - INTERAFRICAN BUREAU OF ANIMAL RESOURCES
PAN AFRICAN PROGRAMME FOR THE CONTROL OF EPIZOOTICS

IMPLEMENTED by
TERRA NUOVA, UNA, VSF-SUISSE and CAPE

Funded by
EUROPEAN DEVELOPMENT FUND PROJECT No. REG/5007/005 EDF VII and VIII
FINANCING AGREEMENT No. 61215/REG
SOMALI PACE PROJECT - Contract No. PACE/EDF/TN/003/04

And

SWISS HUMANITARIAN AID
Veterinarmedizinische Hilfe Puntland, Somalia - Contract No. 7F-01353.01 (Somalia)



Narrative Report

II Phase 01/11/04 - 31/03/05



Sections Report



SECTION A: PUBLIC SECTOR

(1st November 2004 – 31st March 2005)

SECTION A:

PUBLIC SECTOR TECHNICAL REPORT

(NOVEMBER 2004 TO MARCH 2005).

1. PROJECT OBJECTIVES

Result 1

This component aims to strengthen the capabilities of public sector animal health workers to regulate, monitor and evaluate the livestock sector.

2. EVENTS AND ACTIVITIES IMPLEMENTED THIS QUARTER

During this period, the Project activities focused on completion of plans for the implementation of the Master Plans and the endorsement and enactment of the Veterinary Law Code in Puntland and Somaliland. Two workshops were held to develop plans, milestones and timetables for implementation of the Master Plan in Puntland. Similarly two workshops were held to discuss the Veterinary Law Code: the first workshop was held to sensitise a wider audience of livestock stakeholders on the drafted veterinary law-code, its importance regarding animal health, disease control and livestock trade while the second workshop was used to develop time-tables and plans for presentation of the veterinary code to the council of ministers for endorsement and to members of parliament for enactment. Following the presentation of the Master Plan to the Minister and senior staff for Ministry of Livestock, Agriculture and Environment (MoLAE), the minister endorsed the Master Plan and the Institutional Procedure and regulations for MoLAE as working documents for the ministry. Implementation of the Master Plan are underway, the Minister has requested the relevant authorities to allocate the ministry more fund so that the process of recruiting various cadre of staff in the Ministry can commence (Annex I Appendix I). The Minister has proposed and forwarded names of twelve livestock professional for employment as district veterinary officers and regional veterinary coordinators. Based on the timetables and plans developed for the Veterinary Law Code, the Minister for Livestock, Agriculture and Environment presented the veterinary code to the Council of Ministers in February. Three weeks later the Council of Ministers endorsed the veterinary law code for Puntland. The process for presentation of the code to the Members of Parliament is on going and the code will be discussed once parliament reconvenes in June 2005. Similar workshops planned for Somaliland did not materialise because the Minister for Livestock in Somaliland indicated that there priority was in rehabilitation and construction of the Ministry's headquarters as foreseen in the work plan for PACE Project before other activities could be implemented. Four public servants, two each from the Ministry of Livestock in Somaliland and Puntland, received fifteen-day training in Kenya Agricultural Research Institute, Muguga.

1.1. Advise on the roles and responsibilities of public servants and other actors in the livestock sector

1.1.1 Workshops to develop plans and timetables for implementation of the master plan in Puntland

Two workshops were held in Puntland involving livestock stakeholders in Puntland. Participants included public and private Somali Livestock Professionals, public administrators, government authorities and other leaders (Annex I, Appendix II and Appendix III). The first workshop was to sensitise the interlocutors on the developed Institutional Procedures and Regulations and the Master Plan developed for Ministry of Livestock, Agriculture and Environment (MoLAE) and let them have an in-depth understanding of these documents. The objective of this workshops included sensitising the Somali Livestock Professionals and public administrators to be proactive in encouraging the higher authorities to implement the Master Plan for functional organization of the departments within MoLAE. The second workshop developed timetables and milestones for implementation of the Master Plan had participants who included Cabinet Ministers and Members of Parliament. Based on the outcome of these two workshops, plans are underway to recruit district veterinary officers and regional veterinary coordinators as the initial stages for implementing the Master Plan. Appointment letters were given to 12 livestock professionals who had been appointed for the positions of district veterinary

and government authorities of the Puntland State Government. These included the Ministries of Labour and Finance, respective regional governors and police bosses where the appointments were to be effected. The Ministry of Labour acknowledged the appointments but the Ministry of Finance is yet to allocate finances for the appointments to be effected.

1.2. Assist public servants to enact and enforce appropriate laws, regulations and guidelines

1.2.1 Sensitisation workshop on the Veterinary Law-Code in Puntland

The Veterinary Law Code was widely distributed in the last quarter. In this period a workshop to sensitise more Somali Livestock professional in Puntland was held (Annex II, Appendix IV). In this workshop, the need for having laws, and especially the veterinary laws, was emphasised to all the professionals. The drafted veterinary law code was discussed chapter by chapter by the professionals for in-depth understanding. Each chapter was then discussed in groups and thereafter plenary discussions were held to make recommendations. The professionals identified some aspects in veterinary field that were not addressed by the drafted code that included the public health act, hides and skins act and the drugs and poisons act.

1.2.2 Workshop to develop timetables and plans for enactment of the Veterinary Law Code in Puntland.

After presentation of the Veterinary Law Code to the Minister and senior of MoLAE by the Zonal PACE Team, the Minister approved the veterinary law code. The Minister later made a presentation on the importance of the veterinary law code to the Council of Ministers. After this presentation, all the Ministers in the Puntland State government received a copy of the veterinary law code for their perusal and comments (Annex II, Appendix III). The second workshop on the veterinary law code focused on developing timetables and plans for enactment of the drafted document. Participants included cabinet ministers, members of parliament, public administrators and leaders, public and private veterinarians, veterinary drug importers and distributors (Annex II, Appendix V).

Three weeks after the presentation by the Minister of MoLAE and the distribution of the copies of the Veterinary Law code, the Council of Ministers endorsed the document. The Veterinary Law Code for Puntland is awaiting enactment by Members of Parliament when parliament reconvenes in June 2005 before it is forwarded to the President for an assent to become law.

1.3. Contribute to the re-establishment of the public infrastructures, vehicles, equipment, etc

1.3.1. Training of public animal health workers on technical subjects.

Four public veterinary workers, two each from the Ministries of Livestock of Somaliland and Puntland, received two-weeks training in Kenya Agricultural Research Institute, Muguga, Kenya, on sample collection and processing, laboratory testing, analysis and reporting process. The intense training was aimed at enhancing collection, processing and transparent dissemination of information on major diseases that affect trade by the two ministries.(see Annex A 3 for the training report)

3. ADHERENCE TO THE WORK PLAN

3.1. Activities not implemented

3.1.1 Three workshops planned for Somaliland, two on the veterinary law code (sensitisation of the government authorities and developing time tables and plans for presentation of the veterinary law code to the council of ministers for endorsement and parliament for enactment) and one on developing milestones on the implementation of the master plan were not held. The Minister for Livestock in Somaliland suspended all other activities of Somali PACE Project in the zone until the planned rehabilitation and constructions of the offices, training room cum library and laboratory at the ministry headquarters had commenced.

3.1.2 Specialists from KARI and the Department of Veterinary Services, Kenya, did not get the opportunity to visit Somaliland and Puntland to finalise the training and operationalise the Epidemiology and Data Management Units (EDMU) of the Ministries of Livestock in the two

e) Other Recommendations

i) The Ministry of Livestock, Agriculture and Environment should also seek support from Donors and other development agencies to realise the proposed Institutional Procedures and Master Plan.

ii) MoLAE should establish a strategy for the ministry and policies for livestock, agriculture and environment sectors

iii) Human resource capacity should be enhanced and the training identified by heads of departments undertaken

iv) MoLAE and the government should link with neighbouring countries to encourage its young generation acquire diplomas and degrees in the three sectors

v) Ministry should submit comprehensive work plans and budget to the relevant ministries and authorities to receive sufficient funds to be able to fulfil its obligations

vi) MoLAE administration should encourage transparency and accountability in all its ranks and departments

vii) Urgent need to establish the department of planning and training

viii) Intense lobbying for implementation of the institutional procedures should be done immediately at all levels

ANNEX I: UNDERSTANDING THE MASTER PLAN AND INSTITUTIONAL PROCEDURES AND REGULATIONS FOR THE MINISTRY OF LIVESTOCK, AGRICULTURE AND ENVIRONMENT, PUNTLAND

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Introduction

The Master Plan and the Institutional Procedures and Regulations for Ministry of Livestock, Agriculture and Environment are documents that were produced following recommendations from series of workshops culminating to a consensus workshop in Puntland State of Somalia involving livestock stakeholders. These documents were submitted to the Minister for Livestock, Agriculture and Environment for approval and endorsement. The documents provide details on the mandate, organizational structures of the Ministry, job description of the senior staff, internal and external linkages important to MoLAE and tentative recurrent and capital budgets for MoLAE. It was considered important to hold sensitisation workshops involving staff from MoLAE, Ministry of Finance and Ministry of Planning and other livestock stakeholders for them to understand the importance and contents of the Institutional Procedures document drafted and the need to have the organizational structure in place and the budget required for it to function. The Minister for Livestock, Agriculture and Environment approved the two documents and gave a commitment to adopt the proposals in the two documents starting with budget requests and employment of staff in the various job cadres (Appendix I). Two workshops were held to sensitise the livestock stakeholders on the two documents and to develop plans, milestones and timetables for their implementation.

Objectives

a) Review the current operation and functions of the MoLAE

b) Review the development of the Master Plan and Institutional Procedures documents

c) Presentation of the content of the Institutional Procedure document

d) Draw up a timetable on the implementation of the Master Plan and the Institutional Procedures

e) Make recommendations on the way forward

Participants

A total of 21 participants attended the first workshop in Garowe (8th to 11th February) (Appendix II). Fourteen Somali Livestock Professionals from the public and private sectors attended the workshop. They included public veterinary professionals from MoLAE (9) and five (5) private veterinarians from Puntland Livestock Professional Association (PULPA). Two persons were each invited from Ministries of Finance and Commerce while three persons came from Ministry of Planning. The second workshop was attended by 32 participants who included Somali Livestock professionals from the pubic and private sectors, Cabinet Ministers, representatives from Parliament and traders (Garowe, 28th to 29th March) (Appendix III).

Methodology

The workshop procedures involved presentations, group discussion and response to some structured questions either in groups or as individuals.

Outcome

a) Present organizational structure and operations of MoLAE

The present organizational structure of the Ministry of Livestock, Agriculture and Environment (MoLAE) was presented by the Director General (Appendix IV). A question was posed to the participants, as a group exercise, on their understanding of the current operations of the Ministry. Plenary presentation by the participants concluded that the present organizational structure is not comprehensive enough to provide services expected from the Ministry by different stakeholders (Appendix VII). There should be one Director General who will be answerable and accountable to the Minister. The distribution of staff is biased in that there more staff in the department of animal health than any other department. Furthermore, even the distribution of the staff in the department of animal health is heavily skewed to the port veterinary office in Bosasso.

b) Development of the Institutional Procedures

An appraisal study and four workshops involving different stakeholders in the livestock sector were held in Puntland to identify the support MoLAE needs in order to be strengthened and improve delivery of animal health and other services. This appraisal study was to generate an understanding on the present set-up of MoLAE, how it functions, staff employed and infrastructure available among other issues. The first workshop was on roles and responsibilities of the various actors in the livestock sector that delineated the roles of each actor. Building on the results of this workshop, a series of other workshops were held; one with traders to identify constraints of the livestock trade, the other with senior public veterinarians to develop the organisational structure of the ministry and define job descriptions and the last workshop with the public administrators was to identify the linkages of various ministries and government departments to MoLAE and the support each ministry can offer to create a synergism way of operation. A final consensus workshop brought together representatives of the previous workshops and chartered the way out on what the Master Plan for MoLAE was expected to be. All the ideas generated from the different workshops and the recommendations from the consensus workshop were used to draft the Master Plan. The Master Plan document for MoLAE finalised and copies submitted to the Minister for Livestock, Agriculture and Environment and other senior staff in the ministry for final comments and inputs. Information from the drafted Master Plan document and some recommendations of the various workshops were used to produce a document that provides details on the mandate, organizational structures, job descriptions, linkages (internal and external) and a tentative budget for the Ministry of Livestock, Agriculture and Environment was produced. This document "Institutional Procedures and Regulations for the Ministry of Livestock, Agriculture and Environment" was submitted to MoLAE for final inputs and comments. Both two documents have received the Ministerial approval and are in the process of implementation.

Most of the participants in the present workshop were involved in the development of the Master Plan as workshop participants in one of the workshops or were interviewed during the process.

c) Presentation of the Content of the Institutional procedures

Copies of the Institutional Procedures and Regulations for MoLAE draft document were distributed to the participants. The document was reviewed chapter by chapter and the following recommendations were made:

i) Organizational structure: The Department of Animal Health should be renamed Department of Animal Health and Production. The department will incorporate animal production and marketing section. The department of livestock production, planning and training should restrict itself to training, planning and project evaluation and monitoring. This proposed organizational structure (Appendix V) should be incorporated in the Master Plan for MoLAE. The department of agriculture should have the section of Crop Production, Plant Protection and Extension, Frankincense Development and Marketing, Land and Water Conservation & Management; while the department of environment should have the following sections: Range and Forestry Management and Land Conservation and Wildlife Management (Appendix VI) and these must be incorporated in the Institutional procedures and Master Plan documents.

ii) The personnel requirements proposed in the document of 25 degree holders and 38 diploma holders with 23 support staff for the whole Ministry should be adhered to. The Minister should start applying to the concerned authorities (office of the president, ministry of planning and ministry of finance) to get approval and funds to employed the proposed staff.

d) Timetable for implementation of the Institutional Procedures

ACTIVITY	TIME	ACTION BY	Comments
Proposed plan for staff required	March 2005	Departmental Heads, DG	
Proposed budget needed	March 2005	Departmental Heads, DG	
Presentation of the Staff requirement to Ministries of Planning and Finance and office of the President	April 2005	Minister, DG	
Presentation of Ministry's budgetary requirement to the Ministries of Finance, Planning and Office of the President. Start of	May 2005	Minister, DG	

e) Other Recommendations

i) The Ministry of Livestock, Agriculture and Environment should also seek support from Donors and other development agencies to realise the proposed Institutional Procedures and Master Plan.

ii) MoLAE should establish a strategy for the ministry and policies for livestock, agriculture and environment sectors

iii) Human resource capacity should be enhanced and the training identified by heads of departments undertaken

iv) MoLAE and the government should link with neighbouring countries to encourage its young generation acquire diplomas and degrees in the three sectors

v) Ministry should submit comprehensive work plans and budget to the relevant ministries and authorities to receive sufficient funds to be able to fulfil its obligations

vi) MoLAE administration should encourage transparency and accountability in all its ranks and departments

vii) Urgent need to establish the department of planning and training

viii) Intense lobbying for implementation of the institutional procedures should be done immediately at all levels

Appendix I: Acknowledgement and Committal Letter from the Minister for MoLAE on the Master Plan and Institutional Procedures.

Dawlad Goboleedka
Ee Soomaaliya

Puntland State
of Somalia

Ministry of Livestock, Agriculture and Environment
Office of the Minister

Ref: WWXXBD/024/05 Date: Thursday, February 10, 200

To: Dr Martin N Pace Zonal Adviser in Punt land

Subject: **Institutional Procedures and Regulations of the Ministry of Livestock, Agriculture and Environment**

Thanks for your 20 Copies of the Institutional Procedures and Regulations of the MOLAE

Let me inform you that we have requested as MOLAE 117 New Workers to fill the gap of the shortages of the public Sector Personnel

1. We have the future plan to make restructuring within the Departments as per the proposed Institutional Procedures
2. We have submitted the MOLAE Budget for 2005-2006 to the Minister of Finance
3. We have requested in 2005-2006 Budget including 67 Animal health technician (7 Regional Vet Co- ordinations, 30 District Vet Officials and 30 Vet Assistant)
4. We have also requested 50 Workers for the Agriculture and Environment Department

Thanks for your advice and suggestion

Yours Sincerely

Dr: Ibrahim Hared Ali (Dacar)
Minister of the
Livestock Agriculture and Environment

Appendix II: List of Participants in the 1st Workshop on the Master Plan and Institutional Procedures and Regulations for MoLAE

#	Name	Organization
1	Abdikarim Ahmed Jama (Buraale)	PULPA
2	Abdirashid Jama Mohamed	PULPA
3	Nuur Farah Jama	PULPA
4	Mohamed Yousuf Salah	PULPA
5	Mohamed Ahmed Mohamed (Qaylo)	PULPA
6	Mohamed Ismail Hassan	MoLAE
7	Mohamed Jama Hersi	MoLAE
8	Mohamoud Said Nuh	MoLAE
9	Ali Abdi Isse	MoLAE
10	Ali Nur Ibrahim	MoLAE
11	Mohamoud Mohamed Qurba'	MoLAE
12	Amed Mohamoud Mohamed	MoLAE
13	Bille Omar Qambi	MoLAE
14	Abdinasir Mo'alin Aden	MoLAE
15	Ali Muse Gas	Ministry of Planning
16	Mohamoud Abdi Koronto	Ministry of Planning
17	Mohamed Ahmed Yousuf (Malable)	Ministry of Planning
18	Mohamed Suleiman Aden	Ministry of Commerce
19	Ahmed Yousuf Nuur	Ministry of Commerce
20	Ahmed Abdilkadir Barre	Ministry of Finance
21	Mohamed Ahmed Geyre	Ministry of Finance

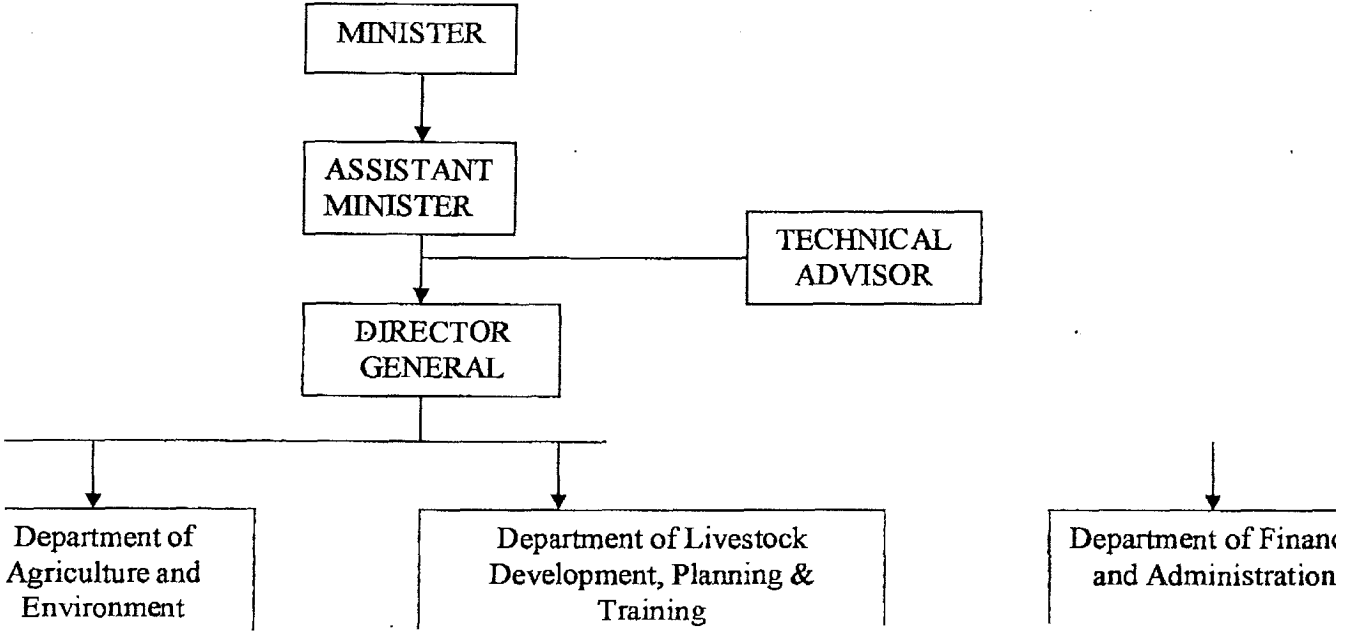
Appendix III: List of participants in the 2nd Workshop on Master Plan and Institutional Procedures and

Regulations for MoLAE

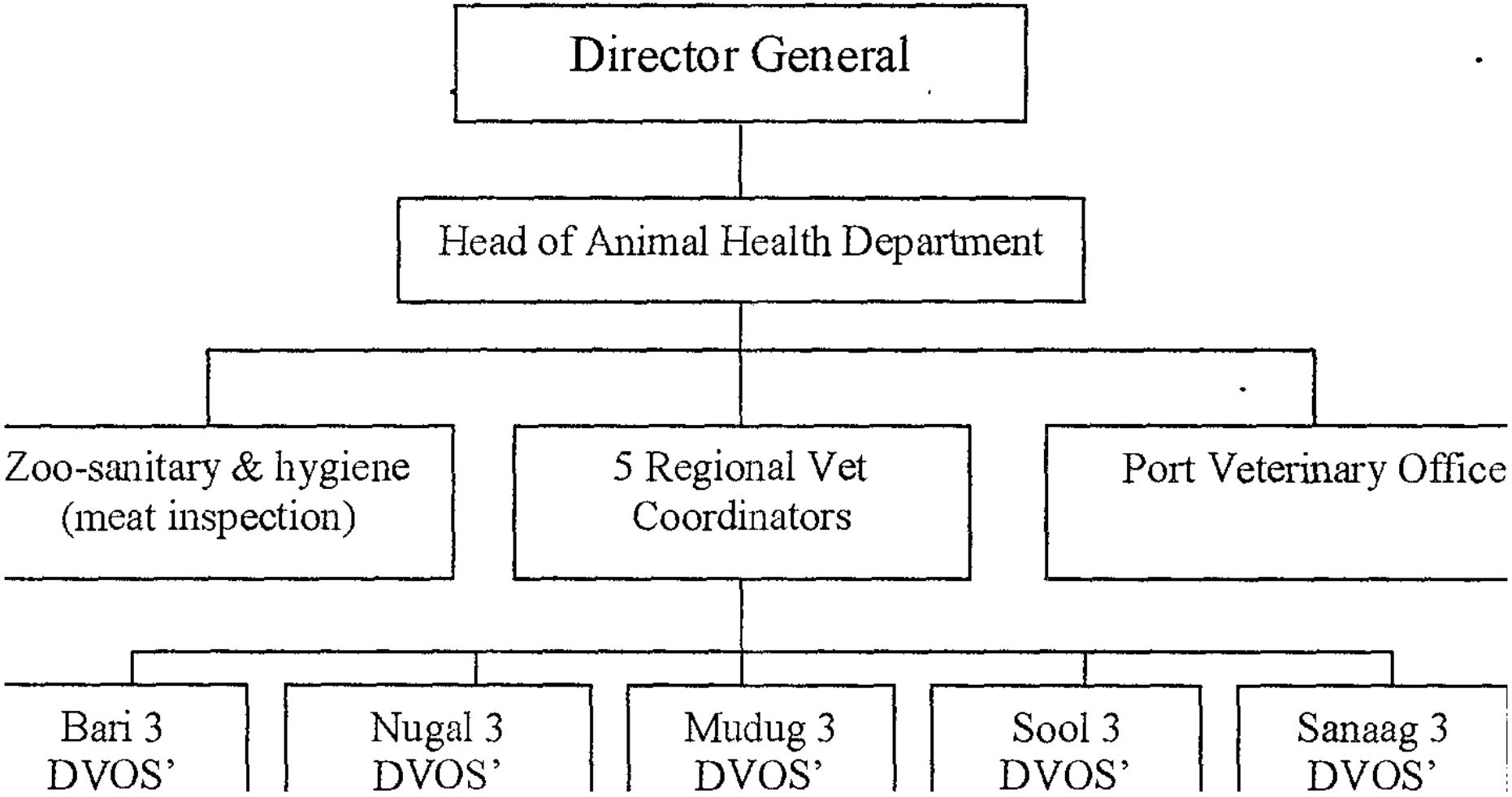
	Garowe, 28-29th, 2005	
#	Name	Organization
1	Ibrahim Hared Ali (Da'ar)	MoLAE Minister
2	Yasin	MoLAE Ass. Mn
3	Ali Egal Afgab	Ass. Min of Health
4	A/wali A/rahman Geire	Ass. Min of Int. Cooperation & Planning
5	Ahmed Hussen Yusuf	State Min in the office of the President
6	Ahmed Mohamed Egag	Former MoLAE Min
7	Salad Hared Ali	MP
8	Warsame seeraar	MP
9	Mahdi Mohamed Muuse	MP
10	Ibrahim Elmi Warsame	MP
11	Mohamed Ali Hassan	MP
12	Mohamoud Mohamed Farah	MP
13	Mohamed Ismalil Hassan	MoLAE
14	Mohamed Jama Hersi	MoLAE
15	Mohamed Mohamoud Warsme	MoLAE
16	Jama Abdi Jama	MoLAE
17	A/lahi Mohamoud Geedi	MoLAE
18	Abdi Muse Isse	MoLAE
19	Ass. Khalif Ahmed Abdi	MoLAE
20	Dr. Mohamed Aden Ahmed	PULPA
21	Mohamed Jama Dirie	PULPA
22	Ali Askar Ali	PULPA
23	Dr. Mohamed Mohamoud Farah	PULPA
24	A/kadir Ali Samater	PULPA
25	A/kadir Yusuf Ilmi	PULPA
26	Mohamed Ahmed Mohamed	PULPA
27	Abdi Khalif Mohamed	PULPA

Appendix IV: Present Organizational Structure of MoLAE

ORGANIZATIONAL STRUCTURE OF MoLAE

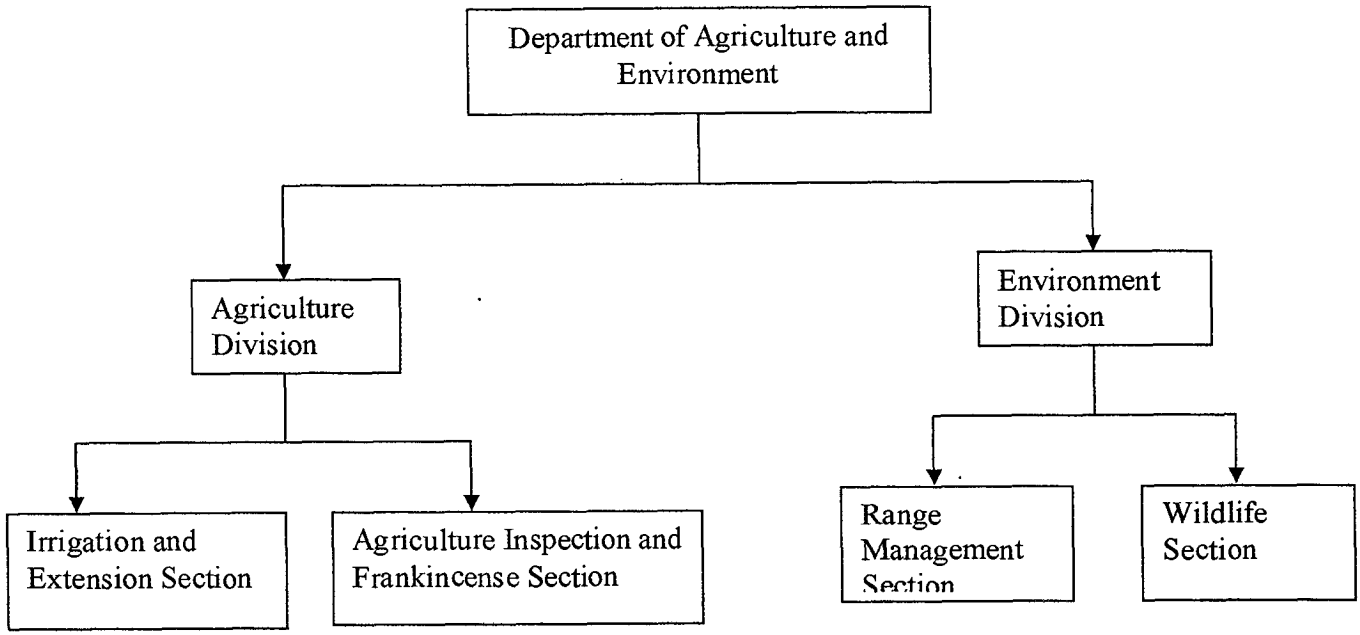


Appendix V: Proposed Organizational Structure for MoLAE

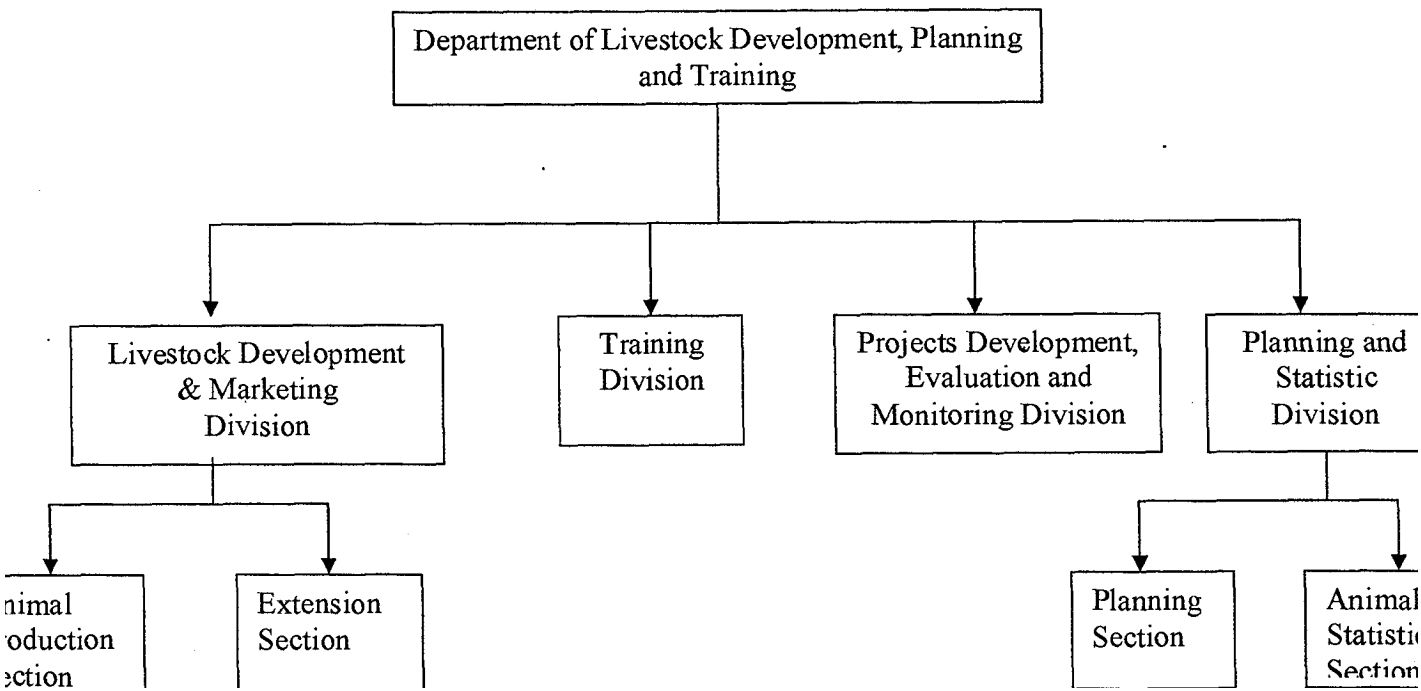

Director General
Head of Animal Health Department
Zoo-sanitary & hygiene (meat inspection)
5 Regional Vet Coordinators
Port Veterinary Office
Bari 3 DVOS'
Nugal 3 DVOS'
Mudug 3 DVOS'
Sool 3 DVOS'
Sanaag 3 DVOS'

Appendix VI: DEPARTMENT OF AGRICULTURE AND ENVIRONMENT

Chapter 2.4. Department of Agriculture and Environment



Chapter 2.5. Department of Livestock Development, Planning and Training



Appendix VII: Group Presentations on the Current Functioning of the Ministry of Agriculture and

Proposed improvements

1. Question: What are the roles and functions of a Ministry of Livestock, Agriculture and Environment?

   a) Animal health services delivery

   b) Disease surveillance and control

   c) Livestock vaccinations

   d) Develop early warning systems on disease outbreaks

   e) Public health including meat inspection

   f) Export certification

   g) Information dissemination to stakeholders and international organizations

   h) Monitoring and evaluation of projects

   i) Animal production and extension services

   j) Natural resources/environmental management

   k) Livestock and agriculture resource centres including collection of data

   l) Agricultural extension services

   m) Collection of livestock levies and fees

   n) Wildlife management

   o) Developing policies on livestock, agriculture and environment

   p) Plan and implement Ministry's activities

   q) Initiate developmental programmes in the three sectors

   r) Enforce rules and regulation for livestock, agriculture and environment

   s) Develop training policies for the livestock keepers and staff

   t) Staff management to avoid overcrowding in one section

2. Question: What departments would be expected in the Ministry of Livestock, Agriculture and Environment?

   a) Animal Health Department

   b) Agriculture Department

   c) Environment Department

3. Question: Is the Ministry functions as expected?

   All participants in the workshop concurred that the Ministry of Livestock, Agriculture and Environment is performing below the expectations of the stakeholders. The major handicap faced by the ministry include: limited resources (insufficient funding, lack of personnel etc), lack of a functional organisational structure with proper chain of command etc. The following propositions were given for the ministry to improve its performance:

4. Question: What is required for MoLAE to function properly?

   a) Develop a livestock policy and strategic plan.

   b) Enhance and upgrade it management system

c) Allocation of sufficient budget for staff requirements and carrying out activities

d) Overhaul its present organizational and adopt the proposed organizational structure and ensure that the vacant positions are filled

e) Upgrade the capacity and skills of the staff

f) Employ personnel on the basis of qualification and experience

g) Accountability should be practised at all levels especially at the port veterinary office

h) Chain of command and hierarchy should be respected and adhered to

i) The office of the second director general should be scrapped

j) Create linkages with other ministries and governmental departments

ANNEX II: VETERINARY LAW CODE SENSITISATION WORKSHOPS FOR GOVERNMENT AUTHORITIES AND LIVESTOCK STAKEHOLDERS IN PUNTLAND.

ANNEX II: VETERINARY LAW CODE SENSITISATION WORKSHOPS FOR GOVERNMENT AUTHORITIES AND LIVESTOCK STAKEHOLDERS IN PUNTLAND.

Introduction

Animal health surveillance and control is a national duty for public authorities, private veterinarians, individual owners and producers. There is a need for appropriate legislative and regulatory apparatus to be formulated, adopted, implemented and enforced. In Puntland a task force was formed and mandated to review the veterinary law-code for the Ministry of Livestock, Agriculture and Environment (MoLAE) based on the defunct United Republic of Somalia Veterinary Law of 1967. The members of the task force included three public veterinarians, two private veterinarians, one administrator from the Ministry of Trade and a veterinary law-code consultant who facilitated and guided the work of the task force together with the PACE Somalia Project Zonal Veterinary Advisor and the Zonal Veterinary Coordinator. The task force gathered information using semi-structured interviews with key informants from the livestock sector and used a broadly based, bottom-up participatory or consultative process for proposing or discussing laws, regulations and guidelines which were incorporated. The stakeholders included public and private veterinarians, livestock traders, livestock keepers, veterinary drug importers, public administrators and other leaders. Considerations of veterinary codes of countries within the region were also done. The code was presented to the veterinary professionals, livestock traders, public administrators and other stakeholders. A final draft was submitted to the Minister for MoLAE and his technical staff for the final inputs. The Veterinary Code is now in the process of being enacted into law. It is important to sensitise the Cabinet of Ministers, members of parliament, government authorities, public and private veterinarians, livestock traders, veterinary drug importers and retailers and other livestock stakeholders on the importance of veterinary laws so as to facilitate the process of enactment.

Objectives

The objectives of the workshop will be:

a) To sensitise Puntland Cabinet, Members of Parliament and other government authorities on the importance of the veterinary code

b) To present the draft veterinary law code to veterinarians (public and private) and other key stakeholders

c) To draw up a timetable for the endorsement and enactment of the veterinary code by the Council of Ministers and Parliament and the President

d) To develop recommendations on the way forward regarding implementation and enforcement of the veterinary code

Participants

The first presentation of the Veterinary Law Code was to the Minister and senior staff of MoLAE, a total of 15 participants (Garowe, 3rd February). Thereafter, the Minister made a presentation to the 15 member of the Council of Ministers (Garowe 5th February). The Veterinary Law Code was then presented chapter by chapter to 15 Somali Livestock Professionals from the private and public sectors (Garowe, 4th to 7th February). The last workshop for two day was presentation of the Veterinary Law Code to 32 participants who included representative members of parliament, Somali Livestock professionals and representative livestock traders (Garowe, 30th to 31st March).

Outcome

a) Senior staff in the Ministry of Livestock, Agriculture and Environment.

The Minister for Livestock, Agriculture and Environment, Mr Ibrahim Hareed Mohammed, the director general, the heads of departmental heads and other senior staff in the ministry (Appendix I) were briefed and presented with the final draft of the Puntland Veterinary Law Code. The Minister was part of the task force that reviewed and drafted the Veterinary Law Code for Puntland before he became the Minister. The Minister for Livestock confirmed his commitment of ensuring that the Veterinary Law Code receives the presidential assent and establishment of a veterinary drugs quality control section (Appendix II)

b) Cabinet Ministers

The Minister for Livestock, Agriculture and Environment made a presentation of the Veterinary Law Code to the Council of Ministers. After this presentation each member of the Council of Ministers received a copy of the final draft of the Veterinary Code for their perusal and inputs (Appendix III). It was envisaged that they will forward their inputs and comments to the Minister of Livestock who will pass the same to PACE Zonal office for necessary amendments.

c) Presentation of the Veterinary Law Code to the Veterinary Professionals

Somali Livestock Professionals in Puntland were invited for a three-day meeting where the drafted Veterinary Law Code for Puntland State of Somalia was presented. The professionals were from both the public and private sectors (Appendix IV). Initially three questions were posed to the participants and discussed in groups to set the temperature for the workshop and have a common understanding regarding the law. The questions were (a) what a law is, (b) why it is important to have laws (c) what a veterinary law is and (d) why it is important to have veterinary laws. Group exercise results are reported in plenary indicated that the participants understood what were laws, their importance and the need for having veterinary laws (Annex V). Furthermore, they gave topics that they considered important as part of the veterinary law. Thereafter each of the participants received a copy of the Veterinary Law Code and in their groups went through all the nine chapters of the code with the facilitation of the Zonal team. Each group held discussion on the particular assigned chapters and made a presentation on how they find these chapter and made recommendations, if any. Each group then presented the outcome of their discussion, including recommendations made, to the rest of the participants.

Following the plenary discussion the participants indicated that the following topics were not addressed in the current Veterinary Law Code:

i) Public Health Act (This act will contains topics that will address sea food inspection and certification, inspection and certification of animal products such as meat (chilled carcasses for export and meat slaughtered for local consumption) eggs and milk

ii) Skins and Hides Act

iii) Drugs and Poisons Act

The facilitators indicated that these acts of the Veterinary Law could be drafted latter and incorporated in the main Veterinary Law Code as Addendum.

d) Recommendations made fro this workshop with the livestock professionals included:

i) Examples of animal movement permits and veterinary international export certificates should be included in the Annexes of the present Veterinary Law Code.

ii) The Ministry of Livestock, Agriculture and Environment should spearhead and hasten the process of enacting the Veterinary Law Code with the support of the Veterinary professionals from PULPA, chamber of commerce, livestock traders and other livestock stakeholders. Intense lobbying should be undertaken by these groups with the Council of Ministers and Members of Parliament to ensure that the law code ie approved and enacted.

iii) In the process of establishment of veterinary services and enforcing the Veterinary Law Code in Puntland, the areas of Sool and Sanaag should receive due attention. Ignoring this areas posses a danger in terms of disease outbreaks emanating from this two regions. Further

State thus jeopardising any achievements made.

iv) Policing of various small ports in the Puntland coastal areas for livestock and/or seafood being exported should be undertaken to ensure that the animals and the seafood products are examined and certified for export.

v) MoLAE should start the using private veterinarians for certification by engaging private veterinarians trained and contracted by international non-governmental organizations such as VSF-Suisse and Un Agencies such as FAO (through the Excellex and LICUS projects).

vi) Animals that ere rejected from importing countries should be isolated in secluded for further examination and testing before they are released to the owners.

The possible suggestions given by the participants to ensure that the drafted veterinary law code is enforced were:

i) Involve other institutions of Puntland e.g. staff from police department, justice department, ports and custom staff and local authorities. These institutions should be made to understand the relevant parts of the Code as relates to their services.

ii) Mobilization of all livestock stakeholders with relevant topics of the Veterinary Law Code that concern their operations and activities.

iii) Educate public and create awareness highlighting the main issues in the Veterinary Law Code through awareness electronic and print media and through public gatherings.

iv) Incorporate the Veterinary Law Code in Puntland State Penal Code

e) Timetable developed for the process of enacting the veterinary law-code.

ACTIVITY	PERIOD	Action	Comments
Presentation of the Veterinary code to senior MoLAE staff	February 2005	Zonal Advisor, Zonal Coordinator	Presentation done and copies of the veterinary law code distributed
Presentation of the veterinary Code to the professionals	February 2005	Zonal Advisor, Zonal Coordinator	Presentation done and discussion of the veterinary code chapter by chapter undertaken
Presentation of the Veterinary Code to the Council of Ministers	February 2005	Minister for MoLAE, Zonal Coordinator	The Minister presented the Veterinary code to Council of Ministers on 3rd February 2005; copies of the veterinary code were distributed. The Ministers endorsed the veterinary Code by acclamation on 17th March 2005.
Presentation of the Veterinary Code to Members of Parliament	April 2005	Minister for MoLAE, Zonal Coordinator	Presentation of the Veterinary Code was done to representative members of parliament. The Veterinary code in English and Somali were distributed
Enactment by Members of Parliament	June 2005		Parliament reconvenes in June 2005 and one of the main motions for discussion will be the Veterinary Code. Need following up with the Zonal Office
Assent by the President	June 2005	Minister, MoLAE, Zonal Coordinator	
Incorporation of the Veterinary Code in the Puntland laws	July 2005	Zonal Advisor, Zonal Coordinator, Justice Department	

Appendix I: **List Ministry of Livestock, Agriculture and Environment top management and technical staff, 3rd February 2005.**

No.	Name	Position
1	Ibrahim Hareed Ali	Minister for Livestock, Agriculture and Environment
2	Yasin Ali Jama	Vice Minister of MoLAE
3	Abdirahman Jama Gayre	Technical Advisor to Minister
4	Hassan Mohamed Khalaf	Director General of Livestock
5	Abdinasir Aadan Mohamed	Director General of Agriculture and Environment
6	Ali Abdi Isse	Director Finance and Administration
7	Mohamed Jama Hirsi	Director of Agriculture Department
8	Mohamed Ismail	Director Department Animal Health
9	Mohamed Said Nooh	Director of Environment
10	Ali Nuur Ibrahim	Port Veterinary Staff
11	Abdirahman Mohamed Jama	Port Veterinary Staff
12	Bille Cumar Qambi	Accountant
13	Jama Abdi Jama	Administration Section
14	Ahmed Mohamoud Mohamed	Environment Section Head
15	Mohamed Mohamoud Yusuf Qurbac	Karkar Veterinary Office

Appendix II: Letter from Minister for Livestock, Agriculture and Environment on the commitment to ensure that the Veterinary Law Code receives the Presidential assent.

Dawlad Goboleedka Ee Soomaaliya **Puntland State of Somalia**

Ministry of Livestock, Agriculture and Environment

Office of the Minister

Ref WWXXBD/039/05 Date Sunday, February 27, 2005

To Dr Martin N

PACE Project Zonal Adviser in Puntland

To Dr Hersi A Guled

PACE Project Coordinator in Puntland

1. Further Laboratory Training course in Mugugu LAB For Epidemiology and Data Management Unit (EDMU) of MOLAE is still awaiting as Planed before ,

2. the veterinary Law Code is due to be signed in this week by the President of Puntland State, then to the parliament for legalization .

3. The Somali Livestock Board (SLB) Formation is due to be signed by the President , then to the parliament for legalization ,

4. the MOLAE is Committed to set up a Veterinary Drugs Quality Control commission to tackle persistently increasing problems on Animal medicines issues ,

Best regards,

Minister of the

Ministry of Livestock, Agriculture and Environment

Dr Ibrahim Hareed Ali (Da'ar)

Annex III: List of the Council of Ministers who received the copy of the Veterinary Law Code.

Dawlad Goboleedka Ee Soomaaliya

Puntland State of Somalia

Wasaaradda Xanaanada Xoolaha, Beeraha iyo Deegaanka.

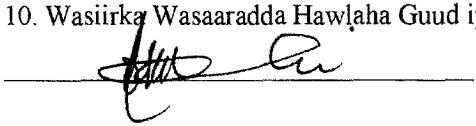
XafiiskaWasiirka

Ref:WWXXBD/009/05 Date:February 3, 2005

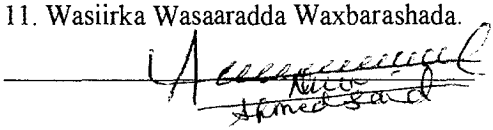
Uj: **Cadayn Lawareegid Buug**

1. Madaxweynaha DGPL
2. Madaxweyne K/Xigeenka
3. Wasiirka Wasaaradda Diinta iyo Awqaafta.
4. Wasiirka Wasaaradda Maaliyadda
5. Wasiirka Wasaaradda Ganacsiga iyo Warshadaha.
6. Wasiirka Wasaaradda Warfaafinta
7. Wasiirka Wasaaradda Caafimaadka
8. Wasiirka Wasaaradda Qorshaynta iyo Xiriirka Caalamiga ah.
9. Wasiirka Wasaaradda Dekedaha iyo Kaluumaysiga.

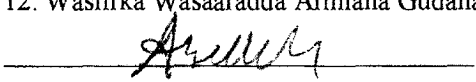
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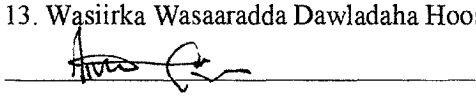
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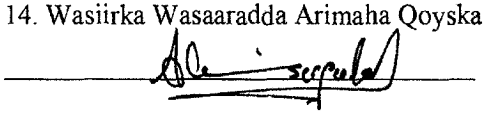
12. Wasiirka Wasaaradda Arimaha Gudaha



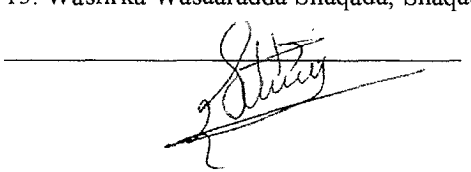
13. Wasiirka Wasaaradda Dawladaha Hoose iyo H/R/Miyiga.



14. Wasiirka Wasaaradda Arimaha Qoyska



15. Wasiirka Wasaaradda Shaqada, Shaqaalaha, Isboortiga iyo Dhalinyarada



MAHADSANIDIN

Wasiirka Xannaanada Xoolaha Dhirta iyo Deegaanka.

Dr. Ibraahim Xareed Cali (Dacar)

Annex IV: **List of Somali Livestock Professionals in a four-day workshop on the Veterinary Law Code, 4th to 11th February 2005.**

#	Name	Organization
1	Abdulahi Jama Ibrahim (Alalash)	PULPA
2	Dr. Ahmed Saeed Samatar	PULPA
3	Mohamed Ismail Warsanme	PULPA
4	Abdulkadir Yusuf Elmi	PULPA
5	Saeed Abdulahi Ali (Mingiste)	PULPA
6	Abdulahi Awad Omar	PULPA
7	Abdirahman Jama Aden	PULPA
8	A/salaam Warsame Bone	MoLAE
9	Mahamed Mahamu'd Xuseen	MoLAE
10	Said Nur Jama	MoLAE
11	A/rahman Haashi Arab	MoLAE
12	Mohamoud Mohamed Nur	MoLAE
13	A/bdikarim Mohamed Isse	MoLAE
14	Abdi Muuse Isse	MoLAE

Appendix V: Workshop Participants in the Second Veterinary Law Code Workshop, 30th to 31st

March 2005.

#	Name	Organization
1	Ibrahim Hared Ali (Da'ar)	MoLAE Minister
2	Ahmed Hussen Yusuf	State Min in the office of the President
3	Ibrahim Elmi Warsame	MP
4	Salad Hared Ali	Dep. Presdent of parliament
5	A/lahi Mohamed Isse	MP
6	Warsame seeraar	MP
7	A/qani Ismail	MP
8	Mohamoud Mohamed Farah	MP
9	Mohamed Ali Hassan	MP
10	Hussen Yasin Dirie	MP
11	Mohamed Ismail	MoLAE
12	Dr. Mohamoud Mohamed Nor	MoLAE
13	Abdi Muse Isse	MoLAE
14	Ass. Khalif Ahmed Abdi	MoLAE
15	A/risak Nor Ibrahim	MoLAE
16	Mohamed Jama Hersi	MoLAE
17	A/salam Warsame Bonne	MoLAE
18	Ali Askar Ali	PULPA
19	A/kadir Yusuf Elmi	PULPA
20	Mohamed Jama Dirie	PULPA
21	A/llahi Jama Ibrahim	PULPA
22	Ali Dahir Jama	PULPA
23	Mohaned Ahmed Mohamed	PULPA
24	A/kadir Ali Samater	PULPA
25	Ali Farah Salad	PULPA
26	Ass. Mohamed Aden Mohamoud	PULPA
27	A/karin Ahmed Jama	PULPA
28	Mohamed Aden Mohamoud	PULPA
29	Mohamed Mohamoud Yousuf	Trader
30	Omar Haji Dirie	Trader
31	Ismail Mohamoud Ali	Trader
32	Faisal Roble Yousuf	Trader

Appendix VI: Group Presentations the importance of state laws and more so Veterinary Laws

1. QUESTION: WHY IS IT IMPORTANT TO HAVE LAWS?

a) Ensuring that justice prevails

b) To spell clearly the role of the different institutions

c) Enable mediation once there is a misunderstanding

d) Ensuring that rules and order are maintained

e) To ensure that the authorities have the power to discharge their duties

f) Ensuring that control mechanisms are in place

g) A means of controlling contrabands

h) Ensures that there is security and the community can access health facilities, receive education etc

i) Enables structure to function as expected and required

2. QUESTION: WHAT IS A VETERINARY LAW?

a) Regulations that ensure delivery of veterinary services

b) Legislation and documents for the veterinary professionals

c) Document legitimising veterinary profession and activities

d) Guidelines for the government, veterinary professional and other livestock stakeholders to follow regarding livestock issues

e) Articles that govern veterinary professionals

f) Articles that define everyone's roles

3. QUESTION: WHY IS IT IMPORTANT TO HAVE VETERINARY LAWS?

a) Minimise the risk of disease to spread

b) Establishing order in the livestock sector

c) Gives good reputation to a country as a livestock exporter and creates confidence with the importers

d) Better share of the livestock market because there are law governing the sector

e) Facilitates the functioning of veterinary professionals,

f) Differentiate veterinarians from para-professional

g) Ensuring that quality animal care is provided

h) Ensuring that quality animals are exported and ensure order is maintained

i) Ensuring that all stakeholders get justice

j) Facilitate livestock export including certification

k) Ensure animal welfare is adhered to

l) Control veterinary drug quality

m) Ensures livestock information is made available

4. QUESTION: WHAT ARTICLES MUST BE IN A VETERINARY LAW?

a) Animal movement

b) Important livestock diseases and their control

c) Animal health services delivery, breeding of livestock, nutritional requirements

d) Export of animals (quarantine regulations, diseases to check for, compulsory vaccinations required, certification and animal welfare)

e) Information dissemination

f) Importation of animals and animal products

g) Meat, milk, hides and skins inspection, slaughterhouse hygiene

h) Veterinary drugs control

i) Marketing of livestock

ANNEX A 3: TRAINING SVP REPORT

(1ST NOVEMBER 2004 – 31ST MARCH 2005)

TRAINING OF FOUR VETERINARY PROFESSIONALS FROM SOMALIA
21st March – 5th April 2005. At Virology Division, NVRC Muguga North

Introduction

The Division of Virology NVRC Muguga undertook to train four Veterinary professionals from Somalia in response to a request made to KARI, NVRC Muguga by PACE Somali Component on 19th November 2004 (No. PII/mn-176/04).

Terms of reference:

To train 4 Somali Veterinary professionals for 10 days at NVRC Muguga on the following topics;

- Sample collection and processing.
- Sample aliquoting and storage.
- Sample packaging for submission to Regional and world reference laboratories.
- Serological testing for Rinderpest and Peste des petits ruminants(with more emphasis on Elisa).
- Recording, analysis and interpretation of results.
- Report preparation.

Methodology

The training was carried out using the following aids;
- Lecture notes (Annex one)
- Manuals of relevant laboratory procedures (Annex two)
- Practical work in the field and laboratory

The field work involved planning and carrying out animal sampling under field conditions. Bleeding exercises for both serum and buffy coat samples together with the collection of nasal and eye swabs were demonstrated and also practiced by the trainees.
In laboratory, the trainees processed EDTA blood & swabs in preparation for AGID, Immunocapture Elisa and virus isolations . They also separated sera from blood clots and in addition they learnt how to aliquot the samples for working with, storage and dispatch. Practical work in AGID, Immunocapture Elisa and cElisa was performed while Virus isolation and Virus Neutralisation tests were demonstrated. Interpretation of results and analysis were covered during the training.

Using the relevant packing materials and current OIE coding systems, sample packaging for submission to regional and world reference laboratories were taught.

In addition the trainees expressed the wish to learn how to make dilutions out of stock solutions. This was demonstrated to them.

Trainers comments

All four participants showed a lot of interest in all the aspects of the training programme. They were good in bleeding and although their pipette handling proved difficult at first, at the end of the course they were able to do the technique properly. They also participated nicely in the discussions.

Dr. PK Mirangi
Dr. EK Ndung'u
Dr. RN Ngotho
Dr. RG Ireri

RICULTURAL RESEARCH INSTITUTE
NATIONAL VETERINARY RESEARCH CENTRE MUGUGA,
P.O. BOX 32, 00902 KIKUYU, KENYA
TELEPHONE:066-32000, 32703, 32106, 32107, FAX: 066-32450,
TELGRAMS: VETRESORG, KIKUYU

ANNEX ONE

SUMMARY NOTES:TRAINING COURSE HELD AT NVRC, MUGUGA ,
21ST MARCH - 5TH APRIL, 2005

PREPARED FOR SOMALIA AND SOMALILAND VETERINARY PROFESSIONALS

Compiled By
E. K. Ndungu

RINDERPEST

Definition

Classic descriptions of rinderpest refer to it as a highly fatal disease of domestic cattle, Buffaloes and yaks. The virus also affects sheep, goats, some breeds of pigs and a very large variety of wildlife species within the order Artiodactyia, although not always in a clinically apparent form.
In describing rinderpest in contemporary terms, it is perhaps best to consider that for the most part it is a mild, nonfatal, infectious disease of cattle, but one with two very dangerous attributes. The first is an almost certain ability to undergo virulence modulations. The second is an ability to infect game animal species and, in buffaloes, eland, giraffe, lesser kudu and warthog, to cause an acute infection associated with high levels of mortality.

Aetiology

Rinderpest, is caused by a negative-strand RNA virus of the genus *morbillivirus* in the family *Paramyxoviridae*. This family consists of single stranded, non-segmented, negative sense RNA viruses with helical nucleocapsid symmetry. The RNA genome is approximately 16,000 bases long and encodes six virus structural proteins (N, P, M, H, F and L) and two non-structural proteins (C and V). Other important members of the *Morbillivirus* genus are measles virus (MV) of man, Canine distemper virus (CDV) affecting mainly dogs, Pestes des petits ruminants virus (PPRV) of sheep and goats and the recently described viruses affecting marine mammals, phoecine distemper virus (PDV) of seals and the Dolphin morbillivirus (DMV).

Current Distribution In Africa

Rinderpest virus lineages 1(Classical) and 2(mild form) have only been recorded from Africa. Lineage 1 appears to have been distributed from Egypt to southern Sudan and eastwards into Ethiopia and into northern and western Kenya. On the other hand, lineage 2 has been recorded from both East and West Africa and at one time may have been distributed in a sub-Saharan belt running across the whole of the continent Now however, as the result of further coordinated vaccination and surveillance programmes (Pan African Rinderpest Campaign in particular), neither West nor Central Africa have reported rinderpest for the past 15 years. Until recently both lineages were

being reported from eastern Africa (lineage 1 in southern Sudan in 1998 and lineage 2 in Kenya in 2001). The failure to find more recent evidence that lineage 1 is still being transmitted supports the belief that this lineage has also been eradicated.

Reappearing in 1994, 1996 and 2001 in wildlife, Lineage 2 is still being transmitted within the Somali pastoral ecosystem where its continued presence is causing considerable concern. In 1994, this virus reappeared in south-east Kenya where its ability to engage in cryptic persistence for a period of at least 30 years, during which time it is likely to have been transmitted with a low level of virulence among susceptible cattle. Although this virus is now seen as having evolved to the point where it has been possible for it to escape veterinary attention in remote areas, its presence did not go unnoticed by the nomadic pastoralists whose cattle it infected. Most recently, in 2003 mild rinderpest was reported in cattle in Kenya close to the border with Somalia; the virus has not been isolated but phylogenetic studies identified viral RNA closely related to the ancestral RBOK strain. This enigma needs to be resolved urgently. The danger posed to cattle elsewhere in African by viruses circulating in what is almost certainly the last reservoir of rinderpest is shown by their ability to spread within Kenya and to neighbouring Tanzania in the early 1980s (18), regaining virulence for cattle in the process.

Clinical signs

The incubation period of the lineage 2-associated mild form of rinderpest is between 1 and 2 weeks, and the ensuring clinical disease can be seen as a subacute febrile attack and little more. The fever is not invariable, it is short-lived (3-4 days) and not very high 38-40°C). The depression that characterises more acute forms of rinderpest is absent from mildly affected animals and, as they do not lose their appetite, they will probably continue to graze, water and trek as well as unaffected animals. These animals do not usually develop diarrhoea. On close examination there may be some slight congestion of the visible mucous membranes and small, focal areas of raise, whitish epithelial necrosis may be found on the lower gum - sometimes no longer than a pin head - along with a few eroded cheek papillae. Some animals may escape the development of such erosions, the appearance of which is fleeting. Other animals may show a slight, serous, ocular or nasal secretion but, in contrast to the more severe forms of the disease, these do not progress to become mucopurulent.

From time to time the virulence of mild lineage 2 rinderpest may increase, in which case the following description of classical rinderpest is applicable. After an incubation period of between 1 and 2 weeks, the clinical disease is characterised by an acute febrile attack within which prodromal and erosive phases can be distinguished.

The prodromal period lasts approximately 3 days, during which affected animals develop a pyrexia of between 40 and 41.5°C together with partial anorexia, constipation, congestion of visible mucosae, serous ocular and nasal discharges, depression and drying of the muzzle. However, it is not until the onset of the erosive phase and the development of necrotic mouth lesions, that a tentative clinical diagnosis of rinderpest can be made. At the height of fever, flecks of necrotic epithelium appear on the lower lip and gum and in rapid succession may appear on the upper gum and dental pad, on the underside of the tongue, on the cheeks and cheek papillae and on the hard palate. Through the enlargment of existing lesions and the development of new fool, the extent of the oral necrosis can increase dramatically over the following 2-3 days. Much of the necrotic material works loose giving rise to shallow, nonhaemorrhagic mucosal erosions.

Diarrhoea is another characteristic feature of rinderpest and develops 1-2 days after the onset of mouth lesions. The diarrhoea is usually copious and watery at first, but later on may contain mucus, blood and shreds of epithelium and it may be accompanied, in severe cases, by tenesmus. During the erosive phase, necrosis may be observed in the nares, in the vulva and vagina, and on the preputial sheath. Anorexia develops, the muzzle dries out completely, the animal is depressed, the breath is fetid and mucopurlent ocular and nasal discharges develop.

Deaths occur but the mortality rate will be variable and may be expected to rise as the virus gains progressive access to large numbers of susceptible animals. Initial mortality rates will probably be in the order of 10-20% and, in the terminal stages of the illness, animals may become recumbent for 24 - 48 hours prior to death. Some animals die while showing severe necrotic lesions, high fever and diarrhoea, others after a sharp fall in body temperature, often to subnormal values. Alternatively, the pyrexia may remit slightly in the middle of the erosive period and then, 2-3 days later, return rapidly to normal accompanied by a quick resolution of the mouth lesions, a halt to the diarrhoea and an uncomplicated convalescence.

Post-mortem findings

Typically the carcass of dead animals is dehydrated, emaciated and soiled. The nose and cheeks bear evidence of mucopurulent diacharge, the eye is sunken and the conjuctiva congested. In the oral cavity, there is often extensive desquamation of recrotic epithelium, which always appears sharply demarcated from adjacent areas of healthy mucosa. The lesions frequently extend to the soft palate and may also involve the pharync and the upper portion of the oesophagus; the rumen, reticulum and omasum are usually unaffected, although necrotic plaques are occasionally encountered on the pillars of the rumen. The abomasum, especially the pyloric region, is severely affected and shows congestion, petechiation and oedema of the submucosa. Epithelial neocrosis gives the mucous membrane a grey colour. The small intestine is not commonly involved except for striking changes to the Peyer's patches where lymphoid necrosis and sloughing leaves the supporting architecture engorged or blackened. In the large intestine changes involve the ileocaecal valve, the caecal tonsil and the crests of the longitudinal folds of the caeca, colonic and rectal mucosae. The folds appear highly engorged in acute deaths of darkly discoloured in long-standing cases; in either event the lesions are referred to as 'zebra-stripping'.
Even though infections with lineage 2 may pass unnoticed in cattle, the virus is high infectious for wildlife species, and among those generally regarded as highly susceptible (buffalo, eland, and lesser kudu) it causes fever, a nasal discharge, typical erosive stomatitis, gastroenteritis, and death. In addition it has been observed that buffaloes infected with lineage 2 showed enlarged peripheral lymph nodes, plaque-like keratinised skin lesions and keratoconjuctivitis. Lesser kudus were similarly affected, but whereas blindness - caused by a severe keratoconjuctivitis - was common, diarrhoea was unusual. Eland also showed necrosis and erosions of the buccal mucosa together with dehydration and emaciation. Therefore, under the present circumstances, a diagnosis of rinderpest in any of these species points to the likelihood of the simultaneous transmission of the virus, even at a subclinical level, in neighbouring cattle.

Diagnosis

The diagnosis of classical and mild rinderpest is dependent on a detailed and accurate epidemiological history and a careful observation of the clinical signs and post-mortem lesions as detailed above. The disease should be differentiated from Bovine virus diarrhoea/mucosal disease, Malignant catarrhal fever, Infectious bovine rhinotracheitis, Bluetongue, and Foot and mouth disease.

Confirmation of a diagnosis of rinderpest should be sought particularly in virgin outbreaks or in areas where the disease has been absent for a prolonged period. At the farm (cowside) level, a simple and rapid agar gel immunodiffusion test for detecting rinderpest virus antigens is available and confirmation of a clinical diagnosis can be obtained within 1-2 hours. Samples collected for confirmation of a provisional diagnosis of rinderpest should be kept on ice and dispatched by the fastest available means to the laboratory for testing. In the laboratory, a battery of tests is available for confirmation of rinderpest as follows:

a) Antigen detection

- Agar gel immunodiffusion (AGID) test. This test uses the following samples
  - Ocular/nasal secretions (swabs)
  - Lymph node biopsies
  - Post-mortem tissues (lymph nodes, spleen, tonsils, conjunctiva)

- Antigen Capture ELISA

A test kit is commercially available from CIRAD-IEMVET and uses the same samples as above.

b) Virus isolation and identification

This requires the following samples:

- Ocular/nasal secretions collected in 1-2 ml of transport medium (not glycerol)
- Buffy-coat ceells from blood in anti-coagulant (at least 10ml of whole blood)
- Post-mortem tissues (collected fresh)

c) Demonstration of rinderpest virus antibodies in sera

This can be carried out using the Virus neutralisation test (VNT) or the Competitive ELISA (cELISA). However, the detection of antibody is rarely used for diagnosis since it requires paired sera or an accurate history of non-vaccination of the animal involved.

d) Molecular Diagnosis

This is achieved using rinderpest virus-specific cDNA Probes and the Polymerase chain reaction (PCR). These tests require specialized equipment and trained personnel but samples collected for the AGID and virus isolation are suitable for use with these techniques.

e) Immunohistochemistry

This is very useful in doubtful cases and it requires formalin-fixed tissues for confirmation of diagnosis.

Control

Europe, South Africa, Brazil and Australia controlled and eradicated rinderpest using the quarantine and slaughter ('stamping out') policy. This is unacceptable in most parts of the world where rinderpest still persists. In these countries, control of the disease depends on mass vaccination campaigns using live attenuated vaccines, which confer life-long immunity against all strains of the virus. The most widely used of these vaccines is the Plowright cell culture attenuated vaccine. This vaccine is however thermolabile and requires a cold chain from the producer laboratories to the point of use in the field.

Recent research efforts have concentrated on developing thermostable rinderpest vaccines. One vaccine produced by modifying the freeze-drying conditions and stabilisers of the Plowright vaccine can be stored at 45°C for up to one month without loss of potency. Recombinant vaccines have also been produced in thermostable Capripox and Vaccinia virus vectors but these are still undergoing long-term immunity and safety trails in the laboratory.

In response to disease outbreaks, emergency mass vaccination campaigns coupled with quarantine measures are used to control the spread of the disease.

Rinderpest Relatively easy to eradicate

Rinderpest has epidemiological features that render it a relatively easy disease to eradicate. The virus is fragile and requires close contact for transmission. There are no insect vectors, no carrier state and recovered or vaccinated animals are immune or life. There is only one serotype of the virus and a single lie vaccine is effective against all the different known strain and lineages of the virus.

- **Stamping out used to eradicate (quarantine, slaughter, disposal & compensation)**

During the first half of this century, rinderpest was eradicated from Europe and Southern Africa using the 'stamping out' policy where infected and in-contact herds were slaughtered and the carcasses disposed of by burning or burial. The owners were also suitably compensated for their losses. These measures resulted in the eradication of rinderpest without the use of any vaccine. Since then Europe has maintained freedom from rinderpest by enforcing strict controls on the importation of live animals and animal products and the prohibition of imports from infected countries.

- **Vaccination (prophlactic)**

For economic and social and religious reasons, the 'stamping out' policy is impractical in Africa and other parts of the world where rinderpest persists. In these areas, control is achieved through vaccination as a prophylactic measure.

- **Mass vaccination campaigns**

In many countries annual mass vaccination campaigns are carried out to ensure protection of cattle against rinderpest.

- **Tissue culture vaccine (thermolabile)**

The most commonly used vaccine for these mass vaccination programmes is the tissue culture attenuated vaccine developed in Muguga by Plowright in the 1960's.. The freeze-dried product is table for long periods if stored frozen. However, vaccine held at high temperatures rapidly loses its potency. The reconstituted produce is rapidly inactivated and must be used immediately after reconstitution. Due to the thermolability of this vaccine, it is necessary to ensure the maintenance of an effective 'cold chain' from the vaccine production laboratory until the vaccine is administered under the skin of the animal in the field. This is expensive and lack of financial resources often results in loss of the cold chain with subsequent loss of potency of vaccines reaching the field.

- **Thermovax for difficult areas**

During the 1980's and early 1990's, research efforts were directed at improving the delivery of rinderpest vaccine by improving its stability under host conditions. This resulted in the development of vaccinia and capripox rinderpest

recombinant vaccines and thermovax. Thermovax is essentially the Plowright vaccine prepared using modifications to the stabilisers and procedures in the freeze-drying process. This results in a product that is able to retain its potency even when subjected to high ambient temperatures. This product is presently in use in several remote and inaccessible areas where it is also difficult to maintain an effective cold chain. Recombinant vaccines are still undergoing laboratory evaluation and are not available for use in the field.

- **Community based animal health workers**

The use of community based health workers for the effective delivery of rinderpest vaccine in remote areas is commonly advocated. In Ethiopia, this approach has assisted in eliminating rinderpest from long standing endemic foci in inaccessible regions.

- **Sanitary cordons around known endemic zones**

Following the control of rinderpest by use of mass vaccination campaigns, it is essential to ensure that effective sanitary cordons are maintained around known endemic areas to ensure that the virus does not gain access to other areas. Within the sanitary cordon, high levels of vaccination coverage are maintained and strict controls on the movement of animals into and out of the zone are enforced. This ensures that the disease remains confined in the endemic zone.

- **Sero-monitoring essential**

The use of mass vaccination alone is not sufficient to ensure the eradication of rinderpest. The effectiveness of the vaccination campaigns needs to be assessed by carrying out sero-monitoring programmes. This entails the random collection of blood samples from herds with serological testing to determine the prevalence of rinderpest antibodies. High antibody prevalences confirm that vaccination campaigns were effective and ensure that herds are protected against entry of the virus into the population.

- **Cessation of vaccination/disease searches**

It is not economical to sustain mass vaccination campaigns throughout the years. Once the disease is eliminated and confidence is established that it is unlikely to recur, it is important to stop vaccination and to divert the resources for the campaigns to other pressing animal health and production constraints. However, this can only be done with assurance that the disease has been eliminated from the population. This assurance been only be obtained through carrying out active disease searches and sero-surveillance. The disease searches aim to investigate and resolve all cases of rinderpest-like disease in order to ensure that the virus is not circulating in a clinically undetectable form. Cessation of vaccination is also an essential requirement of entry into the OIE pathway whose ultimate objective is to declare countries free from disease and infection with rinderpest virus.

- **Emergency/outbreak response (fire fighting)**

Mass vaccination campaigns can also be used as an emergency measure to control rinderpest following an outbreak of the disease. This is usually expensive and sometimes ineffective particularly if not supported by strict by strict animal movement controls.

- **Quarantine & vaccination**

In the event of an outbreak it is important to ensure that quarantines are immediately instituted. Emergency vaccination measures should then be carried out as quickly as possible to ensure control and localisation of the outbreak.Quarantines are put in place as emergency measures to assist in the control of disease. They should be lifted as soon as the disease is effectively controlled. If quarantines are left in place for prolonged periods, they will be violated because stock-owners must move animals to fulfil their economic and social needs.

- **Active disease searches to identify all foci**

Following an outbreak of rinderpest, it is important that the quarantines and vaccination measures are put in place, active disease searches are also undertaken to determine the extent of spread of the disease. This ensures effective control of outbreaks. In addition, **sero-monitoring** should be carried out ensure that adequate level of herd immunity are attained by the emergency vaccination campaigns. Sero-surveillance in unvaccinated animals should also be carried out to complement the active disease searches.

Coordination of control efforts

The effective control of rinderpest requires proper co-ordination of all activities carried out to achieve it. This is carried out at various levels within individual countries, geographic regions and globally.

District

Co-ordination of control efforts is carried out through the district /province levels depending on administration units of individual countries. In case of suspected out breaks, the district office will apply the disease control measures to the affected areas and initial reports made to national coordination office.

National
National Co-ordination office works closely with laboratories to ensure the smooth running of control and diagnostic activities. The national Co-ordination office/ team will inform the laboratories of all suspected outbreaks. The laboratories will dispatch an investigation team to area of outbreak where extensive investigations are made. Immediately the results are out, if they are positive the National co-ordination office will ensure that strict disease control measures are employed to contain and control the outbreaks. National co-ordination office informs the regional co-ordination office and the OIE.

Regional - PACE, SAREC, WAREC
There are a number of regional programmes to co-ordinating the control of eradication of rinderpest from Africa and Asia. These include the Pan African Programme for control of Epizootics(PACE- formerly Pan African rinderpest Campaign-PARC) which has succeeded in eliminating the disease from west and central Africa, in South Asia Rinderpest Campaign (SAREC) and the West Asia rinderpest Campaign (WAREC) carrying out similar work in their respective regions. These regional programmes in collaboration with countries in respective regions provides and generates support from donor community and decision makers and mechanism for rinderpest eradication in concerted and co-ordinated programme.

Global - FAO (GREP, EMPRES), OIE/WTO
Globally, the co-ordination and monitoring of control efforts by the various national governments and regional organisations is carried out by the Food and Agriculture Origanisation (FAO) of the United Nations through its Global Rinderpest Eadication Programme (GREP).
The functions of GREP:

- Provides mechanisms for rinderpest eradication in concerted and co-ordinated programme.
- Generates support to regional networks (PACE, WAREC, SAREC etc.)
- Spreads and share knowledge and information on rinderpest through improved communications(technical regional meetings/ workshops, EMPRES, AVIS)
- Promotes routine & standardised reporting systems
- Promotes use of internationally standardised and validated diagnostic tests

The Paris-based International Office of Epizootics (OIE) is responsible for co-ordinating information on outbreaks of the disease and control measures undertaken. The OIE has also formulated a pathway for countries to follow in order to achieve freedom from rinderpest (disease and infection).

With increasing liberalisation of global trade, the World Trade Organisation is developing a keen interest on epidemic diseases of livestock, which have an impact on international trade of livestock and their products. WTO does not allow contaminated countries to trade with Livestock. It excludes countries affected by rinderpest and other noticeable diseases from the world market.

In conclusion, Disease recognition/reporting is prerequisites to effective control and subsequent eradication
The ability to recognise and the willingness to report rinderpest outbreaks are essential prerequisites to effective control and eradication of the Rinderpest disease. It is not possible to control a disease that is not recognised. For this reason, the occurrence of mild rinderpest poses great challenges to the eradication efforts and it is important that field and laboratory veterinarians are equipped with adequate skills and knowledge to combat rinderpest in all its form.

Epidemiology
Cattle infected with virulent rinderpest virus excrete infectious virus in all their bodily secretions and excretions. The virus is fragile and does not survive for long outside the animal host as it is rapidly inactivated by sunlight, changes in pH, head and many chemical agents. There is no evidence that insect vectors play a role in disseminating the virus. The transmission of the rinderpest therefore requires very close contact between sick and susceptible animals.There is no carrier state in rinderpest. Recovered or vaccinated animals develop virus neutralising antibodies which persist and confer life-long protection against re-infection with any strain of rinderpest virus.
The maintenance of rinderpest in a population depends on the virulence of the virus strains, the continual supply of susceptible animals and the rate at which they come into contact with infected animals. In small, closed populations,

the disease tends to be self-limiting since the susceptible animals quickly become infected and either die or recover. In large populations where the contact rates are high and there is a large supply of fresh susceptible animals, the disease may persist and become endemic if effective control measures are not undertaken.

In endemic situations, rinderpest has a specific age prevalence. Adult animals are immune due to vaccination or recovery from previous infections while maternal antibodies ingested in the colostrum protect young animals. The disease is maintained mainly in unvaccinated animals aged between 1 and 2 years (yearling) whose maternal antibodies have waned. In contrast, epidemic disease in previously disease free areas affects animals of all ages. In affected herds, the strain of virus and the inmate resistance of the species and breeds of animals involved may influence the patterns of disease.In Asia, sheep and goats play an important role in the epidemiology of rinderpest and are able to maintain the virus in circulation in the absence of disease in cattle. In Africa, the small domestic ruminants rarely show clinical signs of rinderpest and are incapable of maintaining the circulation of the virus. A proportion of sheep and goats in contact with infected cattle have been shown to sero-convert and thus serve as useful sentinels in the serological surveillance for rinderpest since they remain unvaccinated in most parts of Africa.

Epidemiology: Details

Rinderpest has a simple epidemiology with features that render it a relatively easy disease to eradicate.

- **Infected animals excrete virus in secretions/excretions**

Infected animals shed virus in their secretions (i.e. tears, nasal discharges, saliva) and excretions (i.e. urine and faeces).

- **Virus is fragile**

The virus is fragile and does not survive for long outside the body of the animal. Even in the animal, the virus persists for only a short time following the development of neutralising antibodies. Virus excretion into the environment does not therefore persist for long.Outside the animal's body, the virus is readily and rapidly inactivated by factors such as sunlight, heat changes in humidity (the virus survives best at low or high relative humidity but is destroyed when the humidity lies between 50-60%), pH changes (such changes occur following autolysis and putrefaction thus rapidly rendering carcasses safe especially in hot environments). A large variety of chemical disinfectants, detergents and lipid solvents also rapidly inactivate the virus and infected premises can be quickly rendered safe.

- **No insect vectors**

There are no known insect vectors involved in the transmission of rinderpest virus.

- **No carriers, lifelong protection**

There is no carrier state in rinderpest. Recovered animals develop a sterile immunity and do not re-excrete virus into the environment. Both recovered animals and those immunised through vaccination are protected for life against re-infection with any other strains of the virus.

- **Very close contact for transmission**

Since the virus is so unstable outside the animal body and it is excreted for only a short period by an infected animal, its transmission requires very close contact between sick animals and other susceptible animals.

- **Maintenance depends on population, virus pathogenicity and contact rates**

The maintenance of rinderpest depends on the animal population in which it occurs, the pathogenecity of the virus strains involved and the contact rates between sick and susceptible animals. In large dynamic populations, with a constant supply of susceptible stock, the virus may persist for long. Highly virulent strains of virus transmit rapidly causing high mortality and may become self limiting when they kill of all susceptible hosts particularly in closed herds. Mild strains are less readily transmitted and may persist for long in areas with a continuous supply of susceptible hosts. In nomadic situations, high contact rates occur at communal grazing grounds and watering points. In sedentary herds, the contact rates are low and the virus will not readily be maintained in the population.

Endemic vs Epidemic rinderpest

Endemic rinderpest occurs in large populations where there is constant supply of susceptible stock. In this situation, most of the adult animals are immune due to recovery from previous infection. Young calves are protected by maternal antibody for periods of 6-10 months. The disease therefore occurs mainly in yearling animals (1-2 years) that have lost their maternal antibodies.

Epidemic rinderpet occurs in virgin outbreaks (areas with no previous records of the disease) or in areas where the disease has been absent or prolonged periods of time. In such areas, the majority of animals of all ages are susceptible and are equally affected by the disease.

Role of sheep, goats and wildlife

In Africa, sheep and goats do not seem to play a significant role in the maintenance and transmission of rinderpest virus. During outbreaks of the disease, a small proportion may become infected but rarely show clinical signs of disease. They also do not readily transmit the virus to other in-contact sheep, goats or cattle. In addition, they are not able to maintain the virus in circulation in the absence of the disease in cattle. In contrast, in Asia, when sheep and goats are infected with rinderpest virus, they show over signs of disease and are able to transit the virus to other in-contact sheep, goats and cattle. They are also able to independently maintain the virus in circulation in the absence of the disease in cattle.

Some species of wildlife particularly buffaloes, kudus, eland and giraffes are highly susceptible to rinderpest virus. They become infected and show over signs of the disease. They are also able to transmit the virus to other in-contact wildlife and cattle. However, the current consensus of opinion is that wildlife is not able to maintain the virus for long in the absence of infection in cattle. Therefore to control the disease in wildlife is necessary to ensure that cattle in contact with them are adequately protected so that the virus runs out of susceptible wild animals and burns itself out before gaining entry into the cattle populations.

Molecular epidemiology and virus lineages

In recent years advances in molecular biology have enabled the use of genetic mapping techniques to carry out detailed epidemiology studies of the distribution of historic and recent rinderpest virus strains. Several lineages of rinderpest virus have been identified with distinct geographic localisations in Asia and Africa. In Africa, two lineages of virus have been recovered in various outbreaks of the disease since the 1960's. In each lineage, there are viruses of different pathogenic potential. These techniques do not determine the origin of virus in fresh outbreaks of the disease. They are therefore very valuable tools for use in the eradication of rinderpest since they may serve to identify previously undetected endemic foci of disease.

In conclusion, and understanding of the epidemiology of rinderpest is essential for those involved in control and eradication programmes for the disease.

PESTE DES PETITS RUMINANTS (PPR)

Definition;

- An acute, highly contagious viral disease of goats and sheep, characterised by : fever, anorexia, necrotic stomatitis, diarrhea, oculonasal purulent discharges

respiratory distress.

- It is rinderpest - like in Africa and Asia and is highly fatal

Aetiology:

- PPR is caused by a Morbillivirus in the family Paramyxoviridae
- Other morbilliviruses include:
  - Rinderpest virus
  - Canine distemper virus in dogs
  - Phocine distemper in seals
  - Measles virus in humans
- Initially PPRV had been considered to be a host-adapted variant of RPV
- Disease observation has shown PPR to be independent of Rinderpest and cattle.
- In serology PPRV has been shown to be as immunologically distant from RPV as it is to other morbilliviruses. Molecular studies have confirmed these observations.
- PPRV can be isolated 'in-vitro' in primary sheep and goat kidney, and also in vero cell lines. Once isolated it can grow in some bovine kidney cell lines.
- PPRV is heat labile, but can last for months if frozen. It is inactivated at pH3 and ether and chloroform.
- CPE produced by PPRV in tissue culture resemble that produced by RPV.
- In molecular terms, PPRV has been observed to be close to measles and canine distemper viruses than RP, and African isolates of PPRV can be readily distinguished from non-African isolates.

Clinical Signs

- The disease can be acute or subacute.
- The incubation period ranges from 2-6 days.
- Signs generally appear 3 - 6 days after being in contact with an infected animal
- Temperature rises to 40°C - 41°C
- Then depression, inappetence, and development of serous nasal and ocular discharges which gradually become purulent and more profuse.
- The nasal discharge may block the nares and encrust the muzzle causing the animal to snort and sneeze while the ocular discharge may mat the eyelids together.
- One day or two after pyrexia the buccal mucosa becomes congested and pale areas of necrosis become visible on gums.
- In severe cases these increase in size and extend to involve the cheeks, dorsum of the tongue, hard palate and dental pads.
- The epithelium easily sloughs leaving red erosions.
- Diarrhoea sets in 2 to 3 days after pyrexia and death may occur 3 - 7 days later.
- Less severe and mild cases may be observed in which all or some of the signs develop to a lesser degree and the mortality rate is reduced.
- Formation of prominent crusty scabs (proliferative lesions) along the outside of lips, are not observed in RP.
- Development of pneumonia during the later stages is also not observed in RP
- Considerable proportion of PPRV-affected goats are infected with E. coli bacteria, that produce a heat-labile enterotoxin and which increases the clinical severity and mortality rate.

Epidemiology

- PPR was first described in 1942 in Cote d' Ivoire W. Africa and is now enzootic in that region,

- Widely spread in more northern countries of sub-Saharan Africa, and has been identified in Sudan, Ethiopia and also in Arabian Peninsula.
- No clinical or serological evidence exists south of a line drawn from Cameroon through Sudan.

- Earlier reports of rinderpest in sheep and goats in Asia might have been PPR as clinical signs are indistinguishable
- The PPR virus is stable at pH 5.85 - pH9.5, but unstable at below pH4 and above pH11.0
- Transmission of PPR virus is probably by inhalation of aerosols derived from nearby animals or by nuzzling and licking between infected and susceptible animals.
- Beddings, feed and watering troughs are thought to aid in the transmission.
- As with RP, transmission cycle depends on regular supply of susceptible animals and sufficient movement to allow mixing of populations. Market places are thought to play a major role, and animals returned from markets bring infection with them.
- The PPR virus can be detected for at least 7 days after onset of pyrexia in ocular, and nasal secretion, faeces and urine.
- Goats are more susceptible than sheep and kids over 4 months and less than 1 year are most susceptible (Case fatality rate 55-85% in goats and sheep less than 10%). Other authorities maintain that, both goats and sheep are equally affected and disparities often observed reflect the proportions of the two species in the locality)
- Infection rates in sheep and goats are generally high (above 50% and up to 90%) during outbreaks.
- PPR has no seasonal variations, and an outbreak can be maintained at village or urban level
- Insects do not play any part in the transmission.
- Risk of an outbreak is greatly increased when a new stock is introduced or when animals are returned from the market unsold. Outbreaks are often observed during massive animal movements during religious festivities in West Africa
- In terms of immunity, animals that recover from the disease are immune for life.
- In West Africa, Sahelian goats and sheep are more resistant than the dwarf breeds in the south.
- In the wildlife, an outbreak of PPR in a zoo in UAE killed wild sheep, gazelles, gemsbok and Nubian ibex. Other potentially susceptible species were not affected.
- Experimentally, the disease can be transmitted through close contact with an infected animal, or through inoculations with infected tissues and blood.
- PPR virus does not infect cattle and pigs in the field although sub-clinical disease has been observed in these species under laboratory conditions.
- PPR is considered important in West Africa where sheep and goats are important source of protein

Pathogenesis

- PPR virus penetrates the retropharyngeal mucosa, sets up viraemia and specifically damages the alimentary, respiratory and lymphoid systems.
- Infected cells undergo necrosis, but in respiratory mucosa and in the lungs there is also proliferation of cells.
- Some virulent strains cause death from severe diarrhoea and dehydration, before respiratory lesions become severe.
- In others, death is hastened by concurrent disease such as; Pneumonia pasteurellosis, Coccidiosis -E.coli also aggravates the diarrhoea

- Lymphoid necrosis is not as marked in PPR as in RP.
- Animals that recover carry antibodies that confer lifelong immunity.

Necropsy Findings:

- Carcass is severely dehydrated, hindquarters soiled with fluid faeces, crusts of exudate around the eyes, nose and swollen lips.
- Discrete or extensive areas of erosions and necrosis and ulceration are present in oral mucosa, pharynx and upper oesophagus, and may extend to abomasum and distal small intestines.
- Haemorrhagic ulceration in iliocecal region, colon and rectum show zebra stripes.
- Retropharyngeal and mesenteric LN are enlarged and wet, the spleen may be enlarged.
- Mucopurulent exidate extends from the nasal opening to the larynx and the trachea and bronchi may be hyperemic and contain froth due to pulmonary congestion, and oedema.
- Intestinal pneumonia is usually present.
- Grossily the pneumonia is characterised by areas of red consolidation, involving the anteroventral lobes, and especially the right lobes.

- In cases of bacterial complicatons, purulent or fibrinous brenchopneumonia and pleuritis are observed.
- Microscopically lesions in alimentary tract are similar to these observed in RP.
- Specimens for histology should include, lungs, small and large intestines, oral mucosa and mesenteric LN.

Diagnosis

- A presumptive diagnosis of PPR can be made from clinical signs and lesions, together with epidemiological evidence of introduction of new stock in a flock.
- With such epidemiological background post mortem findings of stomatitis, enteritis and pneumonia are typical PPR findings.
- Laboratory tests are required to rule out rinderpest, and other similar conditions.

Sample Collection

- In live animals samples should be collected during the acute phase of the disease.
- Post mortem examination of at least 3 animals is advisable and samples collected aseptically
- Samples should be chilled and if possible refrigerated when being transported.
- Preserve post mortem tissues in 10% formalin.
- Blood for serology is best collected at the end of the outbreak.

In live animals.

Swabs - Discharges of the conjunctival sac, Nasal secretions, Buccal mucosae, rectal mucosae
EDTA blood (virus isolation, PCR and haematology)
PM samples: Lymph node, Lungs, Spleen, Intestinal mucosae

Antigen Detection

Rapid assays include immunocapture Elisa, CIEP/AGID and PCR.

CIEP - Fast test results 30 - 40 minutes
(Swabs samples, post mortem tissues)

AGID - Not very sensitive - Low amounts of antigen excreted. (Needs 18-24hrs).
(Swab samples, post mortem tissues)

Immunocapture Elisa - Rapid differential test for RP
(Swabs samples, post mortem tissues)

Sandwich Elisa - Rapid test (results 2 hrs) specific with high sensitivity)
(Swab samples, post mortem tissues)

PCR - Molecular, differential test for PPR and RP and very sensitive.
But expensive.

Antibody detection.

Virus neutralisation (VNT) - Time consuming but sensitive. Test prescribed for International trade.

Competitive Elisa (cELISA): High specificity and sensitivity.

Virus isolation and identification

This should be carried out even after identification by the rapid methods.
In-Vitro;

- In primary lamb kidney cells or vero cells. (Swab samples, EDTA blood, Post mortem tissues)

In- Vivo

- Inoculation into suceptible goat.
(swab samples, EDTA blood)

Immunohistochemistry:

- Immuno-peroxidase staining
  (Formalin fixed tissues)

Differential Diagnosis;

- One strain of RPV has become adapted to sheep and goats. This should be considered when carrying out PPR investigations in South and South West Asia.
- Care should be taken when dealing with rinderpest-like diseases to rule out PPR and rinderpest.
- Respiratory system is frequently involved in PPR cases
  i) CCPP is wide spread and prevalent in many parts of sub-saharan Africa, with high mortality in goats, but mucosal lesions and diarrhoea are usually not observed in CCPP.
  ii) Para-influenza type 3 virus infections may confuse in diagnosis.

- Nairobi sheep disease (in East Africa), but oral lesions are minimal or absent in NSD, and it is restricted in areas with Rhipicephalus appendiculatus, and goats are rarely affected.
- Foot and Mouth disease or Blue tongue, but can be ruled out on oral lesions and absence of diarrhoea.
- Nematodiasis is a common cause of diarrhoea in sheep and goats, and also bacterial enteritis eg. By E. coli and Salmonella in kids. These can be ruled out by absence of oral lesions.
- In convalescent goats, labial scabs can be confused with lesions of Orf (contageous ecthyma), but this does not have the alimentary and pulmonary lesions.

Control

- Affected and in-contact sheep and goats should be isolated from rest of flock and effective quarantine imposed until at least one month after the complete recovery of the last case.
- Although difficult to achieve, control of animal movement is essential for controlling the disease.
- Control by vaccination is the better option, but vaccination in affected flocks has been sparingly applied.
- Owing to the cross-immunity between PPR and RP, attenuated rinderpest virus vaccine has been used to protect sheep and goats - even pregnant ones.
- Attenuated PPR virus vaccines have been developed.
- Infected premises should be thoroughly disinfected with solutions containing lipid solvents or agents with or low pH.

INVESTIGATION OF A SUSPCECTED OUTBREAK

Investigate promptly any report of disease, which could be Rinderpest. Take immediate action as there have been delays before the report reaches you, particularly where disease is mild. Resources of manpower and vehicles must be made available to follow up suspected Rinderpest. Allow sufficient time, you may have to track down the disease over considerable distances in difficult terrain. Take supplies for the collect of samples. Include drugs for treatment of other conditions, to encourage owners to cooperate.

OBTAIN INFORMATION IN THREE WAYS:

I	Epidemiological Investigation	How does the disease affect the whole herd? Get the overall picture
II	Clinical examination	How does the disease affect live animals?
III	Post-mortem examination	What changes are there in the dead Animals?

Could it be Rinderpest?

Information from these three activities will answer the question

1. EPIDEMIOLOGICAL INVESTIGATION

Take a thorough history of the outbreak and of cases by talking to the owners or keepers of the animals. Talk to women and men, do not exclude anyone who may have information and visit other herds and owners as the story unfolds. The disease may have moved from where it was reported. Avoid "leading questions" lie, "Did you see blood diarrhoea?" instead as "What was the dung like?"

Record your findings on an official form provided by your service. Use a notebook for additional information. Do not rely on memory, it is easy to become confused. Note the date, name and position of the person interviewed. Draw a sketch map of the infected places and cattle movements, with approximate distances.

Observe hygiene: do not carry disease to another herd!

CHECK LIST FOR THE EPIDEMILOGICAL INFESTIGATIONS **Ask 10 questions to discover important information:**	
1.What clinical signs were noticed?	Avoid leading questions here
2.When were signs of disease first noticed?	Useful for calculating the time of infection. Compare with the age of the lesions you see.
3.What species of animals are affected (including game)?	If pigs or small ruminants are affected consider FMD
4.What contact has there been with other cattle?	Animals recently brought into the herd, contact with trade, transhumant cattle, market and watering points.
5.What contact has there been with game, sheep or goats?	Wildebeest are a reservoir for MCF. Sheep and goats can give serological evidence for RP.
6.What vaccinations have been given to the herd?	The response to this may be unclear and answers should be checked against official information.
7.How many animals of which age groups have been sick and how many were there in each group at the start?	Calculation will assist the diagnosis. Record age group 0-12 months, 1-2 yrs, 2-3 yrs, over 3 yrs.
8.How many animals of which age group have died?	Calculation will assist the diagnosis
9.Has a disease like this been seen before?	If so, get a description and date
10.Are any other cattle in the area affected?	This may broaden the investigation but double check before going a long way.

CLINICAL EXAMINATION

Inspect the herd, note the breed and age classes of animals, check if they are marked as vaccinated and look for clinical signs.

Select as many of the animals as possible for examination. The most useful ones are those in the early stages of the disease and the herder may overlook these. Animals presented by the owner as having been sick may only show very old or healed lesions. Animals will need to be well restrained as you will thoroughly examine the mouth.
Make a clinical examination, paying attention to the check list on the next page and keeping notes.

CHECK LIST FOR CLINICAL EXAMINATON

Include 10 points:

1. **General:** Does the animal look bright or dull, is the coat normal or rough or soiled with faeces?

2. **Breathing:** Fast, slow or painful, is there coughing? Use a stethoscope if you have one.

3. **Feeding** Well fed or "tucked-up" or empty.

4. **Temperature& faeces** Take the rectal temperature and check for diarrhoea: make the animal defecate by dilating the anus and check the dung.

5. **Lymph nodes** Are they enlarged? Remember that in young cattle they are often obvious.

6. **Dehydration:** Pull up a fold of skin and release it, there should be good elasticity with the skin returning quickly.

7. **Eyes:** Bright or dull, sunk into the head? Any reddening of the membranes, clear of white discharge? Any whitening of the normal clear front of the eye?

8. **Muzzle**: Normal or dry, flaky or "mealy" or cracking, nostrils reddened, is there any clear of cloudy or purulent discharge?

9. **Mouth**: Open the mouth, thoroughly check lips, gums, cheeks, papillae, dental pad. Pull out the tongue as far as possible and check both surfaces. Is the breath foul?

10. **Feet**: Wash and check carefully including between the claws for blisters or ulcers.

Note: This list does not provide a comprehensive clinical examination.

CHECK LIST FOR YOUR FINDINGS

Remember: Examine as many animals as possible

	Rinderpest	FMD	MCF	BVD/MD	IBR
Percent of herd sick	0-100	20-100	1-10	See Text	10
Percent of sick which die	1-100	1-20	95-100	See Text	1-10
Incubation Period	5-15 days	3-5 days	Wks - mths	See Text	15
Clinical course (days)	3-15	2-10	7-21	2-25	2-25
Fever	●	●	●	◆	◆
Lymph nodes swollen	-	-	◆	-	-
Eye discharge	●	-	●	◆	●
Corneal opacity	❑	-	●	-	❑
Nasal discharge	●	◆	-	◆	●
Mouth erosions	●	-	●	●	●
Mouth/feet blisters or ulcers	-	●	-	-	-
Dribbling	●	●	●	❑	◆
Coughing	❑	-	❑	◆	◆

Diarrhoea/dysentery	•	❑	❑	•	❑
Lameness	-	•	-	-	-
Abortion	❑	•	❑	♦	•
		- Could it be Rinderpest ?			

Key:

- \- Not seen
- ❑ Occasional
- • Common
- ♦ Very common

MCF - Bovine malignant catarrhal fever
BVD/MD - Bovine virus diarrhoea/mucosal disease
FMD - Foot and Mouth Disease
IBR - Infectious bovine rhino-tracheitis
In small ruminant could it PPR- **Peste Des Petits Ruminants**

POST MORTEM EXAMINATION

Note the following:

1. Post mortem examination should be conducted as soon after death as possible, many signs disappear quickly.
2. Advanced or percute/ mild cases of disease will not show the typical signs
3. No single carcass will show all the signs
4. Observed changes are not diagnostic: other diseases produce similar changes

CHECK LIST FOR POST-MORTEM EXAMINATIONS

Examine 10 items

1. **Carcass:** Dehydrated, emaciated, soiled, foul smell
2. **Mouth:** Erosions

3.	**Rumen pillars**	Congestion ,necrosis, perforations
4.	**Small Intestine**	Peyer's patch: swollen, dark, friable
5.	**Lymph nodes**	All lymph nodes especially mesenteric and gut associated: enlarged, soft and oedematuos in early case, later shrunken, grey
6.	**Large intestine:**	**"Zebra stripes"** run whole length of gut. Red if fresh, in long dead and later cases greenish-black. Gut may contain blood
7.	**Nasal cavity:**	Congested, eroded, coated with muco-purulent exudate
8.	**Trachea:**	Congested
9.	**Lungs**:	Congested and emphysematous
10.	**Abomasum**:	Congested and / or necrosis.

COLLECTION OF SAMPLES FOR THE DIAGNOSIS OF RINDERPEST AND PPR

Before taking samples, careful consideration should be given to the purpose for which they are required. This will determine they type and number of samples needed to provide valid results. When samples are taken from live animals, care should be taken to avoid injury or distress to the animal or danger to the operator and attendants. It may be necessary to use mechanical restraint, tranquillisation or anesthesia. Whenever handling biological material, from either live of dead animals, the risk of zoonotic disease should be kept in mind and precautions taken to avoid human infection . Post mortem examinations should be carried out under as aseptic conditions as is practicable. Care should be taken to avoid environmental contamination, or risk of spread of disease through insects or fomites. Arrangements should be made for appropriate safe disposal of animals and tissues.
The laboratory that is going to perform the assay(s) should be contacted if there are specific questions concerning the type of sample that should be collected.

1. Sample collection from live animals

The main objective is to collect laboratory samples from affected animals (choose 5 - 10 animals) which contain sufficient quantities of the specific antigen.
These animals are:

a) Febrile animals
b) Animals with starting ocular discharge
c) Animals with mouth lesions
d) Animals at more advanced stages of the disease (e.g. with diarrhea) or recovering from the disease should only be selected if no other animals are available.

Blood

Blood samples may be taken for culture of viruses , in which case it is usual to use anticoagulants, such as ethylene diamine tetra-acetic acid (EDTA) or heparin. They may also be taken for serology, which requires a clotted sample. A blood sample is taken, as cleanly as possible by venipuncture. In most large mammals, the jugular vein or a caudal vein is selected. Blood may be taken by syringe and needle or by needle and vacuum tube (not easy in delicate veins but convenient in strong veins). Ideally the skin at the site of venipuncture should first be shaved (plucked) and swabbed with 70% alcohol and allowed to dry.

For samples that are collected with anticoagulant, thorough mixing, using gentle agitation only, is necessary as soon as the sample has been taken. For serum samples, the blood should be left to stand at ambient temperature (but protected from excessive heat or cold) for 1-2 hours until the clot begins to contact. The clot can then be ringed round with a sterile rod and the bottles placed in a refrigerator at 4°C. After several hours, or overnight, the sample can be centrifuged at bout 1000 g for 10-15 minutes and the serum can be decanted or removed with a pipette. In order to establish the significance of antibody titres, paired serum samples will often need to be collected 14 days apart. An alternative method for collecting and transporting blood that is to be used for serology is to place a drop of blood on to filter paper, the blood is dried at room temperature and the sample can then be shipped unrefrigerated.

Tears

Tears are an excellent source of virus and for the detection of rinderpest antigen. The best is to use cotton-wool buds or swabs, which are wiped under the eyelid and round the conjunctival sac to soak up as much as possible of the clear tears. . The swab should be allowed to remain in contact with the secretions for up to 1 minute, then placed in transport medium and sent to the laboratory without delay at 4C.

Take the plunger out of a sterile 20 ml syringe and break the cotton-wool tip off the stick into the barrel of the syringe. Add 2-3 drops of phosphate buffered saline and allow the fluid to soak into the cotton-wool. Then put the plunger back into the syringe and use it to push the cotton-wool hard against the bottom of the syringe. This will squeeze all the fluid out which should be collected into a small glass container. All these samples should be stored at 4°C (on ice). DO NOT FREEZE. Label all the bottles clearly indicating from which animals the samples have come from.

Lymphnodes

Find a peripheral lymph node preferentially the prescapular lymph node and grasp it firmly through the skin. Take a wide bore needle (12 gauge) with its stylet in place in the needle and push it firmly through the skin and into the middle of the node. Remove the stylet from the needle and attach a 10 or 20 ml syringe, pre-wetted with a drop of Heparin injection BP. Pull the plunger out to suck a plug or the tissue of the node into the needle. Remove the syringe and needle from the animals and inject the tissue into a small jar, or better, into a well of an agar-immunodiffusion plate or slide.

Gum scrapings

Collect necrotic tissue from eroded gums by scrapping the affected gums and the inside of the upper and lower lips with a finger, spatula or knife. Put the collected material into a small glass container (Universal or McCartney bottle).

1. Sample collection at post-mortem

Samples of tissue from Tonsils, spleen, lymph nodes, intestinal mucosa for both rinderpest and PPR. In addition collect Lung tissue for PPR

Animal health personnel should be trained in the correct procedures for pot-mortem examination of the species of animals with which they work. The equipment required are a knife, saw and cleaver will be required, and also scalpel, forceps and scissors, including scissors with a rounded lip on one blade for opening intestines. A plentiful supply of containers appropriate to the nature of the sample required should be available, along with labels and report forms. Containers should be fully labeled with the date, tissue and animal identification. Special media may be required for transport of samples from the field. The operator should wear protective clothing: overalls, washable apron, rubber gloves and rubber boots.

10 to 20g each of spleen, mesenteric lymph node, pre-scapular lymph node and tonsil are collected and put into separate sterile bottles. These samples should be taken with sterile instruments as cleanly as possible and the bottles held at 4°C (on ice) can be taken at post-mortem. Tissues may be collected for histopathology and/or immuno-histochemistry, and for detection of proteins or genome nucleic acids. The person conducting the post-mortem examination should have sufficient knowledge of anatomy and pathology to select the most promising organs and tensions for sampling. Each piece of tissue should be placed in a fully labeled separate sterile screw-capped jar. Sterile instruments should be used for collecting specimens for virus isolation and care should be taken not to contaminate tissues with intestinal contents. Disinfectants should be used on or near tissue to be sampled for virus isolation.

The tissues may be sent to the laboratory dry or virus transport medium, depending on the examinations required. After collection, the samples for should be refrigerated until shipped. If shipment cannot be made within 24 hours, the samples should be frozen, however, prolonged storage at -20°C may be detrimental to virus isolation. For histopathology, blocks of tissue not more than 0.5 cm thick and 1-2 cm long are cut and placed in neutral buffered 4-10% formalin, which should be at least ten times the volume of the tissue sample.

Labeling and packaging of samples

All the sample bottles should be labeled with waterproof labels and, except for those containing formalin, should be packed in ice and dispatched immediately to the laboratory by the fastest available route. A complete description of the history, signs, post-mortem findings and a list of samples taken must accompany them. The laboratory must be informed at once by telephone, telex or telegram of the dispatch of the samples, the method of transport and the estimated time of arrival. Prints of labels and designs of the packing material are contained in the FAO Manual on the Diagnosis of Rinderpest.

INFORMATION TO BE SENT WITH SAMPLES

It is essential that individual samples be clearly identified using appropriate methods. Marking instruments should be able to withstand the condition of use, i.e. being wet or frozen. Pencil has a tendency to rub off containers and labels attached to plastic will fall off when stored at -70°C. Information and case history should always accompany the samples to the laboratory, and should be placed in a plastic envelope on the outside of the shipping container. The following are suggested items that should be addressed. It would be advisable to contact the receiving laboratory to determine if it has a submission form that it would like to have submitted with the samples or if it needs other information.

i) Name and address of owner/occupier where disease occurred, with telephone and fax numbers
ii) Name, postal and e-mail address, telephone and fax numbers of the sender.
iii) Diseases suspected and tests requested.
iv) The species, breed, sex, age and identity of the animals sampled.
v) Date samples were collected and submitted.
vi) List of samples submitted with transport media used.
vii) A complete history would be beneficial for the laboratory and should be included if possible. Some of the components of the history are:
   a) A list and description of the animals examined and the findings of the post-mortem examination.
   b) The length of time sick animals has been on the farm, if they are recent arrivals, from where they originate.
   c) The date of the first cases and of subsequent cases or losses, with any appropriate previous submission reference numbers.
   d) A description of the spread of infection in the herd or flock.
   e) The number of animals on the farm, the number of animals dead, the number showing clinical signs, and their age, sex and breed.
   f) The clinical signs and their duration including the condition of mouth, eyes and feet, and milk or egg production data.
   g) The type and standard of husbandry, including the type of feed available, possible contact with poison or poisonous plants.
   h) Any medication given to the animals, and when given.
   i) Any vaccination given, and when given.
   j) Other observations about the disease and husbandry.

PACKAGING AND TRANSPORT OF SAMPLES

1. Approval to ship specimens

The laboratory that is going to receive the samples should be contacted to ensure that it has the capability to do the testing requested and to see if there are any special packaging of shipping requirements. It is essential to contact the receive laboratory when material is sent to another country. A special import license will usually be required and must be obtained in advance for any biological material. This license should be place in an envelope on the outside of the parcel.

2. Transportation of specimens

The specimens should be forwarded to the laboratory by the fastest method available. If they can reach the laboratory within 48 hours, samples should be sent refrigerated. If dry ice is used, the additional packaging requirements must be met. Infectious substances, which can include diagnostic specimens, are not permitted to be shipped as checked luggage or as carry on luggage and must be shipped as cargo.

3. Packaging

The shipper should ensure that the specimens are packaged so they arrive at the laboratory in good condition and there is no leakage during shipment. The International Air Transport Association (IATA), Dangerous **Goods Regulations (DGR)** have explicit requirements for packaging and shipment of diagnostic specimens, by all commercial means of air transport. These requirements for air transport are covered in detail in the IATA publications, which are updated every year. In many countries, similar requirements are applicable to ground shipments and the postal service. The shipper is expected to know and follow the procedures outlined in the current DGR. The following is a summary of the regulations applicable in 2004 and it should only be used as a guide for shipping. Shippers must also always check the latest version of the IATA DGR prior to shipping diagnostic specimens. In addition, the national guidelines provide explicit directions for packaging and shipping diagnostic specimens and are based on IATA requirements .

The DGR outline the procedures for the shipment of infectious substances, which can include diagnostic specimens. Infectious substances are defined in the DGR as substances that are known or are reasonably expected to contain pathogens. Pathogens are defined as micro-organisms (including bacteria, viruses, rickettsiae, parasites, fungi) or recombinant micro-organisms (hybrid or mutant) that are known or reasonably expected to cause disease in humans or animals.

The DGR state that infectious substances (including diagnostic specimens likely to contain animal or human pathogens) are designated as **UN 2814, UN 2900 or UN 3373.**

Samples sent for diagnostic purposes should be designated as UN 2814 or UN 2900 if they include material derived from humans or animals with a disease that can be readily transmitted and for which effective treatment and preventive measures are not usually available. Infectious substances meeting this definition that affect humans, **including Zoonotic agents, are designated UN 2814; those affecting animals only are designated UN 2900.**

Infectious substances shipped for diagnostic purposes that do not meet the criteria for assignment to UN 2814 or UN 2900 are assigned to UN 3373 and designated as Diagnostic Specimens.

Table 1. **Indicative examples of animal pathogens forbidden as diagnostic specimens that must be shipped as infectious substances affecting animals (UN 2900)**

African horse sickness virus	**Contagious bovine pleuropneumonia**
African swine fever virus	**Peste des petitis ruminants virus**
Avian paramyxovirus type 1	**Rinderpest virus**
Newcastle disease virus	
Bluetongue virus	**Sheep pox virus**
Classical swine fever virus	**Goat pox virus**
Foot and mouth disease virus	**Swine vesicular disease virus**
Lymph skin disease virus	**Vesicular stomatitis virus**

Any infectious agent that can cause disease in humans or animals that has been amplified in culture and new or emerging pathogens must also be assigned to UN 2814 or UN 2900. The following is the IATA definition of amplification in culture.

Cultures (laboratory stocks) are the result of a process by which pathogens are amplified or propagated in order to generate high concentrations, thereby increasing the risk of infection when exposure to them occurs. This definition refers to cultures prepared for the intentional generation of pathogens and does not include cultures intended for diagnostic clinical purposes.

The packaging of infectious substances and specimens from suspected serious animal diseases, UN 2814 or UN 2900, are outlined in packing instruction 602; a Shippers Declaration of Dangerous Goods must be completed and submitted with these samples. There is also a requirement that the shipper receive training on the IATA- approved

shipping procedures for UN 2814 and UN 2900 shipments. For further information on all UN 2814 or 2900 shipments refer to the IATA regulations.

The other group, **UN 3373**, covers Diagnostic Specimens; this category has a lower risk and packages containing these specimens should be labeled as Diagnostic Specimens; a Declaration of Dangerous Goods is not needed. IATA packing instruction 650 provides the guideline for packaging infectious substances assigned to UN 3373 and the following is a summary of these packing instructions. However, the complete procedures, as outlined in the most recent IATA Dangerous Good Regulations, must be followed.

IATA/ DANGEROUS GOOD REGULATIONS.

i. **Infectious substances assigned to UN 3373 'Diagnostic specimens' must be packed in good quality packaging, which must be strong enough to withstand the shocks and loadings normally encountered during transport. Packaging must be constructed and closed so as to prevent any loss of contents, which might be caused under normal conditions of transport.**
ii. **The specimen should be put into the primary (receptacle(s), which can be glass bottles, tubes or plastic containers**
iii. **Adequate adsorbent material must be packed around the primary receptacle(s) to absorb all the fluid in the primary receptacle(s).**
iv. **If multiple primary receptacles are used they should be individually wrapped or separated so as to prevent contact.**
v. **The primary receptacle(s), and adsorbent material, are put into the secondary receptacle.**
vi. **The primary receptacle and the secondary packaging used for liquids must be leak-proof. The primary receptacle or secondary packaging must withstand, without leakage, an internal pressure differential or not less than 95 kPa in the range from -40°C to 55°C.**
vii. **The primary receptacle(s) used for solids must not leak (be sift proof).**
viii. **The primary receptacle must not contain more than 500 ml of liquids or 500 g of solid specimens. The outer packaging must not contain more than 4 litres for liquid specimens or 4 kg for solids.**
ix. **An itemised list of contents must be enclosed between the secondary packaging and the outer packaging.**
x. **If shipped at ambient temperatures or higher, the primary receptacle must have a positive means of ensuring that it is leak proof, such as leak proof seal, heat seal or skirted stopper. If screw caps are used they should be taped shut.**
xi. **Prefrozen packs or dry ice can be packed around the secondary receptacle. If dry ice is used, there must be an internal support to secure the secondary receptacle in the original position after the dry ice has been dissipated. The outer packaging must permit the release of carbon dioxide. There are additional requirements if liquid nitrogen is used and these are described in the DGR.**
xii. **The primary and secondary receptacles must be put into a shipping container with, adequate cushioning material.**
xiii. **The packaging must be able to withstand a 1.2 metre drop test. (There are additional strength requirements for packaging used for UN 2900 and UN 2814 specimens).**
xiv. **The package must be labeled Diagnostic Specimens. The 'Nature and Quantity of Goods ' box of the airway bill must state 'DIAGNOSTIC SPECIMENS PACKED IN COMPLIANCE WITH IATA PACKING INSTRUCTION 850'.**

Shipping forms

All shipping forms including the import license and submission form must be put in an envelope attached to the outside of the shipping container. The forms and labels must be completed as outlined in the DGR and also put on the outside of the container.

Preservation Of Samples For Prolonged Storage.

Establishing a collection of samples for future studies can be very useful. This can include cultures for comparison with future isolates, tissue or serum samples that can be used for the validation of new tests and a collection of fixed tissues, or paraffin blocks, for future histological examination. Possibly the most useful collection is the storage of serum samples. These samples may be useful if a retrospective investigation is carried out to compare the present disease status with that of earlier times.

Serum Banks

Serum samples can provide information about the animals from which the sera were taken. The samples can be tested for a variety of constituents, such as immunoglobulins, trace elements, toxins, hormones and enzymes. If a sufficient number of serum samples have been collected at random from a population, comparisons can be made on the affect of sex, age, breed and geographical location. Results from this comparison can identify high risk groups, vaccination priorities can be established, and patterns and rates of disease determined.

A serum bank is a catalogued collect of sera that are stored so as to preserve their immunological and other biochemical properties. Both the catalogue and the storage conditions are essential for a successful serum bank. Each individual sample should be fully documented and identified. The database should contain all relevant information about the origin of the sample and test results obtained. Additional data that may be of interest, such as weather conditions and the animal's productivity may also be included. Accurate records are essential and must be obtained when the blood samples are collected. The first essential is the complete identification of the animal. The amount of detail recorded should be appropriate to the abilities of the operator, accuracy being more important than quantity of information. Although pooling of sera reduces documentation and storage space, it should be avoided as it greatly reduces the usefulness of the material. Care should be taken to collect the blood as aseptically as possible and sterility should be maintained during separation of the serum and all other manipulations. The serum bank catalogue should be well organised and maintained on a computer database with appropriate backup.

Sera may be stored for periodic use or kept in long-term storage for historical purposes and these two functions should be separated. Storage conditions should minimise loss of immunological and other biochemical properties of the sera. There are three methods;

Deep Freezing
For long-term storage of sera by deep freezing, a core temperature below -60°C should be maintained. The lower the temperature the better, but lower temperatures are more expensive to maintain. Liquid phase N2 is at -196°C, vapour phase N2 is at -100°C and an ultra-low deep freezer will maintain -90°C.

Some serum banks have been maintained at -20°C, but the serum may deteriorate and not be suitable for detection of some properties, especially if stored for long periods at this temperature. Deep-freezers should have a system to provide a warning if the temperature rises due to mechanical break down or power failure. A stand-by generator is essential together with alternative cold storage space in case of contents of a freezer must be transferred.

Dry Storage On Paper Disks At Ambient Temperature
Paper disk storage is a simple and inexpensive method, but it allows only a small quantity of serum to be stored and the eluted serum is only suitable for a limited number of tests. The disks should be kept in a cool, dry atmosphere. They can probably provide satisfactory results for up to 5 years.

Lyophilisation
Lyophilisation is generally regarded as the best method for long-term storage of sera. If freeze drying conditions are optimised the loss of serum characteristics are minimised. Lyophilisation requires expensive equipment and is a time-consuming process. Lyophilised vials should be stored at 4°C.

WHAT IS OFFICE OF INTERTIONAL EPIZOOTICS (OIE) PATHWAY?

These are series of steps a country must take to achieve in proving freedom from Rinderpest. They are Rinderpest surveillance systems recommended to assist countries, which wish to trade in livestock and livestock products but have problems due to presence or past occurrence of Rinderpest disease.

=>Provisional freedom from Rinderpest (no clinical disease).

=>Freedom from Rinderpest disease.

=>Freedom from Rinderpest infection.

Step 1: Provisional freedom from disease
Conditions

- No clinical disease at least 2 years
- Effective Veterinary services - monitor animals health situation.
- Vet. Services investigate all suspected cases of RP.
- There is effective reporting system (Field → Vet. National Office → OIE)
- All Vaccinations Against RP cease by date of declaration

Step 2: Freedom from disease
A country declared itself free from RP may apply to OIE to be declared free from disease provided following criteria are met:

- No clinical RP at least 5 yr.
- No RP vaccination for at least 5 yr.
- Country operates clinical surveillance and disease reporting for RP adequate to detect clinical disease
- All clinical cases suggestive of RP are investigated - both field and lab. Methods.
- Effective measures are in force to prevent re-introduction of RP disease.
- OIE EXPERT PANEL Evaluates the application and decides whether to approve or not. Panel considers evidence presented by the country and gathers information on the extent to which the criteria are met.
- Expert panel reports its findings to OIE FMD and other epizootics Commission that makes the declaration on behalf of OIE.

A country **MUST** maintain this status until declared free from infection.

Step 3: Freedom from infection
A country must bee declared free from infection by OIE if:

- No vaccinations against RP for at least 10 years and throughout 10 yrs period no evidence of RP disease.
  OR
- Has been declared free from disease for at least 1 yr and meets criteria for this status.

- Has effective serosurveillance systems in operation for at 2 years (findings must be consistent - freedom **from infection**, Serosurveillance must include all susceptible domestic stock and wild susceptible species).

NB: In case of freedom from disease and Infection the OIE FMD and Other Epizootic commissions reports its actions to International committee annually.

Zone freedom from disease
If it is not practical to achieve national freedom from the disease in a single step. A country may apply to OIE for Zone freedom from disease provided that:

- Each proposed zone has defined boundaries.
- No clinical RP for at least 5 yr.
- No RP Vaccination has taken place within zone in 3 yrs.
- Clinical surveillance and disease reporting systems for RP are operational and adequate to detect clinical disease.
- All suspected cases of RP within zone are investigated by both field /Labs Methods.
- Effective measures are in force to prevent re-introduction of RP into the zone from rest of country/other countries.

RINDERPEST SURVEILLANCE AS PART OF OIE PATHWAY

- All regular activities aimed at ascertaining the health status of a given population with the aim of early detection and control of animal diseases of importance of National economies, food security and trade.
- A continuos process throughout the OIE pathway.

Types of surveillance

- **Direct surveillance**
  =>Animals are physically inspected and all observations made are recorded. (Observe animals from fairly close distance and then run them through crush)
  =>All animals appearing unhealthy are selected and closely examined.
  =>All official findings are recorded on a pre-printed data questionnaire.
  =>Samples are taken for laboratory confirmation or even perform post-mortems depending on mobility and other logistics.

- **Indirect surveillance**
  =>Surveillance team visits all livestock owners but relies on ability to recall details of diseases that affected their flocks/herds.
  =>Performed using questionnaires
  =>Leading questions or use of questionnaire with "pre-cooked" clinical signs listed on it should be avoided.
  =>Both indirect and direct surveillance goes hand in hand in practice.

All observations (both directed and indirect) are recorded.

For both types the Surveillance team visit all farmers in the area allocated to them, on regular basis

Surveillance on ground
Surveillance planning

- Disease surveillance not a haphazard action but meticulously planned and managed activity.
- Involves deployment of staff/personnel that will be moving to field in carefully programmed manner, using various methodologies to detect signs of livestock disease.

Putting surveillance system in place

- National Government must realise that Animal surveillance is on the key funds of National veterinary service.
- System must be properly structured and administered properly implemented and utilised system requires co-operation of relevant stakeholders (Official veterinary services - (Management and field staff, other extension staff, private vets farmers and other organisation that might be operating on the ground e.g. NGO'S).

  =>The body initiating the surveillance drive should make contact with all stakeholders and explain the intention and Enlist support.

  =>Transparency is also required as those collecting/supplying data will want to see that information supplied is put into use.

- National government agree in
  (a) Principle that animal diseases surveillance is a key to function of their National veterinary services.
  (b) On need for properly structured administered system.
- Involve all stakeholder
  - ⇨ Other extension staff
  - ⇨ Private farmers
  - ⇨ Official Veterinary services (manager and field staff)
  - ⇨ Other organisation operating on the ground e.g. NGO's.
- Promote transparency
- Agree on objectives of surveillance system
- Identity Priorities of system (most important Disease?)
- Familiarise field staff with the priority disease so that they know the basics about recognising the disease.
- Identify priority areas to be covered, allocate resources in terms of training, staff, intensity of surveillance, etc.
- Define Targets as well as Responsibilities.

  - ⇨ Decisions concerning staff deployment levels and time frame will need to be made.
  - ⇨ Determine the frequency of surveillance inspections in the area.
  - ⇨ When will inspections start?
  - ⇨ When will the first sero-surveillance take place if any?
  - ⇨ Will there be regular surveys?
  - ⇨ Who will be responsible of each activity?
  - ⇨ Will computers be used?
  - ⇨ Do questionnaires need to be drawn up?

- Proper management plan (defining priorities, targets, responsibilities, resource allocation, and allocations) must be drawn up and adhered to.
- In drawing up a management plan, the normal information following in a surveillance system must be taken into account, and every step inflow properly monitored and controlled.

Sero-surveys are used as part of **Disease surveillance** . Sero-surveys give a more "objective" view of the disease in situations in area.

Advantages of sero-surveys

- More " Objective" than visual surveillance
- Provides an idea of current prevalence and geographical distribution of disease.

Limitations of sero-surveys

- ⇨ Expensive (blood and serum tubes, needles, transport of samples laboratories and the cost of testing).
- ⇨ Suitable facilities (good crushes,) are not always available
- ⇨ In some cultures, there may be strong objections to taking blood from live animals.
- ⇨ Animals not always handleable when taking samples.
- ⇨ As result of costs involved, the survey is more likely to be carried out on a small subset of population (sampling errors come into play.
- ⇨ Specificity and sensitivity vary from one laboratory test to another & laboratory tests are never 100%.

- Costs and other problems involved in sero-surveillance should not be a discouragement to use it.
- A well planned random survey carries benefits that should far outweigh its costs.

Planning a serological survey

- Objectives and the tests to be used must be clearly started.
- If survey is for Rinderpest,
  - ⇨ What is being sought? (evidence of disease or vaccination?)
  - ⇨ Where?
  - ⇨ In what species?
  - ⇨ Is this parts of eradication process?
  - ⇨ If so, is it Zonal process or a National one?
- Delineate the area to be surveyed
- Decide what sampling units will be? (in most cases-herds)
- Draw up sampling frame (e.g. list all the villages with survey areas, together with livestock population in each village, choose primary sampling randomly)
- Procedure of random sampling discussed.
- Nomadic herds present special problem: (cannot use random village selection) - Random selection of grid blocks from map are made and percentage of animals found in block are sampled.
- Work out number of teams to be sent to field
  - ⇨ How many vehicles to be used?
  - ⇨ Prepare sampling programme.
  - ⇨ How many animals each team will have to bleed
  - ⇨ How many members are required for each team?
- Include other requirement
  - ⇨ Sample tubes and other accessories
  - ⇨ Marker pens
  - ⇨ Ear tags (if identification of animal is important)
  - ⇨ Cool boxes
  - ⇨ Aids to assist handling (Ropes, nose tongs, etc.)
- Purchase vacuum sampling tubes, needles, holders and handling aids.
  - ⇨ Total number of tubes required is double number of samples to be taken
  - ⇨ Allow extra tubes in case of breakage and defective tubes.
- Develop a marking code for tubes. The code will have to be used on blood tube, the serum tube and the sample form.
- Each team has to be fully briefed on the programme to be followed and issued with all items of equipment needed.

- Individual villages or farms or sites must be early identified to the teams, as well as the number of animals to be bled at each place.
- Arrangement must be made for transport and cooling of sample tubes-cool boxes must be provided for.
- If teams are going to field for number of days - camping equipment, extra petrol, food, and essential motor spares are needed.
- Blood samples are processed in field (allowed to clot overnight and the serum decanted early next morning).
- Field planners must make all necessary arrangements with the laboratory analysing the samples.
    - ⇨ The laboratory should have technical ability to perform the tests required.
    - ⇨ Laboratory should be informed of the arrival of the samples well in advance in case extra resources needed to be reserved for the job.

Kenya Agricultural Research Institute
National Veterinary Research Centre, Muguga.
PO Box 32, Kikuyu.

ANNEX 2

Manuals in some Virological Methods for Training of Somaliland Veterinary Professionals.

MARCH 2005.

Compiled by Eunice K.Ndungu
WASH-UP PROCEDURES:
WASH UP. ROOM

A room for washing and sterilizing dirty Glassware Designed to ensure that dirty and clean glassware do not meet.

Divided into four sections

1). Reception :- Decontamination and rinse
2). Main wash
3). Sterilization
4). Storage

RECEPTION

- Dirty Glassware received from the labs
- Sorted out.
- Decontaminated by Autoclave
- Rinse in hot or cold water
- Soaked in detergent (Decon 90)
- Scrabbed will bottle brush
- Rinse in tap water

2.MAIN WASH

- Hot wash with detertergent (Decon 90)
- Hot water rinse x 3
- Cold water Rinse x 3
- Deionized water rinse x 2
- Put to dry in oven

3. PREPARTION/STERILIZATION

- Glassware capped with tin foil (e.t.c)
- Bottles capped (loose caps)
- Sterilized in (a) hot air oven
- (b) Autoclave

NB – Check for stains before capping

4 CLEAN GLASSWARE STORE:

- Check the Glassware
- Store the clean glassware on the shelves
- Arrange for easier issuance.

NB. ONLY STERILE GALSSWARE IN THE STORE.

DISINFECTANT & STERILAIZATION

DISINFECTANT:

Destruction, inactivation or removal of those micro-organisms likely to cause infection or to give rise to other undesirable effects.

Disinfection-: Destruction of contaminating organisms.

STERILIZATION:

The complete destruction, inactivation or removal of all micro-organisms

For virology Glassware there are two types of sterilization

1). Autoclave

2). Hot air oven

AUTOCLAVE:

Used for – bottles with rubber liners
- Solutions.

Most organisms are killed by boiling at 100°C. However, under pressure, water will boil at higher temperature.

- Set at 15lb/20min

This raises the boiling point to 121°C
This is ensuring that all organisms are killed

HOT AIR OVEN;
Used for
– General Glassware
- Flasks.
- Pipettes

To ensure that all organisms are killed set at 160°C for 1 hour

LABORATORY SAFETY. (as relevant to wash-up unit)
Protective clothing (Gloves and Coats)
- Gloves to be worn at all times when handling dirty glassware
- Clean coat to be worn when handling clean glassware
- No eating/drinking in the wash up.
- to avoid personal contamination
- to avoid contamination of clean glassware

- No smoking
- Broken glassware discarded after decontamination

DEIONISED WATER
Demineralized water,
Used for final rinsing of Glassware.

APPARATUS STERILIZATION

ITEM	STERILIZATION
Glassware	Dry Heat
Glass cover slips	Dry heat
Glass Syringes	Autoclave – remove piston
Pipettes glass	Dry heat
Screen caps	Autoclave
Silicon tubing	Autoclave
Stoppers, rubbers	Autoclave
Test tubes	Dry heat
Disposable tips	Autoclave in boxes or nylon
Ampoules plastic	Autoclave
Ampoules glass	Dry heat

TISSUE CULTURE

THE PARAMETERS THAT GOVERNS A CELL LINE SHOULD BE PUT INTO CONSIDERATION BEFORE ESTABLISHING A CELL LINE

1. The cell line to be employed
2. The culture medium to be employed
3. The type of culture technique - suspension monolayer and the type and the of culture vessels to be employed.
4. The time span of the experiment
5. The ancillary handling equipment required

1. **The cell line**
   a) Primary cell line
   b) Continuous cell line

Guiding parameters:
- (i) Suitability of the cell line for the proposed work.
- (ii) The time span of the project
- (iii) Cell quality required
- (iv) Type of culture required
- (v) Facilities

2. **Culture medium**

This is defined by the cell line itself and additives and buffering system.
   a) The quality required
   b) Sterilisation system

Trouble Shooting

Slow cell growth

A. Check any changes in procedure or equipment

B. Check medium;
- (i) Missing components
- (ii) Water quality
- (iii) Buffering Capacity
- (iv) Antibiotic concentration
- (v) Osmolality
- (vi) pH

C. Check serum for:
- (i) Growth support
- (ii) Contamination
- (iii) Concentration
- (iv) Endotoxin content

D. Check culture vessels
- (i) If glass check wash up procedure
- (ii) If plastic check toxicity

E. Check cells for
- (i) Contamination
- (ii) Split ratio

(iii) Frequency of passaging

F. Ancillaries
   (i) Check LAF filter
   (ii) Check Incubator temperature

Trypsination of whole tissue (kidney, Muscle, Testis, gland etc.

1. All procedures from obtaining tissues to seeding of cells in tissue culture flask should be carried out aseptically

2. Anaesthetise or kill the animal by slaughter. If the organ required will not affect the animal survival, restrain the animal and remove the organ aseptically.

3. Swab the skin thoroughly with 70% alcohol. Using sterile instrument, cut the skin to gain access to the required organ.

4. Using a separate set of sterile instruments, remove the organ and transfer to a sterile container containing transport medium. Transfer to the laboratory and carry all cell manipulations in a laminar flour hood or class III safety cabinet. Remove all the membrane fat tissues covering the organ. Cut the tissues into cubes having sides of approximately 2-3mm, and transfer the pieces to an erlenmeyer flask containing a cotton coated magnetic bar.

5. Wash the tissue pieces twice with Melnick buffer or any balanced salt solution without calcium and magnesium containing 200 µl/ml Penicillin and 200 µg streptomycin.

6. Add approximately 100ml/g tissue melnick buffer containing 10% (v/v) Trypsin solution, 200 l/ml penicillin and 200ug streptomycin. (trypsinizing solution) to the tissue swirl the contents of the flask, allow to settle and pour off the supernatant.

7. Add approximately 20 ml/g tissue trypsinizing solution to the tissue and place on magnetic stirrer for 15 minutes at 37°C. Allow the pieces of tissue to settle and discard the supernatant fluid. This procedure helps to remove the red blood cells.

NB. The procedure can be avoided when handling tissues that are not highly vasculized e.g. Testis

8. Add further typsinizing solution (20ml/g) and agitate at 37°C for 30 minutes. Allow the large pieces to settle and decant the cells suspension through sterile gauze into a centrifuge tube. Add approximately 10% (v/v) FCS to inhibit the action of trypsin.

9. Repeat trypsination procedure until only connective tissue remains.
10. Pool all the cells suspensions and centrifuge at approximately 200g for 10 minutes, discard supernatant.

1. Wash the cells about 4 times using melnick buffer by resuspending the cells in the buffer and pelleting then at 200g for 5 minutes.

2. Resuspend the cells in growth medium. Estimate the number of viable cells using a viral stain and haemocytometer.

3. Using growth medium dilute the suspension to 2-3x10^5 cell ml^{-1} in a suitable culture vessel.

4. Incubate at 37°C in an atmosphere of 5% CO_2.

5. Monitor cell growth everyday and change medium when exhausted

TRYPSINISATION OF CELL MONOLAYER

1. Aseptically decant the medium from the culture vessel.

2. Wash the monolayer with versine/any balanced salt solution without calcium and magnesium. Leave at room temperature for about one minute and decant excess liquid.

3. Add sufficient trypsinizing solution to cover the cells. Incubate at 37°C for 5 minutes. Trypsinizing solution for monolayer is prepared at 0.05% (w/v) Trypsin and 0.02% (w/v) EDTA in versine.

4. When the cells have detached, resuspend in appropriate growth medium and break down any aggregates by pipetting the cells suspension up and down vigorously several times.

5. Count the cells using a haemocytometer and vital stain, dilute to the appropriate number of viable in fresh culture vessel containing growth medium.

6. Incubate at the appropriate temperature. Monitor the culture on daily basis and passage when ready.

PRESERVATION OF LIVING CELLS

1. Trypsinze a sub-confluent flask of hogarithmically growing cells, resuspend the cells in growth medium at a concentration of 2.5 - 4.0 x 10^6 viable cells/ml

2. Cool the cell suspension in an ice-water bath, and add glycerol or dimethyl sulphoxide (DMSO) to a final concentration of 10% (v/v)

   NOTE: DMSO should be added dropwise while shaking.
   When glycerol is used it should mixed on a spiral roller for sometimes to equalitablize.

3. Dispense in aliquots of 1-2 mls in sterile ampoule or cryo-vials. Seal the ampoule.

4. Place the ampoule in a polystyrane box having sides 5-10 cm thick. Seal the box and place in -70°C deep freezer for approximately 2 hr.

5. Store the vial in the vapour phase of liquid nitrogen overnight. Then deep in the liquid phase.

RECOVERY OF FROZEN CELLS.

1. Remove an ampoule from the liquid nitrogen container. Gloves and a face mask should be worn when performing this procedure, as cracking ampoule may explode on removal from the liquid nitrogen.

2. Thaw the contents of the ampoule in water bath set at 37°C. wash the outside of the ampoule with 70% ethanol and allow it to dry at room temperature.

3. Break off the end of the ampoule, open the cryo-vial aseptically transfer the contents to a centrifuge tube.

4. Wash the cells three times to four times with phosphate buffered saline by pelleting at 200g for 5 minutes.

5. Incubate the cells at the correct rate in the right growth medium at optimal growth temperature.

6. After 24hr change the medium with a fresh one and re-incubate.

7. Monitor the cells daily and change medium when appropriate.

POWDER CELL CULTURE MEDIA

Powder media are carefully and finely ground ingredients that provides convenient way for preparing liquid cell culture media within the laboratory is easily accomplished by mixing with deionised double distilled water.

Some ingredients are not included in the powder formulation, this is owed to their instability hence they are added during the solution preparation. Mostly omitted during powder formulation includes sodium bicarbonate, L-Glutamine, Hepes etc.

Thus when reconstituting powder media follow manufactures' manual. Powder media are highly hygroscopic. Once the container is open it should be used wholly, other than preparing aliquots; as they tend to cake on storage and deteriorate in quality.

PROCEDURE

1. Make sure that media preparation vessels are thoroughly clean with none toxic detergent and rinse with distilled water.

2. Assemble the filter unity, aspirator and reservoir sterilise them by autoclaving as to the manufacturer's recommendation.

3. Sterilise the room where dispensing of the product will be done, by either of the following methods.

   (i) Wiping the dispensing tables/bench with a disinfectant

   (ii) Sterilise using UV- light

   (iii) Fumigation of the entire room

4. Dissolve the powder medium in 90% of the required volume of deionized double distilled water on a magnetic stir. Add other ingredients as to manufacturer's recommendation, adjust the pH and top up to the required volume with water.

5. Aseptically connect the filter unity to aspirator, reservoir and positive pressure pump.

6. Pour the medium into the reservoir and tight it, apply the recommended pressure, let all the solution go through filter unity before commencing dispensing.

7. Dispose the filtered medium in sterile bottles aseptically. Sample some for sterility testing.

8. Inoculate sample on appropriate microbial growth media, incubate at the right temperature and monitor them for bacterial growth on daily basis up to seven days.

9. Incubate the dispensed medium at 37°C for 72 hr. This checks the sterility of the bottles and handling procedure during the dispensing period.

10. If there is bacterial growth in any of the samples, the whole preparation is regarded contaminated, hence unsuitable for tissue culture work.

11. If no bacterial growth is detectable for the media samples, inoculated into bacterial growth medium, and if only a few bottles of media are contaminated, the uncontaminated media may be passed for general use, while the following are investigated:

    (i) Glassware sterility: washing up, sterilisation and storage.

(ii) Aseptic procedures employed, when dispensing.

(iii) Sterility of the working room.

PREPARATION OF CALF KIDNEY CELLS

THEORY: Primary calf kidney (BK) cells provide a convenient and sensitive substrate in which to isolate rinderpest virus. Kidneys may be obtained either from an abattoir or from an animal killed at the laboratory but in either case they should be collected only from calves of normal conformation and in good health. The donor calf should not be more than two weeks old. It should be painlessly exsanguinated and eviscerated in a clean, hygienic environment. Foetal calf kidneys are an alternative and sometimes more easily obtainable source of cells. They should only be collected from well developed foetuses over six months old and of normal appearance.

REQUIREMENTS:

A) EQUIPMENT: (must be sterile)

1. Safety cabinet class II
2. Surgical kit
3. Conical flasks
4. Petri-dishes
5. Stirrer
6. Centrifuge
7. Centrifuge bottles
8. Lab coat
9. Muzzle gauze
10. Funnel
11. Pipettes

B) **REAGENTS** (Must be sterile)

1. Phosphate buffer saline (PBS)
2. Melnic buffer + 10% Trypsin
3. Phenol red
4. Ox serum
5. HS (Hanks saline)
6. Antibiotics

PROCEDURE

1. Kidney are aseptically collected from a calf (1-7 day) killed in the post mortem room.
2. Transfer the tissues to the lab in transport media in a kilner jar with phosphate buffer saline with antibiotics
3. In a safety cabinet, put the tissue in a petri-dish and aseptically peel off the capsule using a scapel blade, carefully without destroying the cortex.
4. Chop off the cortex placing on petri-dish
5. Mince the cortex until it's fine using crossed scapel blades
6. Transfer minced cortex to a conical flask and wash with warm PBS + PSN until it is free of blood (Reddish colouration).
7. Top it with Melnick buffer (10% Trypsin + 15ml phenol red in 400 ml melnick buffer)
8. Harvest by stirring at 37°C for 45 minutes on a magnetic stirrer.
9. Filter using a funnel and muzzle gauze and add a little ox serum to stop trypsin reaction.
10. Spin at 800 - 1200 rpm for 10 minutes and re-suspend the cells in PBS, PSN spin again at 800-1200 rpm for 10 minutes and discard the supernatant.
11. Spin again add PBS + PSN until white cells are clear (about 3 times)
12. Pack the cells by centrifuging in a graduated centrifuge tube at the same speed as above
13. Re-suspend cells in 1:100, 1:125, 1:150 or 1:200 or growth media as one may require
14. Dispense in falcon flasks T75 or T125
15. Incubate at 37°C for about 4 day and examine microscopically on daily basis.

NOTE

PREPARATION OF REAGENTS

a) **Melnick trypsin** ..... 400 ml Melnick buffer
15 ml phenol red
10 ml of 10% trypsin + Antibiotic

- Melnick buffer gives the tissues the working standard (or stabilizer)
- Phenol red is used as a pH control.
- Antibiotics are used to prevent bacterial and fungal growth (contaminant)
- trypsin breaks the packed cells into singles
- Ox serum stops the reaction of trypsin

b) **Growth media**
HS + 5% Ox serum + 0.5% PSN + 0.05 mycostatin + Fungizone.

PREPARATION OF BOVINE TESTES MONOLAYERS (B.T.)

- Calf aged 1 to 21 days, but preferably less than 7 days.
- Stun and bleed-out calf
- Carefully cut through skin over testes and remove these leaving capsule intact
- Dip testes in I.M.S. and burn off
- Remove capsule using scissors and forceps. Cut off epidymia
- Cut testes into halves, scrape out contents
- Chop off these into fragments using crossed scalpel. Transfer into trypsinising flask.
- Wash fragments 3 times with P.B.S., then once with Hanks BSS
- Cover fragments with pre-warmed 0.25% Trypsin in Hanks BSS, a magnet and stir at 37°C until fragments have disintegrated (11/2 to 2 hours)
- Filter tissue suspension through double gauze/butter muslin
- Centrifuge at 800-100 rpm/5 minutes. Discard supernatant.
- Re-suspend the deposit in supplemented Earles Saline (ES (V) + Ox serum 5% + Mycostatin and Neomycin. Count and dilute to contain 1.2 to 1.4 x 10^6 cells/ml
- Examine the culture after 2 days; if monolayer is almost confluent and medium is acid, change it to Earles LA/YE medium + Ox serum 5% (+M & N).

DIAGNOSIS OF RINDERPEST USING AGAR GEL IMMUNODIFFUSION TEST (AGIDT)

AIM
Serological detection of specific antigens in tissues or secretions from affected animals.

THEORY
AGID is a variant of the classical serological reaction in which a soluble antigen is precipitated by the addition of the specific antibody in a medium. The suspect antigen and known antibody diffuse from wells cut in the agar. When the reactants meet, the reaction is manifested by the development of a visible line of precipitate at the interface. The specificity of the reaction is readily controlled by running a known antigen simultaneously against the same positive antiserum such that the control precipitation line links with the test line if the latter is specific, that is, if there is a line of identity.

The recommended samples for collection from live animals are lymph node biopsies gum scrapings and ocular secretions. And the recommended post mortem samples are lymph node and spleen.

COLLECTION OF NASAL AND EYE SWABS (OCULAR)

PROCEDURE:

1. When collecting nasal and eye swabs (ocular) sterility must be observed for both the reagents and the equipment.

2. **REQUIREMENT**

    1. Sterile cotton wool
    2. Sterile bijou bottles
    3. Sterile transport media with antibiotics
    4. PBS
    5. Cool box
    6. Cryo Vials
    7. A pair of scissors or scalpel blades sterile
    8. Gloves
    9. forceps
    10. Syringes and needles

COLLECTION OF OCCULAR SWABS FROM LIVE ANIMALS

1. Restrain the animal well
2. Use sterile cotton wool swabs, insert into the conjunctival sac behind the lower eye lid.
3. Leave for approximately 1 minute for tears to adsorb onto cotton wool swab; wear gloves to maintain sterility.
4. Transfer the soaked cotton wool swab into either Bijou Bottle (Vial) containing BAPBS, or an empty Bijou bottle depending on test required. Cut the excess swab handle using a pair of scissors.

Swabs for virus isolation

a. Transfer the tears-soaked cotton wool swabs to a bijou bottle containing 1 ml BAPBS + PSN
b. Keep the sample on ice or in a cool box.

Swabs for AGIDT (Agar gel immunodiffusion test)

- Transfer the tears-soaked cotton wool swabs to a dry bijou bottle

- Keep the sample on ice as above

Swabs for PCR

- Transfer the tears-soaked cotton wool swabs into a dry bijou bottle containing 0.5 ml PBS
- Transport samples to laboratory for testing.

AGID REQUIREMENTS

- Gel Cutters
- Suction Pump
- Humidity
- Clinical flask
- Petri dishes
- 30 ml Screw capped bottles
- 1 lumination box
- Pressure cooker/Autoclave
- Mortar and Pestle and/or ten broock tissue grinder
- Pasteur pipettes
- Surgical Kit
- Syringes and needles
- Stationery
- Sample collection bottles
- Cotton wool Swabs
- Record Sheets and book

SPECIMEN COLLECTION AND PROCESSING

Recommended samples from live animals are:
A)LYMPH NODE BIOPSIES:
Samples of peripheral lymph node are collected by collected aspiration biopsy using a wide bore hypodermic needle attached to 10 or 20 ml syringe previously sterilised.
The tissue plug is ejected into a small ten-broke grinder, squeezed and placed into a suspected antigen well. Plugs of tissue may be ejected directly into the well.

B)GUM SCRAPING
A Spatula is rubbed across necrotic gum lesions to collect gum scrapings. These scrapings are then placed in the suspect antigen wells.

C)OCULARAND NASAL SECRETION.
Nasal secretions are obtained by inserting swabs until **efficiently** wet
The antigen is extracted by placing the swab in the barrel of a sterile 2ml syringe. Add 50µl of PBS and squeeze drops of fluid into the suspect antigen well.

RECOMMENDED POST MORTEM SAMPLES ARE:

Lymph Node, Spleen and Tonsils.

Lymph Node, Spleen and Tonsils from carcasses are homogenised using a mortar and pestle and a animal volume of PBS. The fluid is collected and placed into the suspect antigen well.

PREPARATION OF REAGENTS.

PURIFIED, AGAR

Agarose - 1g
Distilled water - 100ml
Sodium azide - 0.05g

- Weigh Agarose, add to water and mix in flask
- Dissolve agar by autoclaving or immersing in boiling water
- Allow to cool to 50°C and add Sodium Azide, Shake gently until dissolved
- Dispense agar in 30ml universal bottles and store at 40°C until required.

TEST.

1. Melt agar by autoclaving immersion in boiling water or using microwave oven.
2. Allow to cool to 50°C and dispense 5ml agar into 50mm petri-dish. Leave at room temperature until solid.
3. If possible allow to solidify further by placing at 4°C for as long as possible.
4. Use gel cutter to cut wells in agar.
5. Remove plug using suction pump and pasteur pipette or a hooked needle. Take care not to damage well.
6. Orient petri-dish and number wells as bellow

7. Using a pasteur pipettes fill central well with Rinderpest antigen. Take care not to over fill the well and allow antigen to run onto the surface of the agar.

8. Dispense Rinderpest hyper-immune serum to wells 1,3 and 5 using a fresh pasteur pipette or sterile tips.

9 Dispense Rinderpest negative Serum to well 2.

10. Dispense samples (suspect antigen) to 4 and 6.

11. Careful place petri-dish in humidity box and leave at room temperature. If ambient temperature is above 40°C store in refrigerator.

12. Examine after 2,hours.

READING OF REACTION.

Examine the reaction areas between positive control antiserum(well 1,3 and 5) and the central well containing the standard control antigen. Straight white lines of precipitation should be clearly visible. If not, return plate to humidity box and read again later.

If the suspect (sample, wells 4and 6) antigen is rinderpest, similar lines of precipitation should form between the wells containing suspect antigen and the wells containing antiserum and they should merge with the line of the control precipitate.

SEPARATION OF LYMPHOCTES WHOLE BLOOD EDTA OR HEPARIN.

1. Collect blood in 10mlEDTA or HEPARIN vacutainer tubes and mix well to prevent partial clotting

2. Centrifuge at a speed of 2,000rpm for 30 minutes in a refrigerated centrifuge to pellet red cells.

3. Pipette of the buffy coat layer (lymphocytes) and transfer into clean centrifuge tube of 15ml and resuspend cells in 10ml Hank buffered saline solution(HBSSS) or Normal saline.

4.Make up to 15m with Hank's BSS or Normal saline

5. Centrifuge at 1,5000 rpm for 10 minutes

6. Discard supernatant and wash cells by resuspending in 10 mls Hanks BSS or normal saline

7. Centrifuge at 1,500 rpm for 5 minutes

8. Discard supernatant and wash cells by resuspending in 10 mls Hanks BSS or normal saline

9. Centrifuge at 1,500 rpm for 5 minutes as above

10. Discard supernatant and resuspend samples in 1ml cryol vial containing Hanks BSS OR Normal saline

11. transfer into a clean sterile 1ml cryol vial or micro centrifuge tube and store in the freezer at -20°C or -70°C for RNA extraction

12. If for virus isolation inoculate into cell suspension immediately

NOTE:
Mix lymphocytes with susceptible cells, such as, primary bovine kidney/vero cells at a ratio of 1:5

VIRUS NEUTRLIZATION TEST

Constant virus and varying serum samples are used in this test.

Procedure:

1. Dispense 50 µl of the serum in duplicates i.e. 2 wells per sample starting from Row A column 2 up to H so that one plate contains 4 serum samples depending on the number of samples available.

2. Dispense 50µ l of BAPBS or G MEM already mixed with antibiotics in all the wells except number one, as diluent.

3. Dispense 50 µl of serum in column No. A up to H

4. Do a serial dilution or titrate the serum beginning from column 2 up to 12 discarding the last mixture.

5. Dispense 50 µl of diluent in all wells from Row A - F numbers 1 - 12 in the second plate as the virus and cells control.

6. Prepare 1 $TCID_{50}$ that was obtained by virus titration as stock virus

7. Add 50 µl of the virus in all wells in plate one

8. Absorb for 1 hr @ 37°C

9. Prepare cell suspension that contains 104 cells/ml

10. Add 150 µl of the cell suspension in all the wells.

11. Seal the plates and incubate at 37°C.

12. Observe daily for C.P.E.

Interpretation of Results

(a) Where there is NO C.P.E.(Cytopathic effects), Neutralization has occurred and therefore the serum has antibodies to the virus.

(b) End point - is last well where 50% C.P.E. is noted.

(c) Where there is C.P.E., there is NO Neutralization therefore the serum has no antibodies.

A SIMPLIFIED H-BASED COMPETATIVE ELISA PROTOCOL: RINDERPEST

1. EQUIPMENT REQUIRED

1.1 Photometer

Flow laboratories, BDSL ImmunoSkan microplate reader with an interference filter of 492 nm.

1.2 Orbital Shaker

BDSL Microplate Shaker (or equivalent)

1.3 Washer

BDSL HandiWash microplate washer. Alternatively, plastic wash bottles or a wash fluid container connected to suitable tubing may be used.

1.4 Pipettes

BDSL Multichannel Pipette, variable range from 5-50 ul and 50-250 ul, qualify tips and reagent troughs. BDSL single channel pipettes, variable ranges from 5-50 ul, 50-200 ul and 200-1000 ul and quality tips.

1.5 Water Purification System

Minimum; glass-distilled or deionized water as recommended by BDSL

1.6 Microplates

NUNC Immuno 1- Maxisorp (available from BDSL), flat bottom, 96 well microplates (substitution may after diagnostic performance). According to manufacturer's recommendation, plates should be stored at temperatures between +4°C and +15°C.

Note: Only NUNC Immuno 1-Maxisorb ELISA microplates available from BDSL/Flow Laboratories may be used for the test and they are not reusable. Any change of plate type may seriously affect the test performance.

1.7 Refrigerator

Any type in the range of +2°C to +6°C.

1.8 Freezer

Any type in the range of –15°C to –20°C.

1.9 Incubator

Any type of radiant, warm wall incubator or hot room in the range of +35°C at +39°C.

1.10 pH Meter

Any type with an accuracy of 0.01 pH units. Not essential, but may be of assistance if problems arise (pH strips are included with every kit).

1.11 Glassware/Plasticware

A selection of beakers (20-4000 ml), flasks (50-1000 ml), graduated cylinders (10-2000 ml), graduated pipettes (1-20 ml with suitable safety bulbs, storage bottles with closures (1-100 ml), dilution tubes (2-4 ml) and suitable racks,

wash fluid container with tap (5-10 l) and tubing for connection of this reservoir to plate washer or alternatively, wash bottles (250 ml).

1.12 Cryopreservation Vials

Recommended; polpropylene conical bottom, screw cap with internal thread and O-ring seal (1-5 ml) and suitable storage racks.

1.13 Vortex mixer

As recommended by DBSL.

1.14 Timer

Any type, preferably coutdown-type with an audible alarm.

1.15 Absorbent towels

Disposable or cloth, lint-free and non-abrasive.

1.16 Marker pens (water proof) and adhesive labels.

2. REAGENTS SUPPLIED IN RINDERPEST COMPETITIVE ELISA KIT

WARNING

All of the biologicals listed herein are to be used 'in vitro' test procedures only and are not to be introduced into laboratory, domesticated or wild animals (including birds and fish) by injection, installation, ingestion or inhalation under any circumstances.

All waste generated and containers used in the preparation and use of these biological reagents should be chemically disinfected and/or autoclaved prior to disposal or reuse.
None of the biologicals or derivatives thereof are to be distributed to any other laboratory or persons without consultation with Agency staff.

2.1 Antigen

Cell culture derived rinderpest virus antigen, freeze dried. Store at +4°C.

2.2 Control Sera (Bovine)

C++, anti-RPV antibody positive (strong). (C+, anti-RPV antibody positive (moderate).C-, anti-RPV antibody negative, also used in Blocking Buffer. All control sera are whole bovine sera, freeze dried. Store at +4°C.

2.3 Monoclonal Antibody

Mouse anti-RPV monoclonal antibody supplied as freeze dried hybridoma cell culture supernatant. Store at +4°C.

2.4 Anti-Species Conjugate

Horseradish peroxidase (HRP) conjugated, rabbit antimouse immunoglobulin, liquid. Store at +4°C.

WARNING
It is the responsibility of the user to acquaint themselves with any hazards and disposal requirements associated with the chemicals used in this kit. Material safety data sheets (MSDS) should be consulted especially for OPD.

2.5 Coating Buffer

Phosphate buffered saline (PBS) powder (Sigma Aldrich Chemicals; catalog no. 1000-3) Store dry at room temperature.

2.6 Wash and Blocking Buffer Base

Phosphate buffered saline (PBS) powder (Sigma Aldrich Chemicals; catalogue no. 1000-3). Store dry at room temperature.

2.7 Blocking Detergent

Tween 20, liquid. Store at room temperature.

2.8 Substrate

Hydrogen peroxide tablets. Store dry at +4°C.

2.9 Chromogen

Ortho-phenylenediamine (OPD) tablets. Store blister pack containing tablets in bottle at +4°C.

2.10 Reconstitution Diluent

Water Pyrogen-free, deionized water and bottle have been autoclaved to ensure sterility. Store at +4°C.

3. REAGENT AND SAMPLE PREPARATION

3.1 RPV Antigen Stock

Reconstitute the freeze dried contents of a vial with precisely 1 ml of the sterile water (reconstitution diluent) supplied with the kit and mix gently until completely dissolved. The stock may be stored in its original vial at –20C as it can be thawed and refrozen several times without a significant loss of activity. Use one vial at a time until depleted and them reconstitute the freeze dried contents of a second vial.

3.2 Anti-Rinderpest Monoclonal Antibody Stock

Reconstitute the freeze dried contents of a vial with precisely 1 ml of the sterile water (reconstitution diluent) supplied with the kit and mix gently until completely dissolved. The stock may be stored in its original vial at –20C as it can be thawed and refrozen several times without a significant loss of activity. Use one vial at a time until depleted and them reconstitute the freeze dried contents of a second vial.

3.3 Anti-Species Conjugate Stock

The rabbit anti-mouse immunoglobulin HRPO conjugate stock supplied should be further subdivided into 500 ul aliquots in 1 ml cryopreservation vials supplied, labelled and stored at +4°C. Use one vial at a time until depleted.

3.4 Control Serum Stock

Reconstitute the freeze dried contents of a vial of each control (serum (C++, C+ and C-) with precisely 1 ml of sterile water (reconstitution diluent) supplied with the kit and agitate gently until completely dissolved. These control serum stocks may be stored in their original vials at –20°C as they can be thawed and refrozen several times without a significant loss of activity. Use one vial at a time until depleted and then reconstitute the freeze dried contents of a second vial.

NOTE:

The quality of the deionised/distilled water produced in your laboratory may be affected by the efficiency of the water purification system and subsequent storage conditions.

Care must be taken to ensure that the purity of the locally produced distilled/deionised water used for the preparation of your stocks buffers and stopping solution is of an acceptable standard.

3.5 Chromogen Stock 3.7 mM OPD
WARNING

Handle OPD with care as it is a potential carcinogan. HARMFUL if swallowed, inhaled or absorbed through skin.
Dissolve one OPD tablet in 75ml of locally produced distilled/deionised water, just before substrate/chromogen incubation step and store in the dark at 40°C.

NOTE:
This stock solution should be colourless with a pH between 5 and 6. If coloured it should be discarded and a fresh batch prepared.
This stock solution will provide enough reagents for 15 plates. If the whole volume is not required for a days test, prepare aliquots of 6 and/or 12ml and store at –20°C in the dark.

3.6 Substrate Stock
3% (w/v) H_2O_2 (882mM)
Place one hydrogen peroxide tablet in the empty container supplied and dissolve with 10 **ml** of locally produced distilled/deionized. This will give a 3% solution. Store at +4°C until depleted at which point a fresh stock should be prepared in the same manner.

NOTE:
It is good laboratory practise to plan in advance the amount of buffers required in order to avoid running out of buffers during an assay or to avoid excessive buffer storage periods.

3.7 Coating Buffer
0.01 M Phosphate Buffered Saline pH 7.4+/0.20.
Dissolve the contents of one bottle per 1 litre of locally produced distilled/deionized water. Label and store at +4°C for no longer then two weeks. If not being used immediately, store in aliquots of 50 ml at –20°C.

3.8 Blocking Buffer
0.01 M Phosphate Buffered Saline, pH 7.4 +/- 0.20 plus 0.1% (v/v) Tween 20 plus 0.3% (v/v) normal bovine serum (C- control serum). Dissolve the contents of one bottle per 1 litre of locally produced distilled/deionized water. Label and store at +4°C for no longer than two weeks:
Important, see the following note.

NOTE:
On the day of testing, add both Tween 20 and normal bovine serum (C- control serum) to make the amount of blocking buffer required (see section 5.2)
Fresh blocking buffer must be prepared for each test day.

Do not store blocking buffer with Tween 20 and normal bovine serum (C- control serum) after completion of the test.

3.9 Wash Buffer
0.02 M Phosphate Buffered Saline, pH 7.4 +/- 0.20.
In 1 litre of locally produced distilled/deionized water dissolve the contents of one bottle. Transfer to a wash fluid container with a tap to which tubing may be attached and further dilute with the addition of 4 litres of distilled/deionized water, mix well and store at room temperature for no longer than two weeks.

3.10 Stopping Solution
1M Sulphuric Acid

Slowly add 55 ml of concentrated sulphuric acid to 945 ml of locally produced distilled/deionized water. Label and store at room temperature.

WARNING

ADD SULPHURIC ACID TO WATER, NEVER ADD WATER TO SULPHURIC ACID

NOTE:

It is important that the buffers and stocks described above be within the pH ranges indicated. Therefore the pH of each solution should be tested. If the pH should not fall within the specified ranged then steps should be taken to correct the problem. Poor quality water and unclean glassware are most frequently implicated.

Should any buffer or stock solution show signs of deterioration (ie formation of a precipitate) or contamination (evidence of bacterial or algal growth) discard immediately and prepare a fresh batch in clean glassware.

Wash bottles, wash fluid containers, tubing and easher should be thoroughly rinsed with distilled water prior to addition of freshly prepared wash buffer.

3.11 Test Sera

Whole blood samples should be allowed to clot in the tubes into which they were collected and the serum may be sampled directly off the clot if no suspended cells are apparent. If suspended cells are apparent, the sample should be centrifuged at 1000-2000 G for 10 minutes, after which the serum may be sampled.

If not tested immediately, test sera should be collected from the clot of the blood samples and stored at –20°C in appropriately labelled cryopreservation vials.

Additional information on serum collection, labelling and storage and the establishment of serum bank is given in appendix IV, 'Establishing a serum bank'.

NOTE:

Before testing, test sera should be examined. Those sera which are contaminated to the point that particulate material is apparent should only be tested if no other aliquot of the same serum is available or if a rebleed is not obtainable. In this event it should be recorded that those test sera were contaminated at the time of testing.

4. BUFFERS

Coating buffer

0.01M Phosphate buffered saline, pH 7.4 +/- 0.20

Dissolve 1 satchet in one litre of locally distilled water/dionised water. Label and store +4°C for no longer than two weeks.

Blocking buffer

0.01M Phosphate buffered saline, pH 7.4 +/- 0.20 plus0.1% (v/v) Tween 20 plus 0.3% (v/v) Norugh Bovine Serum (C-Control serum).

Wash Buffer

- 0.002M Phosphate Buffered Saline, pH 7.4 + 0.2 Dissolve one sachet in one litre of locally produced distilled/Deionized water and transfer to a wash fluid container with a tap to which tubing may be attached. Dilute further by adding 4 litres of distilled/Deionized water, mix well and store at room temperature for no longer than two weeks.

5.0 cELISA - PROCEDURE:

5.1 Reconstitute RPV antigen stock and ensure uniform dispersion. Dilute RPV antigen stock in coating buffer (1/100). FOR PLATES: 60ul of RPV stock in 6 ml of coating buffer.

5.2 To **all wells** of the plate add 50 ul of diluted antigen. Tap the plate to spread the antigen immediately. **Cover** or **seal** the plates.

5.3 Incubate for **one** hour at 37C on orbital shaker

5.4 Wash the plates **three times** by filling and emptying the wells and **blot dry on** **Absorbent papers.**

5.5 **Prepare Blocking buffer (just enough for the test).**

For one plate: **25 ml** coating buffer **+ 25** µl Tween 20 + **75** µl bovine serum (Negative Serum)

For two plates: 50 ml. Coating buffer + 50 µl Tween 20 _ 50 µl bovine serum (**Negative serum**).

Add **40** µl of blocking ;buffer to all wells. **Extra 10** µl in Mab control: i.e. **F1, F2** and **G1** and **G2.**
Add **extra 60** µl in conjugate control i.e. **A1** and **A2.**

5.6 Add **10** µl . Volumes of serum samples to test wells (**vertical duplicate**)

5.7 Add **10** µl of each control sera. (Final serum dilution is 1/5)

Strong positive ... B1, B2, and C1, C2
Weak positive ..... D1 D2, and E1, E2
Negative H1, H2

5.8 Immediately prepare a working dilution of monoclonal antibody in blocking buffer (**1:100, i.e. 60** µl **Mab in 6 ml Blocking Buffer: for one plate**). Mix gently and thoroughly **add 50** µl of Mab to **all wells** of the plate **except the conjugate controls (Cc-A1,A2)**. Ensure that Mab solution is dispensed into centre portion of wells, taking care not **to allow pipette tips to come into contact with serum dilution.**

5.9 Incubate for one hour, at **37°C** on orbital shaker.

5.10 Wash the plates **three times** and **blot dry**.

5.11 Immediately before end of serum/monoclonal antibody incubation; Prepare working dilution of the conjugate in **blocking buffer** sufficient for **all** microplates (**approx. 5 minutes before) – 1:1000 dilution**

For 1 plate add **6** µl conjugate **to 6 ml** blocking buffer mix

For 2 plates: add **12** µl of conjugate to **12 ml** Blocking buffer. mix thoroughly.

To **all wells** add **50** µl of **anti-mouse conjugate** in blocking buffer

**** Keep the remaining conjugate at +4°C until the test is complete (it may be useful at the ;end of test to test enzyme/substrate/chromogen solutions activity.****

5.12 Incubate for **one hour** at 37°C.

5.13 Wash plates **three times** and **blot dry**

5.14 Immediately before end of conjugate incubation, prepare a working dilution of the **substrate (H2O2)/chromogen (OPD).**

For 2 plates: dilute **48** µl of substrate stock (**H_2O_2**) in **12 ml** of chromogen stock. The final substrate/chromogen solution should be colorless and stored in the dark; **if colored discard.**

Blank Plate: Add **50** µl of substrate/chromogen) to **first** column of blanking plate.

Test plate: After placing substrate/chromogen to blank plate, add **50** µl to **all wells** of test plate.

Tap the places or place on orbital shaker at room temperature and shake briefly to ensure mixing

Cover all plates to protect from excessive light (using aluminium foil or paper). Allow plates to stand for 10 minutes for color development at room temperature.

5.15 Stop the reaction by adding 50 µl of stopping solution (1 m Sulphuric Acid) to **all wells** of test plate and **first column of blanking plate.**

5.16 Read plates at 492 NM.

5.17 Evaluating plate at the following two levels of reject or accept the test plate
NOTE: The upper control Limits (UCL) and Lower Control Limits (LCL) for the Controls included with any individual Kit may be found on the FACT SHEET on 'Quality/Assurance (QA) Information' accompanying that kit.
For those laboratories using FAO/IAEA ELISA Software, the UCL and LCL values should be updated by the user according to program instructions.

The controls should be examined in the following order:

5.17 First level of Microplate Acceptance

Monoclonal Antibody Control (Cm)
Before calculating P1 values, compare the two intermediate OD values (i.e. disregard the highest and lowest values) of the Cm control to the Lower and Upper Control Limits indicated on the QA Fact Sheet. Both intermediate OD values must fall within these limits. If not, the plates must be rejected.

Only the two intermediate OD values are used for calculation of the media Cm OD value and used in subsequent P1 calculations.

5.17.2 Second Level of Microplate Acceptance

Monoclonal Antibody (Cm), Strong Positive (C++) Moderate Positive (C+), Negative (C-) and Conjugate (Cc) Controls
For the monoclonal antibody control (Cm) and conjugate control (Cc) and for each control serum (C++, C+ and C), the Replicate P1 values should be calculated and recorded on the ELISA DATA SHEET

NOTE:
Use the Table 1A and 1B. only if the individual microplate is accepted according to the 'First Level of Miroplate Acceptance'. Section 6.2.1 (i.e. the two intermediate OD values for Cm control must fall within the UCL indicated on the QA Fact Sheet).

5.17.2.1 Monoclonal Antibody (Cm), Strong Positive (C++) and Moderate Positive (C+) Controls
Compare the Replicate P1 values (as calculated in Section 6, 1 A) for the Cm, C++ and C+ controls to the UCL's and LCL's indicated on the QA Fact Sheet and use the creteria in Table 1A to accept or reject each individual microplate.

TABLE 1A: Cm, C++ and C+ Control Data

REPLICATE PI VALUES		STATUS
IN	OUT	
4	0	Accept
3	1	Accept
2	2	Reject
1	2	Reject
0	4	Reject

IN- Within UCL and LCL range Out – Outside UCL and LCL

Microplate rejected is any of the Controls (Cm, C++ or C+) fails to meet P1 acceptance criteria.

5.17.2.2 Negative (C-) and Conjugate Cc) Controls

Compare the Replicate P1 values (as calculated in Section 6,1,A) for the C- and Cc controls to the UCL's and LCL's indicated on the QA Fact Shee and use the criteria in Table 1B to accept or reject each individual microplate.

TABLE 1B, C- and CcControl Data

REPLICATE PI VALUES		STATUS
IN	OUT	
2	0	Accept
1	1	Reject
0	2	Reject

IN- Within UCL and LCL range
Out – Outside UCL and LCL range

Microplate rejected if any one of the Controls (C- or Cc) fails to meet P1 acceptance criteria.

5.17.2.3 Acceptance of Individual Test Sera Data

The diagnostic threshold for this assay has been set at 50% inhibition (50 P1) of the monoclonal antibody control (Cm).

To accept individual test sera, both replicated P1 values of a test serum must fall either above or below 50 P1.

Test sera should be retested if their replicates P1 values lie on either side of 50 P1.

5.17.2.4 Diagnostic Interpretation of Test Sera Data

If accepted according to Criteria in 6.3, the mean P1 value for the two replicates should be calculated. Test sera demonstrating mean P1 values of 50% or greater are considered to be positive. Test sera demonstrating mean P1 values less than 50% are considered to be negative.

ANNEX THREE

MODULE FOR SOMALI VETERINARY PROFESSIONALS IN LABORATORY DIAGNOSIS FOR RINDERPEST & PPR: 21st March – 5th April,

	Method	Format and Aids
l at NVRC, Muguga uction to rinderpest & PPR and le collection.	Lectures & Video show	Tour of virology lab.
ing and sterilisation of glassware ology	Wash up room set up. Preparation of glassware for cleaning	Soiled glassware collection from laboratories, use autoclaves etc
preparation evival-Demonstration	Preparation of media for Sample transportation Revival of cells from Liquid Nitrogen	Weighing balance, Chemicals & reagents, filtratior flow hood Tissue culture flasks
uction to sample testing le collection: Check list le collection/ reception & recording	Lectures Sample collection & processing demonstrations Demonstration of tests(AGID/VNT/Isolation)	Collection apparatus: transport medium, needles, tul tubes, centrifuge, Tissue culture flasks, Microtitre incubator. Note books/Laboratory sheets
le animal le processing(blood/swabs/Biopsy) , VNT, Virus Isolation techniques V, PPRV.	Sampling by Trainees Practical sessions	Bleeding tubes & needles, swabs, Centrifuges, cryo Agar gel plates, gel cutters, sucking pump Tissue culture flasks, Microtitre plates; pipettes; 37°
le animal le aliquoting/processing)	Practicals continued	Bleeding tubes & needles, swabs, Centrifuges, cryo Agar gel plates, gel cutters, sucking pump
le storage & packaging of samples bmission to the Reference Labs. test demonstration	Group sessions with demonstrations	Record books, cryovials and related packaging mate
luction to Elisa test	Group discussions	Record books, pipettes cryovials, microtitre plat Elisa Reader/ computer/printer
practical, data & recording, retation of results	Performance of the Test by trainees	Record books, cryovials, microtitre plates, sh Reader/ computer/printer
ratory record keeping & report arations	Group Discussions	Records/ Laboratory sheets/ Computers

ANNEX 4

LIST OF PARTICIPANTS

Ahmed Sheik Amin Hasan

Issa Noor Liban

Ali Mahmoud Guilaid

Jama Mohamed Ali

SECTION B: PRIVATE SECTOR

(1st November 2004 – 31st March 2005)

SECTION B:

PRIVATE SECTOR TECHNICAL REPORT

(1st NOVEMBER 2004 TO 31st MARCH 2005).

1. OBJECTIVES

Result 2: Capabilities of Private sector AHWs to engage in curative and preventive services are enhanced

This component aimed to strengthen the capabilities of Somali Livestock Professionals' Associations and individual private private animal health workers to regulate more effectively deliver animal health services in all four zones of the project.

2. EVENTS AND ACTIVITIES IMPLEMENTED DURING THE REPORTING PERIOD

During this period, the Somali PACE Project provided support for the United Livestock Professionals' Association (ULPA) in Somaliland to convene an annual general meeting (AGM). This enabled members to revise the ULPA constitution and to hold elections for executive committee members. The project also provided support for the training of members of the ULPA executive committee on strategic planning and proposal writing prior to the AGM. The Somali Livestock Professional's Forum (SLPF) became dormant following the engagement of key members in activities to facilitate the establishment of the Transitional Federal Government of Somalia. As a result, all activities that were dependent on SLPF leadership and direction were not implemented during this reporting period. The status of implementation of activities planned for this reporting period is reported under each activity as follows:

2.1 Advise on appropriate roles and responsibilities of private sector AHWs.

2.1.1 Workshops to clarify roles and responsibilities of public and private sector AHWS under new legislation.

Plans to hold workshops in Somaliland and Puntland to clarify the roles of public and private sector animal health workers under the new legislations did not materialise as the veterinary codes were not enacted during this period. However between 24th and 25th January 2005, the CAPE Unit of AU/IBAR/PACE organized a workshop in Huddur, Southern Somalia for 22 participants representing various international NGOs, Local NGOs, Community-based Organizations (CBOs) and private veterinary practioners operating in Southern Somalia.

The aim of the workshop was to share information among the various projects working in the relief and development sectors in Southern Somalia in order to outline options to promote collaboration between them and maximize on the comparative advantage of each project. The establishment and strengthening of the veterinary privatisation initiative in Southern Somalia was also discussed. The workshop was facilitated by Sadik Ahmed Bihi of the Somali Organisation for Community Development Activities (SOCDA). However, some invited organisations were not represented due to clan-related tensions in some regions that prevented free access

of some individuals to the venue.

The specific objectives of the workshop were as follows:

- To raise awareness of the animal health initiative under the Somali Communities Animal Health Project (SCAHIP) operated by the CAPE unit.
- To identify who is doing what and where within the areas bordering Ethiopia (particularly Gedo, Bakool, and Bay Regions and their future plans and strategies), in order to facilitate the exchange of information and experiences among the various stakeholders.
- To identify modalities for maximizing the comparative advantages of different projects working in both the relief and development sectors.
- To enhance closer coordination and reporting between various stakeholders in order to avaoid duplication of interventions and ensure that projects complement each other in terms of lesson learning and strategy.
- To develop recommendations on the way forward and outline strategic options to promote collaboration efforts.

Annex B1 (appendix 1) contains the draft proceedings of this workshop .

2.2. Strengthen the establishment and operations of Somali Veterinary Professionals' Associations in all Zones.

2.2.1 Support AGM and managerial training for Executive Committee members of ULPA

During this period, support was provided for ULPA to hold an annual general meeting (AGM) in Hargeisa Somaliland. Prior to the AGM, the Somali PACE Project facilitated the training of 16 members of the ULPA Executive Committee to strengthen their capacity and upgrade their knowledge in the management of ULPA. The training aimed to enable the executive committee members to write proposals and prepare a strategy paper using participatory processes. The training was conducted over a period of four days (24th -27th January 2005) by a consultant from the Mogadishu-based Centre for Training and Communication (CTC) and a draft strategy paper was prepared for discussion and endorsement by ULPA members during the AGM. The specific objectives of the training were:

- To improve the skills of Executive Committee members of ULPA in strategic planning to facilitate the preparation of a strategic paper and a revised constitution for ULPA.
- To improve the skills of ULPA Executive Committee members on project proposal writing.

The detailed training report is included in annex B2.

Following the training session for the executive committee members, the AGM for ULPA was held from 29th January to 31st February 2005. A total of 50 Somali Veterinary professionals attended the AGM and actively contributed to debate on the revision of the ULPA constitution and the strategy paper developed by the Executive Committee members. Elections were successfully held for members of the Board of Directors and the Executive Committee. The strategy paper outlining the long-term development objectives of the Association was discussed and endorsed by the members. A revised constitution for ULPA was agreed (see annex B3). The Somali PACE project facilitated provided financial support for translation of the ULPA constitution into Somali and technical support for formatting the document in

conformity with formats already adopted for the PUPLA, BENALPA, CERELPA and SOWELPA constitutions. The detailed report of the ULPA AGM is contained in annex B4 while the endorsed ULPA strategy paper is included in annex B5.

2. 3. Promote linkages of private sector AHWs to appropriate sources of financing

2.3.1 Assist Zonal Associations to finalize and publicize the Associations profiles

The Somali PACE project supported ULPA to prepare a strategy paper that was translated into Somali and widely distributed (see annex B5). However, the distribution of questionnaires to enable collection of data on individual members of ULPA for the compilation of a database of the members was initially resisted by members during the ULPA AGM. The completed forms had not been returned by the end of the reporting period. Data on the ULPA members, their distribution and competences will be an important component of the Association's profile.

3. ADHERENCE TO THE WORK PLAN

3.1. Activities not implemented

3.1.1 Workshops to clarify roles and responsibilities of public and private sector AHWS under new legislation.

Plans to hold workshops in Somaliland and Puntland to clarify the roles of public and private sector animal health workers under the new legislations did not materialise as the veterinary codes were not enacted during this period.

3.2. Strengthen the establishment and operations of Somali Veterinary Professionals' Associations in all Zones.

3.2.1 Support SLPF to cenvene AGM to develop charter and constitution.

This was not implemented as the SLPF executive committee was not able to convene an AGM in Somalia during this period. No request for support was received from SLPF for the AGM.

3.2.2 Support consensus development on SLPF charter with Zonal Associations and the role of CAHWs in animal health services delivery

The development of consensus on the SLPF charter and the role of CAHWs in the Somali animal health services delivery was dependent on the SLPF annual general meeting. As the AGM was not held, no decisions were made on these issues.

3.2.3 SLPF to establish a physical presence in Somalia.
This activity was not carried out as there was no request for support from the SLPF.

3.3. Train selected private sector AHWs to effectively play agreed roles.

3.3.1 Support integration of CAHWs into disease surveillance systems

The SLPF annual general meeting would have provided policy guidelines on

surveillance activities. The policy guidelines were not forthcoming as there was no SLPF Executive Committee meeting held during this period to make appropriate recommendations.

3.3.2 Complete surveys on community needs for CAHWs in Puntland

The Zonal coordinator for Puntland was engaged in meetings in Nairobi while the Zonal Advisor for Central Somalia with responsibility for inputs to the private sector support activities resigned in February 2005. This made it difficult to complete the surveys in Puntland. However, trends established through earlier studies conducted among 17 communities in Puntland were unlikely to be dramatically influenced by the results of the remaining surveys in a few areas.

3.3.3 Refresher training for 20 CAHWs in Bay and Bakool Regions

No field activities were carried out or reported under this component by the AU/IBAR/PACE CAPE unit during this reporting period.

3.4. Promote working relationships between veterinary professionals and paraprofessionals

3.4.1 Support SLPF and Zonal Associations to develop modalities for disease reporting by CAHWs and SVPs. This activity was not carried out as it was dependent on agreement and policy guidelines from SLPF on the engagement of CAHWs in disease reporting.

3.4.2 Support SLPF to prepare a contractual scheme between SVPs and CAHWs.

This activity was also dependent on agreements expected from the SLPF AGM.

LIST OF ANNEXES

Annex B1: AU/IBAR/PACE/CAPE Unit Report (1st November 2004 – 31st March 2005).

Annex B2: Report on the Training of the ULPA Executive Committee on Strategic Planning and Proposal Writing.

Annex B3: Revised ULPA Constitution

Annex B4: Report of ULPA Annual General meeting

Annex B5: ULPA Strategy Paper

ANNEX B I: AU/IBAR/PACE/CAPE UNIT REPORT

(1ST NOVEMBER 2004 – 31ST MARCH 2005).

Annex B 1: PACE Somalia CAPE Unit

Quarterly Report (Nov 2004-March 2005)

Stakeholders' workshop:

The workshop was organized by AU/IBAR/CAPE Unit and was held at IMC conference hall in Huddur from January 24th to 25th 2005. The workshop hosted 22 participants who were relevant stakeholders operating in Southern Somalia drawn from various International NGOs, Local NGOs, CBOs and private veterinary practitioners operating in the zone.

These institutions were invited in order to share information on the various initiatives being undertaken in zone, identify the modalities for maximizing the comparative advantage of different projects working in different sectors of both relief and development. The gathering was also meant to outline strategic options to promote collaboration between various stakeholders to ensure that projects complemented each other in terms of lesson learning and strategy.

The workshop was also aimed to discuss on how to establish and/or strengthen the veterinary privatization initiative in Southern Somalia. It was facilitated by Sadik Ahmed Bihi of Somali Organization for Community Development Activities (SOCDA). However, it was noted some organizations invited were not able to attend the workshop because of the tensions reported in the zones.

Specific objectives of the workshop were:

1. To raise awareness of the animal health initiative under the Somali Communities Animal Health Project (SCAHP)
2. Identify who is doing what and where within the Border land with Ethiopia (particularly Gedo, Bakol and Bay) and future plans and strategies. Facilitate exchange of valuable information and experience among the various stakeholders.
3. Identify the modalities for maximizing the comparative advantages of different projects working in different sectors of both relief and development.
4. To ensure closer coordination and reporting between various stakeholders to ensure duplication did not occur and that projects complement each other in terms of lesson learning and strategy.
5. To develop recommendations on the way forward and outline strategic options to promote collaboration efforts.

Draft proceeding of the workshop is attached in appendix 1.

Exchange visit:

In southern Somalia where conventional animal health delivery is lacking or inadequate Community-based Animal Health Delivery Systems are playing vital role in providing effective animal health care for pastoral communities. If such systems get the necessary policy and institutional support have the potential to make significant improvements in animal health and pastoral livelihoods.

southern Somalia through community-based approaches. Whilst recognizing the progress made so far, it is quite imperative to ensure that all concerted effort is made to ensure sustainability of these systems through institutional and policy support.

In line with this objective CAPE has organized exchange visit for selected private practitioners from southern Somalia and members of parliament from the Transitional Federal Government of Somalia to share information and experience on community-based animal health delivery systems in Mandera and Wajir districts of Kenya. 5 MPs and 5 private professionals and para-professionals participated in the tour which took place from the 18th to 28th of March, 2005. The team visited different models and approaches of CAH delivery systems in Mandera and Wajir district of Kenya and carry out discussions with local authorities, Pastoral drug user associations, private practitioners and CAHWs.

The exchange visit is believed to assist the recently formed government to formulate appropriate policy and institutional framework that will support and enhance enabling environment for private animal health service delivery in Somalia.

We are working on the proceeding of the exchange visit and will be communicated to you when finalized.

APPENDIX 1: Draft proceedings of the Workshop on establishment of linkages between community-based animal health delivery systems and other development and rehabilitation projects in Southern Somalia.



AFRICAN UNION
Interafrican Bureau for
Animal Resources

UNION AFRICAINE
Bureau Interafricain des
Ressources Animales

P. O. Box 30786, 00100 Nairobi Kenya Tel: 250762 Fax: 313094 E-mail: oau-ibar@africaonline.co.ke

FIRST DRAFT

WORKSHOP REPORT

Workshop on establishment of linkages between community-based animal health delivery systems and other development and rehabilitation projects in Southern Somalia.

Facilitated by:

SOCDA

Somali Organisation for Community Development Activities

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ACKNOWLAGDEGMENT:

The attainment, if at all, of the objectives of the workshop could not be made happen without the support of different persons. I, therefore, would like to thank Habiba Sh. Hassan Hamud for her unconditional and continued support and patience she has shown during the workshop proceedings and after the workshop. The facilitator would like to express his gratitude and appreciation to Mr Ibrahim, the driver who helped us much during our stay in Huddur and Baidoa.

In addition, the facilitator would like to express sincere thanks to my colleague Abdulkadir Khalif Sheikh Yusuf who made the final review of the report.

Lastly, but not the least, many thanks are due to Mr. Mohamed Abdukadir for his support in typing the reports of the workshop

SOCDA Facilitator
Sadik Ahmed Bihi

1.0 INTRODUCTION:

The workshop was organized by AU/IBAR/SCHAP and was held at IMC conference hall in Huddur for the period between January 24th to 25th 2005. It workshop hosted 22 members who were relevant stakeholders operating in Southern Somalia drawn from various International NGOs, Local NGOs, CBOs and private veterinary practitioners operating in the zone.

These institutions were invited inorder to share information on the various initiatives being undertaken in zone, identify the modalities for maximizing the comparative advantage of different projects working in different sectors of both relief and development. The gathering was also meant to outline strategic options to promote collaboration between various stakeholders to ensure that projects complemented each other in terms of lesson learning and strategy.

The workshop was also aimed to discuss on how to establish and/or strengthen the veterinary privatization initiative in Southern Somalia. It was facilitated by Sadik Ahmed Bihi of Somali Organization for Community Development Activities (SOCDA). However, it was noted some organizations invited were not able to attend the workshop because of the tensions reported in the zones.

1.1 OPENING REMARKS:

After reciting verses from the Holly Quran as a curtain raiser by Sheikh Salad, Dr Habiba Sheikh H. Hamud of CAPE, warmly welcomed all the participants, particularly those who covered the long distance despite the checkpoints and security barriers they met while traveling. She also thanked the RRA representatives and Bakol regional deputy Governor who officially opened the workshop. Both Mr. Aden Saransor and Hassan Mo'alim respectively encouraged the workshop participants to make more efforts to meet the workshop objectives.
Mr Ahmed Gedi of CAPE/SCHAP outlined the workshop objectives as:

6. To raise awareness of the animal health initiative under the Somali Communities Animal Health Project (SCAHP)
7. Identify who is doing what and where within the Border land with Ethiopia (particularly GEdo, Bakol and Bay) and future plans and strategies. Facilitate exchange of valuable information and experience among the various stakeholders.
8. Identify the modalities for maximizing the comparative advantages of different projects working in different sectors of both relief and development.
9. To ensure closer coordination and reporting between various stakeholders to ensure duplication did not occur and that projects complemented each other in terms of lesson learning and strategy.
10. To develop recommendations on the way forward and outline strategic options to promote collaboration efforts.

Participants demonstrated active involvement, punctuality and health debating skills, which injected the workshop environment/atmosphere with lively energy. The workshop continued for two consecutive days, starting its session on 24th to 25th of January 2005 and was held in Huddur at IMC meeting hall.

Close observation revealed that most of the participants were men who had prior experience on the thematic issues. The workshop proved to be a good opportunity for the participants to come together, build trust, confidence, share personal ideas/views and exchange experience and know-how.

The topics discussed during the workshop were:

1. Presentation of Project Activities, Challenges and Opportunities for Linkage with Others.
2. Group discussion on thematic issues:
    - Veterinary service delivery strategy in Southern Somalia; current status and future direction:
    - CBAHW, emergency intervention and promotion initiatives
    - Disease surveillance/reporting and livestock marketing initiatives
    - Development and rehabilitation efforts and initiatives

1.2 WORKSHOP METHODOLOGY:

The workshop conducted by the facilitator went through the aforementioned topics in the given order by presenting each topic to the participants. In order to achieve the agreed objectives within the given time-frame a highly participatory approach was designed, encouraged and used during the workshop. This approach was adopted on the assumption that:

1. Everybody's wisdom has to be tapped
2. Every body's suggestion/experience be respected
3. Everybody has the right to be listened/heard in his/her turn

The essence of this approach was to involve all participants in the discussion centered on carefully selected thematic issues and to guide the participants on the workshop progress.

The crucial tool used in the process was "The Work Method" which consists of:

1. **Brainstorming**: in which the participants are grouped and given the opportunity to think both individually and as a group and present their answers/ideas on the flipchart sheet.
2. **Organizing**: in which the facilitator gathers the different group ideas and identifies any relationship.
3. **Unifying**: in which the facilitator unifies the group ideas on the same flip chart-sheet highlighting the shared (Common) Group answers.

2.0 WORKSHOP SESSIONS

2.1 ACTIVITIES OF DAY ONE:

The 1st session of day one was dedicated to registration and opening the workshop. Dr Habiba Sh. Hassan Hamud of CAPE/SCHAP has officially opened the workshop and highlighted the importance of the workshop. Before commencement of the workshop sessions, it seemed crucial that participants establish and agree on formulating norms, values and rules that should be observed by both participants and facilitators during the sessions. The objective of setting these rules was to facilitate and ensure the smooth progression of the workshop.

The following rules were laid down:

1. Punctuality be highly valued above every thing else.
2. No smoking in the workshop hall
3. Patience and tolerance
4. Don't criticize others' ideas/expressions.
5. Active listening.

The second and third session of day one were dedicated to presentations made by the participants. Each and every member had presented the activities undertaken by his/her organization with the precondition that he/she follows the following format.

1.Project activities
2.Project objectives
3.Geographical coverage
4.Project duration
5.Total beneficiaries
6.Local partners and international partner (if any)
7.Links with local authorities
8.Challenges met
9.opportunities for linkages with other actors

Each presenter has been given a flipchart and marker pen and maximum of 15 minutes to present the activities in chronological form. Presenters responded to questions, comments and clarification sought the participants.

3.0 PRESENTATIONS:

3.1 PRESENTATION ONE

CAPE (Community-Based Animal health Participatory Epidemiology)

- **Project activities:** Feasibility study before implementation, PRA and TOT for CAHWs trainers to the livestock professionals base line survey, community dialogue, selection of the trainees, training of CAHWs, Follow-up mission, refresher training, monitoring and supervision of CAHWs. Capacity building of PVPs in managerial skills and formation of zonal livestock professionals associations, promotion of private initiatives, linkage between PVPs and CAHWs, linkage between Drug traders and PVPs. CAHWs participation in disease reporting and surveillance.
- **Geographical coverage:** Bay, Bakol, Middle Juba, Lower Juba and Gedo region.
- **Project Objectives:**

1) Establishment of Community Animal health service delivery system capable of epizootic disease surveillance in southern Somalia.
2) To strengthen private vet practitioners through linkage with CAHWs for drug supply,

monitoring and supervision.

3) Awareness creation of pastoral communities.

- **Beneficiaries**: 10.000 to 20.000 families.
- Linkage with the local elders and local communities of the different regions is very good; they collaborate with CAPE staff every time.
- PVPs are the partners for CAPE
- **Challenges met**: emergency intervention programmes of some agencies.
- **Opportunities**: the need of animal health service providers is very high since Somali communities are nomadic and they keep all species: cattle, shoats, camel and donkey.
- **Recommendations:**
  To harmonize the privatisation initiatives of animal health service delivery and the emergency programmes in order to avoid collision.

3.2 PRESENTATION TWO:

SCAHP Project

- **Project Goal:**

The goal of this project is to reduce the levels of poverty and vulnerability of pastoral groups in the Somali/Ethiopian borderlands.

The objectives:

The goal will be achieved through the attainment of four project objectives. These are as follows:-

1 Establishment of CAH delivery systems capable of epizootic disease surveillance and disease control established in three communities in designated areas.

2 Establishment of linkages between CAH delivery systems initiatives and rehabilitation projects addressing other key problems in Somali/Ethiopian borderlands. Water provision, conflict resolution, livestock trade and marketing, strengthening pastoralist associations and use of rangeland fodder.

3 Knowledge sharing on animal health service delivery and best guidelines for scaling up CAH from designated working areas.

4 Stakeholder analysis of selected pilot community-based animal health worker systems and identification of best-bet approaches to scaling up.

- **SCAHP Activity at Bakol border:**

April 04	Feasibility study of Bakol region	Consultant	Bakol
May-June 04	Base line survey, Community dialogue, Selection and training of CAHWs	VFO & Consultant & PVPs	Bakol
22-30 May 04	Gender awareness workshop	VFO &	Bakol-Godei

	held at Gode eight participants from Bakol and Gedo to Gode for gender awareness training	Consultant &PVPs	
27-31 July 04	Business management training for PVPs	Consultant on contract	Hudur
27Aug-2 Sep 04	Assessment of livestock drug whole sellers and linking to some CAHW drug suppliers in Mogadishu	Consultant	Mogadishu
28 0ct-6 Nov 04	Refresher training for Bakol CAHWs	VFO & Consultant &PVPs	Hudur

- **Beneficiaries:** 1000 to 4000 families.
- **The link with local elders** and local authorities of Bakol is very good.

Livestock professionals of the Bakol are the local partners.

- **Challenges met:** Impassibility of the roads between the villages.

The payment of DSA to the CAHWs trainees during the training of GTZ –Is in Huddur which affected SCAHP's refresher training. CAHWs requested to SCAHP's staff to pay $10 per day as GTZ since the two agencies are implementing the same programme.

- **Opportunities**: There is High demand for CAHWs establishment in the area.

- **Recommendations:** Animal health service delivery-implementing Agencies to harmonise their approach to avoid confusion and mistrust between them and the communities.

3.3 PRESENTATION THREE

COOPERAZIONE ITALIANA NORD SUD:

- **Project activities:**
  - Base line survey on agriculture, livestock and house-hold socio- economic conducted.
  - Crop diversification for food and livestock feed facilitated.
  - Appropriate and adopted production technologies promoted in the project area.
  - Availability and accessibility of quality seeds improved in the target areas.
- **Project Objective:**

It is aimed at enhancing food security and agricultural household income of farmers through improvement of the farming systems in the project area.

- **Geographical areas**: districts in Bakol i.e. Hudur, Tieglow, Wajid and Rabdhure with a total of 23 villages.
- **Project duration**: 2 years started 2002-2004, but now extended one year thus ending Dec 2005.
- **Total Beneficiaries:** 225 farmers directly and 1000 farmers indirectly.
- **Local partners**; None.
- **Relation with local, regional** and chiefs is ok
- **Challenges:**
  - Provisions of improved new crop varieties, which are not known by farmers.
  - Lack of agro- input supply in the region
  - Lack of extension service
- **Opportunities for linkages with others.**
  - Strengthening and developing seed networks.

3.4 PRESENTATION FOUR

SOCONET (Somali Community Network)

- **Activities**
  - Supporting Peace building initiatives
  - Building the capacity of CBOs in terms of managerial skills and leadership style.
  - Maintenance of sanitation improvement and the usage of clean water.
  - Opened and maintained school of agriculture and education for girls.
  - Mobilization of HIV/AIDS, environmental, deforestation and animal health practice at water point and Public gatherings.

- **Objectives**
  - To improve the linkages with international and local NGOs
  - To solve or address organizational conflicts and unification of CBOs to have their sustainability
  - To have full participation of community in their own development and feel of ownership.
- **Geographical coverage**. All Bakol districts
- **Beneficiaries**. N/A but all community in large.
- No international partner yet partnered with SOCANET.
- Relation with local authorities: So far good.
- **Recommendation**
  - Agencies should have consultation with local authorities/NGOs.
  - Communities

After the recitation from the Holly Quran, the facilitator made brief recap of day one and several issues related to day one session was invariably followed by requests for clarification or explanation of concept.

3.5 PRESENTATION FIVE

MSF Belgium:

- **Activities:**
  Started its activities in 2000 and runs health activities in three districts and one village.
- ***Project Objectives***: to cover the community needs towards the health.
- **Geographical coverage**: Bakol region
- **Project duration**: continued.
- **Total beneficiaries**: estimated 80% of the community in Bakol.
- **Local Partner**: None
- **Links with local authority**: good relation based on mutual understanding
- **Challenges met**:
  - Patient default before they recover from the disease
  - Local administration interferes sometimes with the internal policy of the agency.
- **Opportunities for linkages with other actors:** The agency is engaged development of health services and is ready to enhance cooperation with other actors.

3.6 PRESENTATION SIX

Mubarak 3 Hiran Global Service. (Slaughter house- Abattoir)

- **Activities**: slaughter so far 81,504 goat for almost 652, 66.64 Kg for export to the Arab countries.
- **Objectives**: attainment of fresh and edible meat with certification.
- **Geographical coverage**: Hiran District
- **Project duration**: continue
- **Total beneficiaries:** owners, local dwellers, and the customers both inside and outside.
- **Local Partner: No**
- **Challenges:**
  - Lack of coordination between the institution involved in livestock's exportation,
  - Ban imposed on Somali livestock

3.7 PRESENTATION SEVEN:

SOWELPA: South west Livestock Professional Association

- **Activities:**
  Activities of **SOWELPA** can be confined to:
  - Undertake disease surveillance activities in southern Somalia.
  - Register veterinary personnel.
  - Give recommendation of those involved in animal health so that they recruit relevant and competent staff that can meet their organization's requirements.
  - Undertake awareness against the usage the fake drugs used.
- **Project objectives:**
  "Attainment of veterinary association that can play role in advancement of livestock production."
- **Geographical coverage**: all southern regions

- **International partners**: PACE, TERRANOVA, and CAPE.
- **Cooperation with local authority**: is so far good.
- **Challenges**: Some organization involved in animal health has always been reluctant in working with us and do unilateral activities in southern parts.
- **Recommendation**: it is highly recommended to start cooperation with all relevant stakeholders and in doing so Donors are encouraged to contact the potential veterinary association rather than hiring one person with no qualification.

3.8 PRESENTATION EIGHT:

FAO - Emergency Food and Seed Security

- **Project activities:**

1 - Distribution seeds to the vulnerable community
2 - Follow up after distribution
3 - Train beneficences of how to plant groundnut sesame and Sunflower
4 - Promote Vegetable garden activities through training on Tomato, Onion, Watermelon, Carrots and Egg plant

Project Objectives:

To reduce mal-nutrition and food in security in Bakol,Gedo, part of Bay and Middle Jubba region by improving food availability ,food accessibility and Food security in the most Vulnerable Community.

Geographical Coverage:
- **All Bakol Districts**
- **Lugh and Dolow in Gedo region**
- **Dinsor and Qansahdere of Bay Region**
- **Sakow and Bu'alle in Middle Jubba**

Project Duration:
- One Year/Extension another year

Total Beneficiaries:
350-500 formers direct – direct
Each Partner -NGO

Local Partner:

1-	NRMIC	-	Wajid,Rabdurre, Elberde
2-	ORDA	-	Hudur Tieglow
3-	ACA	-	Lugh East
4-	BARRDA	-	Lugh west

5- GRADA - Dolow

Links with Local Authorities:

- FAO Have good Links with Local Authorities-

Challenges Met:

- Its difficult to teach the farmers new crops like sunflower groundnut and secure.

3.9 PRESENTATION NINE:

BENALPA - Benadir Livestock Professional Association

Project Activities: treatment of livestock living in Banadir zone. So far the number of livestock treated are 40,286.

Objectives

A) To Provide Veterinary services
B) To encourage urban Livestock Production
C) To Promote Animal Health and Production of the Zone

Geographical coverage: Benadir Zone

Local Partners: Zonal vet. Associations

Challenges met: Livestock Export ban, port enclosure and different Faction Leaders

Opportunities for Linkage with other Actors: No comments

Local/international partners:

BENALPA works with different Livestock Stake holders and it's future plan is to

form Somali Livestock Board

Recommendation: to continue such meeting of Exchanging information and experience and to form Network Livestock involved Organizations.

3.10 PRESENTATION TEN

NRMIC - Natural Management Information centre

Activities: Natural Resources

Geographical coverage: Bakool region

Project duration: 2 years

Total beneficiaries: 300 families

International partners: FAO, WFP NOVIB,GTZ

Link with Local authority: Good collaboration

Challenges met:

1. Internal conflict between the communities
2. Misunderstanding
3. Lack of full understanding of the benefits of the project

Opportunity to deal with other actors:

- There must be a good relationship with the local actors and the international agencies
- In the future if the above subject is maintained there will be a good development..

Recommendation:

- Establish agricultural CSO operatives within the community
- Assist in digging shall wells.
- provision of small water pumps to the cash crops
- establishing income generating activities

3.11 PRESENTATION ELEVEN

Somali Red Crescent Society

Activities:

First aid training dissemination
- RC/RC knowledge
- Miri mageydo
- IHL
- Geneva Convention

Training service
HIV/AIDS awareness
Increasing membership
Organising district subcommittee's distribution
Pocket calendar wall calendar T-shirt videotape to the cinemas

Objectives:

Geographical coverage:

- Wajid
- Huddur
- Biyoley
- Elbarde
- Yeed
- Rabdhure
- Tieglow

Project Duration: continued
Total beneficiaries: Whole community
International Partners:

- IFRC
- Norwegian
- Red cross
- ICRC

Challenges: High demand for the community in terms of refreshment
Opportunities to deal with others: Good relationship with the local authorities and agencies

3.12 PRESENTATION TWELVE:

SOCDA - Somali Organisation for Community Development Activities

Project Activities:

- Poverty Reduction Programme/Early warning systems (Food Sovereignty Assessment + Advocacy for Farmers & Livestock owners)

Project Objectives: Empowerment of communities
Geographical Coverage: Monitoring National events

- First Phase: Banadir & Puntland regions

Project Duration:

- Pilot project: 2005
- Three years project: 2006-2008

Links with local authorities:

- State, regional,
- district Authorities & institutions
- (Local & National planners)

Links with other local NGOs

- PHRN,
- CS In Action,
- Research institutions,
- Media, MDGs/UNDP

Information sharing and support/Monthly Bulletin – The Watch

Challenges: Development of tools and skilful personnel

Opportunities for all individuals and institution willing to use elaborated information

Recommendations:

- Poverty Reduction is a national task and information on how to tackle it must be shared

3.13 PRESENTATION THIRTEEN

WHO/Polio:

Project Activities:

- Vaccination
- AFP Surveillance

Projects objectives

- Track wild polio virus
- Eradicate polio-myegtis
- Finally certify the country as polio free country

Geographical coverage: the five districts of Bakool region is the catchment area in which the polio activities are implemented

Duration of pre-certification period will expire at the end of 2005

The total beneficiates are 42000 < 5 yrs region wide.

International partner: IMC is the only partner in terms of office provision and maintenance of cold chain

Relation with local authorities: Enjoy in an atmosphere of good relations with the local authority and gain support from their and for our day-to-day admins matters

Challenges:

- ❖ Staff turnover
- ❖ Nomadic community
- ❖ Missed children, particularly during crop harvesting seasons
- ❖ Dependency on local authority for Nids car hire

1. **Opportunities:**

- safe oral polio vaccine
- own teams
- the vaccine is given free

2. **Recommendations:**
   - ❖ Comstaul Team members
   - ❖ Separate teams for nomads
   - ❖ Polio team should have such an authority to exercise their own decision for Nids can hire

3.14 PRESENTATION FOURTEEN:

GTZ

Project Activities:

Community Development through PICD (Participatory Integrated Community Development).

Objectives:

Forming improvement system:

- Livestock
- Agro-forestry
- Agronomy
- Household
- Conflict resolution

Geographical coverage:

Bakol region:

- Tieglow district
- Wajid district
- Rabdure district
- El-barde district

Bay region:

- Dinsor -Kurman
- Raxole -Gurban
- Yaakbarawe
- Misire
- Habiyal

Project duration:

2 Years
End June 2005

Total Beneficiaries:

All communities in Bakool and part of Bay especially Dinsoor district

Local partners:

- CPHR – Centre for Peace & Human Rights
- NARMIC – Natural Resource Management Information Centre
- SOVOCO
- DOY BAND
- Five Brothers

Links with local authority:
Local authorities with good collaboration

Challenges met:
- Always participants based on clan system
- New faces when training CAHWS

Opportunities to deal with local actors:
Consultation with SOWELPA of the proper use of drugs

Remarks/Recommendations:
- All International NGOs better to work with local CBOs/NGOs
- Consultants of International NGOs better to be Somalian

3.15 PRESENTATION FIFTEEN:

IMC - International Medical Corps

Primary Health Care Programme in Somalia

Project Activities:
IMC is mainly focusing on Primary Health Care programme (PHC)
They are running Three Mother Child Health (MHC) all function in Bakool region, 21 Health posts (HP) functional in Bakool region.

- We also have SFP (Supplementary Feeding Programme) in all IMC District locations in Bakool region, which are Huddur, Rabdure, and Elbarde districts this program is a joint project for IMC, UNICEF and WFP
  The SFP Sides are 3 in Rabdure District 1 Huddur and 1 for Elbarde
- Safe Mother hood program, this program IMC started in Huddur District from December-04
- Along with all those activities IMC is running with immunization program at MCH level at this current time out reach Immunization activities is not active but was replaced acceleration campaign for District capitals.
- Muac Assessment for all IMC Operational districts and was selected 2 villages from each district for nutrition surveillance

Geographical coverage:
IMC Operational area in Bakool region: Huddur, Elbarde and Rabdure distrcts.

Project Duration:
IMC was commenced in Bakool region 2000 April up to date.

Total Beneficiary
Total number of people benefited IMC operational area are 47,500 people 21,250 of them are under five children, we are mainly targeting mother and child at the MCH level SFP program and immunization

Local partners:
IMC collaborates all agencies as partners but the main partners such UNICEF and WFP is the second. The other local partners will be CBHWs including the TBAs and CAHWS District Health board (DHB) Village committee (VC).

Links with L/G:
We have very good links with Bakool Local Authority in all different levels regional and district council, and the rest of the community leaders.

Challenges met:

The main constraints for IMC is funding problem phased for the last 1.5 years which even we don't have any fund for the year of 2005.
The government Health Facilities is not functional Infrastructure is very poor
Security problems happened sometimes

Opportunities:

Good community collaboration and local Authority Administration

Recommendation:

To get fund to contentious our Activities for community Health needs collaborations between International NGO working in the Bakool region.

3.16 PRESENTATION SIXTEEN

BAKOL VETERINARY ASSOCIATION

Project Activities:
Development of Animal Health in Bakol
Objectives:

a) To raise awareness veterinary experts
b) Implementation of surveillance, treatment and control of diseases

Geographical coverage: All the 5 district of Bakol
Relationship with other INGOs:

- Pace
- Cape
- WHO

Challenges:

- Fake drugs in the markets
- Ban on Somali livestock

Recommendation:
We hope that government will tackle the existing problems

4. ISSUES ARISING FROM THE DISCUSSION

From the discussion, the following issues has been raised:

4.1 GENDER PARTICIPATION:

It was clear that women have the least participation in decision-making process in Somalia. In the workshop, it was noted that there was only one female attending the workshop out of 20 participants. Therefore, it was suggested for the future workshops women should be given their role.

4.2 LOCAL PARTNERSHIP:

Some participants remarked that lack of partnership between the INGO and local NGO would result poor performance, particularly if the projects are aimed to be sustainable. Hence, it is highly recommended that partnership based on mutual understanding should be established between the INGOs and the local NGOs in one hand and among the INGOs themselves on the other. To do so, it was decided to follow the Code of Conducts signed by the different INGOs involved in the veterinary services.

4.3 HARMONIZATION OF TRAINING INCENTIVE FEE AND THE APPROACHES:

From the presentation, the participants noted that there is a need to review both the approach and the fee given to CAHWs. CAPE prefers to train the CAHWs without offering fee, but instead CAPE would prefer cover the travel expenses, hotels and daily subsistence. The idea was highly appreciated though every suggestions depends on how the top officers in INGO react.

4.4 ESTABLISHMENT OF COOPERATION POLICY BETWEEN THE INGOS AND LOCAL AUTHORITIES

One of the three local authority members invited in the workshop suggested upon the designing the program, INGO should consider the role of local actors either be local authorities or local NGOs.

4.5 CREATION A SENSE OF OWNERSHIP AMONG THE LIVESTOCK OWNERS.

5. ACTIVITIES OF DAY II

Normally after the recitation of Holy Quran, recap was made and questions related to the topics were asked and responded accordingly. Then the facilitator has definitely presented the following four thematic issues, which should be discussed:

- Veterinary service delivery strategy in Southern Somalia; current status and future direction.
- CBAHW, emergency intervention and promotion of initiatives.
- Disease surveillance/reporting and livestock marketing initiatives.
- Development and rehabilitation efforts and initiatives.

Participants then agreed to group themselves in to two groups following brainstorming and debates, each group presented the group work and below is the unified presentation made by the groups. Each group elected a chairperson who presented the outcome of the group discussion. This was followed by questions and comments from the participants.

5.0 GROUP DISCUSSION:

DEVELOPMENT & REHABILITATION EFFORTS AND INITIATIVES

The 1st team has thoroughly discussed the current situation

5.1 INFRASTRUCTURE

Current Status - Poor Roads across southern Somalia, hindering development especially hires stock

Future Direction

Roads should be rehabilitated through intervention by all stakeholders:

- Regional Authorities
- District Councils
- Community Involvement
- National Master-plan

5.2 SECURITY – CURRENTLY INSECURITY IS RAMPANT

Future Direction

- Demobilisation of the militias
- Proper Administration should be put in place
- Strong relationship between the communities and their leaders

5.3 MARKETING - CURRENTLY INEFFICIENCY

Future Direction

- Access to markets must be improved
- Livestock export ban should be uplifted

5.4 WATER - CURRENTLY POOR WATER AVAILABILITY & SANITATION

Future Direction

- Strategic development of water resources must be there
- Construction of traditional water catchments, boreholes, dams etc
- Modern technology to develop sources, especially ground water
- Water treatment programme

5.5 PASTURE – CURRENTLY POOR AND DETERIORATING

Future Direction

- Range management must be re-introduced
- Deforestation must be replaced be deforestation
- Land demarcation and misappropriation leading to conflicts should be stopped

5.6 LIVESTOCK MANAGEMENT CURRENTLY POOR

Future Direction

- Need to train on management skills
- There should be institutions to provide loans and financial facilitation
- Processing factories must be initiated to add more value over the livestock production and generate more income activities.

6. DISEASE SURVEILLANCE AND LIVESTOCK MARKETING

6.1 DISEASE SURVEILLANCE: (CURRENT STATUS)

- ❖ Disease surveillance in southern Somalia
- ❖ R/P information & surveillance system through:
- Questionnaire
- Siero sample for calves
- Active & passive R/P search
- Wildlife information
- Emergency response
- R/P reporting & surveillance is not continuous
- Pace contracts, vets for specific activities in short period so the livestock is always in movement & survey need to be continuous

6.2 LIVESTOCK MARKETING: CURRENT STATUS

- No movement permission
- No livestock certification – (PAN)
- No holding grounds & quarantine marshal yard
- Poor land & sea transportation
- Poor feeding during the journey
- Livestock ban in Saudi Arabia and other Middle Eastern markets, cheap price in Kenya & Yemen

6.3 LIVESTOCK MARKETING WAY FORWARD

- Improvement of Animal Health and Facilities
- Eradicate Disease which cause Livestock decimation
- Holding ground Established
- Each movement at local and internationally
- Establish recognized Certification
- Suitable transportation system for Livestock Export
- Advocacy and Lobbying for Livestock lifting ban on livestock export through institution involved
- Adequate feeding for Livestock Export
- Establishment of board that represent all vet groups including traders, stakeholders and others in the country

6.4 Disease Surveillance Way Forward

- Set up active & continuous system of surveillance
- Establishment of central sites
- Selection & training of sentinel site workers on the subject of reporting & notification of any contagious disease
- Sample collection and investigation
- Timely response & intervention

- Search, confirm & eliminate policy should be in place
- Reporting from bottom to top livestock producer, liv, trader, CAHWs & Vet. Professionals national international
- Ensure smooth fallow of communication system

7. CBAHW, EMERGENCY INTERVENTION & PROMOTION OF PRIVATE INITIATIVES

7.1 CBAHW

- Workers exist in various locations;
- There is a demand for CBAHW Services;
- CBAHW render services;
- They engage in Businesses;
- They are trained;
- There is access to animal herders ad significant interaction with CBAHW;
- CBAHW's flexibility needed (mobility & fixed stations);
- Relationship with the local authorities and community leaders;
- Local authorities must be involved in the initiative of engaging CBAHW.

7.2 EMERGENCY INTERVENTION

1- The intervening agencies should consult the local authorities and community leaders
2- Agencies to consult with the CBAHW
3- CBAHW will have meeting with the local authorities to discuss pertaining issues
4- The three parties (CBAHW, Authorities and Agencies) will establish working relationships benefiting all stakeholders
   a) Agencies will be encouraged to undertake and lead the emergency
   b) CBAHW will be allowed to involve in emergency operations in order to sustain their knowledge and income
   c) Local authorities and community leaders to regulate and harmonise both the business initiatives and the need for emergency intervention.

8. DEVELOPMENT AND REHABILITATION EFFORTS & INITIATIVES

TENTATIVE ACTION PLAN

Activities	When	Where	Who	Assumption	Budget	Remarks
	Years				US $	
1) Infrastructure	20	All regions	Gov't Donors, LNGOs and GTZ	Accessible roads	200 M	A national road building plan
2) Security	2	Nationwide	Gov't, local authorities & peacekeepers	Peace	500 M	Political stability
3) Marketing	3	Nationwide	State agencies private companies	Good access to markets	50 M	Environment conducive for business
4) Water & Sanitation	10	Nationwide	State agencies private entrepreneurs, LNGOs and INGOs	Sufficiently water clean	80 M	Reduce distance travelled for water
5) Pasture	20	Across the country	State empowered	Enough grass &	100 M	Sufficient animal feed leading to

			range agency	range-land		balance diet
6) Livestock management	5	The whole country	State education system/training programmes by institutions	Well managed assets	15 M	Dynamic business undertakings

9. CBAHW, EMERGENCY INTERVENTION & PROMOTION OF PRIVATE INITIATIVE

TENTATIVE ACTION PLAN

Activities	When Years	Where	Who	Assumption	Budget US $	Remarks
CBAHW in Business	5	Nationwide	Experts in Management	Trained business minded people	20 M	Revolutionary idea
CBAHW Training	10	Nationwide	Experts in field work	Skilled persons	30 M	Good quality livestock
Harmonisation of CBAH, Authorities and Agencies	2	Across the country	Social workers	Good collaboration between all sides	1 M	Easy way of achieving the intended goals

10. VETERINARY SERVICE DELIVERY STATUS

CURRENT: Southern Somalia hosts most of the livestock in Somalia, it has more than 3,000,000 heads of cattle, so animal health workers cannot meet the demand of veterinary services in Southern Somalia. In the zone, there are 75 livestock professionals, 34 private practitioners (active), 10 livestock professional works for INGO's 420 CAHWS (145 L. Jubba, 110 Gedo, 23 M. Jubba, 70 Bay, 72 Bakol):

- Livestock associations are not performing well: SLPF, SOWELPA and regional associations have no collaboration;
- Coordination and collaboration between INGO's, Vet. Professionals and CAHWS in very poor;
- PACE, COOPI, CAPE-SCAHP, VSF and GTZ deliver vet. Services in southern Somalia but they are not harmonised and some times they overlap and duplicate their activities;

Future forward:

- To strengthen the existing livestock professional associations or form new vet. Professional associations if the existing associations do not change their attitudes;
- To form vet. Board and the base of the board has to be in Somalia;
- To provide refreshment training and the base of the board has to be in Somalia;
- To train CAHWS where no CAHWS has been trained;
- To lobby for lifting livestock ban through animal health improvement;
- Disease reporting and surveillance should be in place with the help of PACE and SCAHP projects;
- To mobilise and support inactive livestock professionals through technical support and provision of veterinary equipment.

11. VETERINARY SERVICE DELIVERY STATUS

TENTATIVE ACTION PLAN

Activities	When	Where	Who	Assumption	Budget US $	Remarks
1) Strengthen & encourage livestock professionals associations	2005	Somalia	INGOs and capacity building involved institutions	Associations capabilities improved on strengthen	50,000	Revolutionary idea
2) Formation of vet Board	June 2005	Mog. B/Weyne	Government. Local NGOs and INGOs	Vet board formed	30,000	Facilitation by INGO
3) Capacity Building for professional	2005 – 2006	Regional H.Q.	INGO's donors	Vet. Professionals build their capacity	120,000	
4) Mobilise and support active professional livestock	2005 – 2006	Somalia	INGO's and livestock associations	Vet-professional reactive	40,000	Easy way of achieving the intended goals
5) Disease reporting ad surveillance	April 2005 April 2007	Somalia	Cape, Pace, veterinary professionals	Effective and reliable	2,000,000	
6) Advocate to lift livestock export ban	2005 – 2007	Somalia	RMCN; vet. Professional AU/IBAR, FAO etc	Livestock ban lifted		

12. LIVESTOCK MARKETING

TENTATIVE ACTION PLAN

Activities	When	Where	Who	Assumption	Budget US $	Remarks
Improvement of animal health and Facilities	End of year 2005	Somalia	INGOs, donors and government institutions	Improved livestock health	500,000	
Rehabilitation of holding grounds	Jan 2006	Near the ports and near livestock routes	Donor + Government	Holding grounds rehabilitated & used	1,500,000	
Certification of Export Livestock	Jan 2006	Somalia	Government FAO, AU/IBAR	Recognised certificate	100,000	

				provision		

13. DISEASE SURVEILLANCE/REPORTING

TENTATIVE ACTION PLAN

Activities	When	Where	Who	Assumption	Budget US $	Remarks
1) Set up active and continuous system of disease surveillance	April 05 April 07	Somalia	Pace Vet. Assoc. CAHWS	Continuous disease surveillance in place	1,000,000	
2) Establishment of sentinel sites for disease surveillance	April 05 April 07	Somalia	Pace, vet. Associations CAHWS	Functions sites sentinel	120,000	
3) Sample collection (sero-surveillance)	Feb 6th to March 15th	S & C	Pace, vet. Assoc. vet Prof., CAHWS, L. Authorities	Samples collected and investigated	550,000	

14. CLOSING REMARKS

Participants nominated Mr Hassan Ma'alin, Bakol regional deputy governor to speak on the behalf of the participant. He expressed his gratitude to CAPE/IBAR/ SCHAP for arranging this important workshop. He also thanked the facilitator as well as VFO for the efforts they made in order to realize that the workshop objectives have been met. He briefly talked about the need for such a workshop and thanked AU/IBAR for their tireless efforts in organizing and holding this important workshop and the similar ones that preceded it.

The facilitator has thanked all the participants for the skills they have demonstrated during the workshop and wished them good luck in their endeavor. Dr Habiba has concluded the workshop by praising all those made possible the workshop more successful. Special thanks were given the facilitator and participants as well as the local authority in Bakol.

ANNEX I –

TIMETABLE

	DAY 1	**DAY 2**
Time	**Activities**	**Activities**
7:30– 9:30	**Session One** • Arrival and registration • Welcome/Introduction • Opening remarks • Ground rules • Workshop objectives	**Session One** • Recap • Continuation of the presentation: BVA, SOCANET, SRCS, SOCDA et al
9:30 – 10:00	**Tea Break**	**Tea Break**
10:30– 12:30	**Session Two** **Definition** • presentation of project activities, challenges and opportunities. CAPE, SCHAP, GTZ, IMC, WHO/Polio, CINIS	**Session Two** Group discussion: ❖ Veterinary service delivery strategy in Southern Somalia; current status and future direction. ❖ CBAHW, emergency intervention and promotion of initiatives. ❖ Presentation of group discussion
12.30 – 2:00	**lunch and prayer.**	**Lunch and prayer**
2:00- 5:00: Continuation of presentation SOWELPA, FAO, MUBARAK 3, BENALPA, VSF, NRMIC, MSF/Belgium		❖ Disease surveillance/reporting and livestock marketing initiatives. ❖ Development and rehabilitation efforts and initiatives ❖ Presentation of group discussion ❖ Closing Remarks

ANNEX II

LIST OF PARTICIPANTS

No.	Names of the Participants	Organisations	Title
1)	Abdirahman Moalim Ahmed	Bay Veterinary association	
2)	Ibrahim Mohamed Nor	Luq Authority	Mayor
3)	Dan Odero	ADRA Somalia – *Water Project*	Project Engineer
4)	Abdulkadir Khalif Sh. Yusuf	SOCDA	Acting P.O.
5)	Abdulkadir Sheikh Hussein	SRCS	Community Tracing Officer
6)	Mohamed Ahmed Hussein	IMC	Admin/Finance
7)	Hassan Mohamed Haji	FAO	Assis. Field
8)	Nuur A/lahi Hassan	SOCONET	V. Chairman
9)	Abdulkadir Mohamed Ibrahim	BENALPA	T. Planning Officer
10)	Adan Sheikh Hussein	MSF/B	Lab Technician
11)	Nor Elmi Isse	SOWELPA	Executive/Committee
12)	Abdullahi Farah Malin	Slaughter house	Member
13)	Mukhtar Sh. Abdi	GTZ	Lead Livestock Officer
14)	Mohamed Abdullahi Hussein	Mubarak 3	Certification Officer
15)	Abdirizak Sh. Hussein Korshe	V.S.F	Nurse
16)	Ahmed Adan Abdirahman	B.V.A.	Secretary
17)	Silvesten M. Nzuki	CIWS	Agronomist
18)	Hassan M. Hassan	NARMIC	Ago-forestry
19)	Sh. Salad Abdirahman	CAHW Supervisor	Bakol
20)	Nurta Moallim Hassan	Bakol Women group	Ex. Member
21)	Abukar Mohamed Abdirahman	Shabelle Media	Reprsentative
22)	Aden Mohamed (Saransor)	Bay Local Authority	RRA member

ANNEX B2: REPORT ON THE TRAINING OF THE ULPA EXECUTIVE COMMITTEE ON STRATEGIC PLANNING AND PROPOSAL WRITING

(1ST NOVEMBER 2004 – 31ST MARCH 2005)

REPORT ON THE PARTICIPATORY STRATEGIC PLANNING AND PROPOSAL WRITING TRAINING FOR ULPA

Held in Somaliland, Hargeisa

24th – 28th of January 2005

INTRODUCTION

One of the constant themes in management and organization development research ad practices over the three decades is something called managing change. It is one of the few popular phrases, and phases of general management theory and practice that has survived the test of time. More importantly managing change, as a conceptual framework, has become a common strategy for use in many other professions. I think that it makes sense for vet/vet assistance professionals to become change managers, particularly, as they increase their commitment and actions to enhance livestock.

Managing change requires widespread consultation with others (stakeholders). Managing change puts a premium on learning new ideas, concepts, skills and behaviors.

It requires creative thinking and experimentation finding new pathways to sustainable veterinary development programs and maintaining stability/must include the freedom to fail, further managing change involves a series of purposeful actions, carried out within a framework of analytical and creative thinking.

If ULPA zonal association of Southwest Somalia is to be successful they stone for sustainable veterinary services for livestock community of Southwest Somalia, new tools may have to be acquired or removed the rust from those that have not been used for a while. These tools were presented to the training participants and instructed on how to employ them to analyze, plan and implement sustainable livestock development programs in Somalia.

The consultancy, to facilitate in this training, was untaken by Ibrahim Omar, a specialist in capacity building trainings.

PARTICIPANTS

The training was attended by 16 members of ULPA executive committee from several regions of Somaliland comprising veterinary and Vet. Assistant professionals.

VENUE

The training was held in a very convenient place, PACE Compound at Hargeisa, the administrative capital of Somaliland. The weather was good and comfortable.

METHODOLOGY

Participatory methods were used through out the course of the training sessions and it consists of:

I. Limited lecturing in planetary discussions

This method has the following advantages:

- ☐ Interaction between facilitator and the group would be maximized.
- ☐ Participants may present real live examples under the guidance of the facilitator.
- ☐ Enhance exchange of experience among the actors.

II. Small group discussion

This method has the following advantages.

- ☐ Provides the trainees with opportunities to interact with the instructor and fellow trainees.
- ☐ Allow learners to become active participants in the learning process, rather than passive recipients of information from one source.
- ☐ Allows shared commitments to learning because trainees help each other with difficult points.
- ☐ Learning takes place through self-expression and intercommunication so that learners learn to evaluate the logic of and the evidence of their own and other's position.
- ☐ The learners grasps the idea of self-learning without feat of going wrong, because mistakes are corrected by the group or teacher.
- ☐ Provides an opportunity for the synthesis of varied experiences and data derived from other sources.

III. Brainstorming

Advantages of the method

- ☐ Helps the teacher to assess very quickly how much the trainees know about the subject or topic.
- ☐ One does not need to have well-designed pattern of getting or disseminating the information.
- ☐ The trainees bring out a lot of information within a short time.
- ☐ It helps give direction in the learning process.
- ☐ Trainees are kept alert.

ACRONYM

PACE	Pan-African Program for the Control of Epizootics
ULPA	United Livestock Professionals Association
INGOs	International Non-governmental Organization
CAHWs	Community-based Animal Health Workers
AGM	Association General Meeting
SWOT	Strength, Weaknesses, Opportunity and Threat
NGO	Non-governmental Organization
SLPF	Somali Livestock Professional Forum
COOPI	
VET AID	

OPENING CEREMONY:
The opening ceremony was attended by networking and administrative officers of PACE. Mr. Abdillahi Rabile, delivered a remarkable speech for the group. He stressed the objectives of the training as:

- To prepare strategic paper for ULPA
- To revise ULPA Constitution
- To hold general meeting
- To endorse strategic paper and constitution. Mr. Rabile urged the group to fully participate in the workshop to ensure the quality of association's strategic papers.

CLIMATE SETTING:
The group started to introduce themselves with the facilitator as he also did the same. The facilitator worked actively in initiating the building of working relationships, where participants begun to talk to each other friendly.

The climate setting was important to ensure that barriers to learning were eliminated to a great extent. Part of climate setting was also aimed at achieving the following:

a) Develop norms, which will being them throughout the course
b) Agree on responsibilities and choose office bearers
c) Develop a time schedule to guide them throughout the workshop

WORKSHOP NORMS

The following norms were set by the group to be observed throughout the course:

1. Raise hands before you talk
2. Listen each other
3. No smoking
4. Punctuality (keep time)
5. Share ideas/be brief
6. Reduce movements/noise (In-outs)
7. Avoid side talking

ASSIGNING OF RESPONSIBILITIES

To achieve smooth running of the sessions, the participants agreed to have shared responsibilities as following:

Team Leader	Mr Rabile
Reporter	Mr Da'ud Ismail Nur
Time Keeper	Mr Abdullahi Hassan Iidan

TIME SCHEDULE

Starting time	8:00 to 10:00
Break time	10:00 to 10:30
Continuation	10:30 to 12:30
Prayer	12:30 to 1:00
Discussions and group work	1:00 to 3:00

WORKSHOP EXPECTATIONS

1. Information sharing and exchange ideas
2. Review association structure
3. Annual planning
4. Visioning of the future
5. Group work
6. Networking strategies
7. Activities plan
8. Financial projection

The facilitator briefed and over reviewed of the contents of the preliminary training course. He told them the higher their participation is the better outcome of the training would be resulted. Mr Omer then, asked the group:

What is a stakeholder?

They responded:

- Group of people affected by the intervention
- Institutions affected by project
- Clients
- Beneficiaries
- Interest groups
- Supporting groups
- Opponent groups

Mr. Omer gave a brief definition:

Stakeholders are people, groups, or institutions, which are likely to be affected by a proposal intervention (Either negatively or positively) or those, which can affect the outcome of the intervention.

Asked the participants why do stakeholder analysis, they generated the following:

- Identify supporters and opponents
- Identify profit and losses
- Work out participation strategies.

Then, the facilitator elaborated the concept as a four steps process. When asked what are the key stakeholders, the group listed the following:

- L/stock Professionals
- L/stock Owner/Producer
- L/stock Traders
- L/stock Transporter/Shipping Agencies
- L/public Sector/Public Veterinarians.
- Pharmacists
- M/livestock
- Local Authorities
- Drug Producers
- I-NGO'S
- Fodder Producer
- CHAWS
- Traditional Healers
- Importing Countries
- Public

The groups were questioned to identify:

- High influence –High importance stakeholders
- High influence –Low importance stakeholders
- Low influence –High importance stakeholders
- Low influence –Low importance stakeholders

They yielded the following:

Public sector + traders as High –high group stakeholders

Brokers + gate keepers (elders) as High –low group stakeholders

L/stock producers, NGOs as Low-high group stakeholders

Transporters + fodder producer as Low –low group stakeholders

The facilitator explained participation strategy for each groups, then the participants were divided into small groups to build stakeholder analysis matrix table, which facilitated to select appropriate method of participation.

The outcomes of discussions of the sub groups were pooled:

List of stakeholders	Interest	Effect	Importance	Influence
Professionals	Job	+	High	Low
Producers	Better services	+	High	Low
Public Sector	Job satisfaction	-	High	High
I-NGOs/donors	Partnership	+	High	High
Traders	Good service	+	High	High
Brokers	Economy	+	Low	High
Transporters	Economy	+	Low	Low
Drug sellers	Marketing	+	High	High
Chamber Commerce	Regulation	+	High	High
Illegal/drug dealers	Conflict	-	Low	High
Fodder producers	Economy	+	High	Low

Methodology used after stakeholders analysis

The facilitator proposed to the participants to use participative method in stakeholder analysis and the following methods were identified:

- Consultations
- Awareness raising
- Workshops
- Meetings
- Media
- Collaboration with key stakeholders

DAY TWO

Objectives:

At the end of the session the group will be able to:

- Carry out the external and internal analysis
- Develop vision, mission, goals, strategies and objectives.
- Identify critical issues.

As agreed, the rapporteur briefed the topics covered in the day before. The session proceeded with external and internal assessments. When asked about external political factors the group responded as follows:

- Government and governmental agencies
- Importing countries

The participants also counted socioeconomic factors as follows:

- Local NGOs

- 1 –NGOs/donors
- Social/women organizations
- Religious groups
- L/traders and business groups
- L/stock producers
- Community elders
- Inflation
- Infrastructure

They also presented Demographic factors as:

- Persistent draughts
- Natural disasters (Floods, earthquakes e.t.c)

The group also forwarded about competitor Groups/Institution as:

- Public sector VS private sector
- Some NGOs dealing with livestock programs
- Traditional healers IC
- Some CHAWS
- Some professional individuals hindering association

The participants were asked to generate SWOT analysis based on the external and internal assessment.

They produced the following SWOT Analysis

A) <u>External Analysis</u>

Threats:	**Opportunities**
• Drought:	Collaborating Government
• Natural Disaster:	Security
• Traditional Healers:	I –NGOs
• Public Sector (conflict):	Donors
• L/stock Ban:	L/stock traders
• Completive NGOs:	L/stock producers
• Information:	Traditional elders
• Wrong perception:	Legal drug sellers, Relatively good infrastructure

B) Internal Analysis

Strengths:	**Weaknesses**
• L/professionals Structure	Structure
• Office Availability:	Fundraising
• Office facilities:	Physical facilities
• Management:	Vet. Equipment and Instruments
• Communication:	Office location
• Field activities:	Use of technology
• Good Relation with:	Special Services
• Some I-NGOs (PACE)	

When asked to identify strategic issues as setp-2, the committee responded:

- Fundraising (Inadequate)
- Capacity building (Insufficient)
- As negative strategic issues
- L/stock professionals (Abundant)
- Security as positive issues.
- Delivery of animal health services.

Discussion of a strategic vision of the association followed and they presented:

" We want to be strong credible association that represents all livestock professionals in the zone to establish private sustainable veterinary services in Somaliland in order to improve the livelihood of livestock community as well as to prosper the welfare of its professional members"

The group, after long debate, agreed on the following mission statement:

"We stand for the and welfare and development of livestock health and production system in order to enhance socio-economic and food security for postoralists and agro-postoralists communities."

The participants were, then, urged to propose several goal statements consistent with the vision together with strategies to achieve these goals. As a result they produced the following:

Goal One

- To create and establish excellent private health veterinary services in all regions of Somaliland

Strategies

- Establishment of ULPA regional offices
- Setting-up private veterinary pharmacies
- Establishment of veterinary private clinics and health post in main L/stock concentrated villages

- Establishment of extension program

Goal Two
To create and establish a sustainable fundraising system for the association

Strategies

- Increasing of local contribution by the members of the association
- Seeking donor assistance through extensive lobbing
- Preparing sound project proposals
- Encouraging of government contributions
- Producing bulletins and newsletters
- Preparing consultancy activities

Goal Three
To promote technical and managerial skills for the members of the association.

Strategies

- Soliciting training opportunities for ULPA members from NGO partners and government
- Participating in international conferences and workshops relating to L/stock issues.
- Networking with regional and international institutions and universities etc.
- Establishing mini library in the main office.

The group also continued to forward four other goals of significant importance in the following list: -

Goal Four
To establish good networking systems with all key stakeholders

Goal Five
To contribute in improving animal production systems.

Goal Six
To encourage environmental protection programs

Goal Seven
To create job opportunities for association members.

The participants acknowledged the first three goals as the most important issues and concern the association facing now and in the future. They were agreed to compose annual objectives, for the three first goals. The coming list was yielded:

Objectives for Goal One

- Set up two offices in Awdal and Sahil Regions
- Awareness raising through media for the 5 regions of Somaliland
- Strengthen existing 3 regional Vet. Pharmacies.

Objectives for Goal Two

- Collect monthly registration and membership fees amounting to 3 dollars/month
- Collect working members contributions
- Lobbing regularly for all NGOs

Objectives for Goal Three

- Organize request for 5 training workshops (technical+ managerial) from I-NGOs/PACE.
- Encourage at least 6 members to participate in international conferences and training courses abroad.
- Networking with veterinary association in neighboring countries
- Network with the four zonal associations.

The group, then, were divided into 3 sub groups to establish action plans for three objectives one for each of the first three goals. The presentation was suspended until the next day.

DAY THREE

The day started with rapporteur making recap of the previous sessions. Presentation of the plan of action by the 3 subgroups proceeded in the following manner:

Group 1.

A) Goal One:

To create and establish excellent health Vet. Services in all regions of Somaliland.

Objective One

Set up two offices in Awdal and Sahil Regions of Somaliland.

Activities	Time	Target Group	Expected Outcome	Output Indicator	Responsible Agency	Assumption
Awareness raising	2005	Community	Region informed	Participation Report	Team	ULPA Accepted
Fund raising	2005	I-NGOs	Forecast Cost	Report	ULPA	Proposal well prepared
Selection of Location	2005	Borama, Berbera	2 offices sites	Report	ULPA	Community contribution
Office facilities	2005	I-NGOs/ULPA	Computers etc	Report	ULPA	Funds Available
Transportation	2005	ULPA/partners	1 truck	Report	ULPA	Donations Available
Opening Ceremony	2005	Government/community	Representatives	Report	ULPA	Invitation/ come
Evaluation	2005	2 Offices	Evaluation	Report	ULPA	Experts

Group Two

B. Goal Two
To create and establish a sustainable funding Base for the association.

Objective Two
Seek local and international contributions Amounting to 10,000 U.S.D.

Activities	Time	Target Group	Expected Outcome	Output Indicator	Responsible Agency	Assumption
Registration fees	2005	ULPA New members	$600	Report	Ex. Comm.	New members enrollment
Membership Fees	2005	All members	$2160	Report	Treasurer	Availability members
Working members	2005	W/members	5% Total earnings	Report	Comm.	Some member work
Contractual member	2005	C/members	$ 3600	Report	ULPA	Contracts Available
Workshop participants	2005	W/members Participants	$ 200	Report	ULPA	Attended
Conferences	2005	P/members	$ 1200	Report	ULPA	Attended
Project Proposals	2005	W/members	$ 2000	Report	ULPA	A available
Evaluation and Monitoring	2005	Team	$ 10,360	Report	ULPA	Reports Available

C) Goal Three
To upgrade technical and managerial skills for members of the association

Objectives Three
Propose 5 training courses from I-NGOs partners.

Activities	Time	Target Group	Expected Outcome	Output Indicator	Responsible Agency	Assumption
Need Assessment	2005	ULPA	10 Participants	Report	Partner NGO	Availability of Funds
Training Preparation	2005	Team	Training Material	Report	ULPA	Expertise
Logistics	2005	ULPA	Accommodation	Report	ULPA	Funds Available
Inform Participants	2005	ULPA	All Participants	Report on absentee	ULPA	Funds Available

Venue Selection	2005	ULPA	Appropriate site	Report	ULPA	Funds Available
Transportation	2005		Buses/Trans/cost	Report	ULPA	Funds available

After participants' presentations, the 3rd day session started.

Objectives
At the end of the session the trainees will be able to:
- Develop project proposal writing
- Financial projection

The group was asked what are the steps of project proposal writing they gave the following responses:

- Title page
- Background
- Target groups
- Activities (Input)
- Association profile
- Costs and benefits
- Reporting
- Monitoring
- Appendices
  - Lists
  - Diagrams
  - Detailed budget
  - Job description etc

Handouts of training materials were distributed to the all member of the group. The facilitator, then, gave a brief description of project proposal writing and the issue was thoroughly discussed. At the end of the day the trainees were divided in three subgroups with the tasks to prepare proposals for favorite project. The presentation was delayed for the next day.

DAY FOUR

Objectives of the session:

- Presentation of small subgroup discussions regarding project proposal and budgeting
- Finalizing strategic paper formulation
- Revising constitution

The subgroups commenced to check the outcomes of their work. Mr. Henry, PACE Advisor also joined the session and said few wards of encouragement. The two subgroups, after almost half an hour of discussions, presented as follows:

Group One

Project Title: Awareness Campaign Against Misuse of Drugs

Date of Proposal: 27-01-05

Funding Agency: PACE

Implementing Organization: ULPA (Local Professional)

Project Duration: 1 Month (30 days)

Project Site: Nine Villages of the Gabilay District

PROJECT OVERVIEW:

The main purpose of this project is to raise awareness of livestock/producers/pastoral communities towards the magnitude of the negative impact of drug misuse for their animal and the importance of proper drug use

Background:
ULPA is a professional local association who has the capacity of implementing variety of projects due to the fact that the association has contributed in implementing several projects in the last two years such as COPI- PLEA- ULPA- PACE- ULPA disease surveillance project.

Justification:
Delivery service programs for livestock sector collapsed with the fall of Somali central government resulting in the improper use of drugs. Therefore, we felt important to go about such intervention.

Objectives:
- Mobilize communities of the Nine Villages in Gabilay District.
- Provide skill training to concerned individuals.

Activities:

- Information dissipation
- Preparation of project material and tools
- Setting posters
- Introduction of appropriate drug

Project Staff and Administration:

- One Veterinarian
- Two Vet. Assistants
- One gatekeeper (elder)
- Stationeries
- One Transportation Vehicle
- Vet. Drugs + Posters for Demonstration

Budget and Cost

S/N	Budget	Unit	Total
1	1	1x$70	30x70= $2100

2	2	2x$60	30x120= $3600
3	3	-	= $350
4	-	-	30X60= $1800
5	1	1X50	= $1500
6			= $1000
	Total Amount		**$ 8400**

Monitoring and Evaluation:

- Community Participation
- Reports

Group Two

Project Title: Mandeeq Poultry farm

Location: Aw-Barkhadle

Date: 27-01-05

Duration: One Month

Implementing Agency: ULPA

Funding Agency: PACE

Background:

All poultry farms were destroyed following the eruption of civil war in Somalia. As a result, malnutrition and protein deficiency have been noticed, especially with children and women. Therefore, ULPA, Vet. Professional Association of Somaliland stood up to reduce such problem through rebuilding poultry farm that might provide eggs as a source of cheap protein and vitamins for the community of Hargeisa.

Project Detail:

Goal: To establish poultry farm in Aw-Barqadle area
Clientele: Hargeisa Population

Budget Items:

- Iron Sheet= $250
- Wood= $105
- Bricks= $500
- Door= $200
- Manpower= $420
- Water= $30
- Cement= $250
- Sand= $75
- Paint= $40
- Nails= $5

Total Amount $1845

Monitoring and Evolutions:

Reporting

After presentation has finished the group was urged to revise and discuss strategic paper elements. Additional contributions by Mr. Henry as well as members were added such as:

Threats

- Absence of legal regulatory framework
- Absence of proper policy regarding animal health service delivery.

Mission also were restated as:

" We strive to mobilize human resources for effective delivery services to livestock sector to ensure the improvements of animal health, welfare and production services.

Two goals were added:

- Contribute to influence government policies towards L/sector
- Establish consultancy centers in the regions

Critical issues also revised:

- Delivery of animal health services

At the end of the day the training course was closed. Mr. Henry welcomed by Mr. Ismail, Chairman of ULPA, gave a few words to the group. He urged the group to double their efforts to keep the harmony of association members. He also stressed that PACE is acting merely as facilitator and playing supporting role through capacity building and limited project Supports. He also highlighted some expected changes that might come to PACE in March 2005.However, in April 2005; follow-up projects will start with support of the new partner.

The facilitator thanked the participants for their co-operation throughout the course. He also expressed his gratitude for PACE and Hargeisa PACE Zonal Office Staff for giving him all necessary facilities to run the training smoothly.
Mr. Rabile took the floor and encouraged the members to be professional and committed for the association. He also advised them to be united and accept more professionals to join the organization.
A committee, consisting of 3 participants were assigned to compile all information related to strategic planning of the association in flip charts for presentation in AGM, which is due the next day.

RECOMMENDATION OF THE PARTICIPANTS:

- Awareness raising
- Office Relocation
- Improvement management
- Implementation of Vet. Projects
- Solicit funds for capacity building
- Strengthen networking with stakeholders
- Promote association profile
- Inter Zonal visits
- Follow up courses

OBSERVATION

- Participation was high
- Group was energetic
- Well preparing for AGM
- Well experienced professionals
- Grasped concepts quickly
- Respected the set norms
- Generous with viable ideas
- The group was eager to read strategic paper in the AGM
- They raised life/personal experiences examples
- Full with love and humor
- Talked frankly

CONCLUSION

The Association's internal policies and procedures are not in place though they have constitution. The Association members haven't got enough courses since the collapse of the national government. Emphasis should be put on these aspects.

ULPA ANNUAL GENERAL MEETING
29/01 – 1/02/2005

VENUE
The AGM was held in a conference room of one of the famous hotels in Hargeisa,

OPENING CEREMONY
Deputy Ministry of livestock Mr. Ali Ahmed Abdi, PACE Adviser, Mr. Henry Wamwayi together with PACE Zonal officers and representatives from several other NGOs were present at the ceremony. Almost all professional members including executive committee members of ULPA also participated in the meeting. The AGM was opened by verses of holy **"Qoran"** read by PACE Zonal Co-ordinator in Somaliland, Mr. Ahmed Hashi Nur. He also said a few sentences expressing his happiness to see that differences between ULPA and the PACE Zonal Office have been resolved and the AGM has been held at last. Mr. Hashi stressed that it is time for members to elect appropriate leadership for the association.

Mr. Ismail, chairman of ULPA made a few comments emphasizing that conflicts are now over and gave the floor to Mr. Ali, ULPA Secretary General.

The secretary briefed the members on the history of the formation of ULPA and the difficulties the association faced to hold the Annual Meeting. At last he thanked PACE for facilitating and supporting the AGM for the association. Mr. Ali, further clarified that the association is open to all veterinary professionals.

Mr. Henry Wamwayi, the PACE Project Advisor addressed the participants and highlighted the mandate of PACE regarding capacity building support for both public and private sectors professionals and institutions. He also pointed out the importance of having a strategic vision and good strategies to achieve the set goals of the association. The adviser called upon the members to spare no effort to establish and amend the constitution as a mechanism to guide the association. Finally, Mr. Wamwayi assured the assembly that PACE will not dictate any directions for the members but is interested in the outcomes of association's General Assembly Meeting.

The Deputy Minister of livestock delivered a short but constructive speech telling the members the perceptions of the public sector (Ministry of Livestock) about ULPA. He urged members to strengthen transparency and accountability to avoid mistrust. "ULPA should represent all veterinary professional members and should not be confined to a certain small group," added the deputy minister. The deputy minister advised the members to resolve conflict constructively to abort current rumors that ULPA is a closed house to a certain group.

After the guest speakers left, the AGM meeting started. Mr. Ali, the secretary general was asked to talk briefly about past achievements and problems. First, he introduced the agenda of the day to the assembly.

Agenda:

- Revision of the PULPA structure
- Election procedures
- Criteria for selection of new members
- Revise executive committee number
- Any other issue of concern

Past achievements:

- Establishment of the association in 2002
- Setting up of the ULPA office with the assistance of PACE.
- Draft constitution in collaboration with " VET AID"
- Establishment of regional offices
- Visits of regional offices
- Networking with all I –NGOs, UN Agencies.
- Carrying out drug distribution project funded by COOPI/30 participants
- Workshops, conferences attendance.

Problems:

- Financial shortage
- Office Rent/donated temporarily by one of the members
- Location of office so far from down town
- Annual General meeting failed to be held

After finishing the above reports by Mr. Ali, the treasurer, Mr. Yusuf proceeded with:

Financial Report:

He divided the members into three parts:

- Members who have paid only registration fees
- Members who have never paid anything
- Members who have paid all the due fees and more

The total amount collected since inception of ULPA in 2002 is US$3651. The amount was used to cover all facilities costs. Only US$ 135.90 is remaining in the Bank account.

Date: 2nd day AGM

More than 40 members attended the 2nd day of meeting. Mr. Ali, secretary General of ULPA introduced the same agenda of first day to the assembly and asked them to constructively discuss the topics.

Structure:

- The assembly reviewed the existing structure of the association
- They acknowledged the importance of having a Board of Directors
- Majority of the group voted for a nine member board committee to be elected by the assembly with the task of governing and controlling the execute committee
- The assembly voted for the number of executive committee members to be 7 who also will be elected by the assembly. The committee members will play the role of running the day-to-day activities of the association.

2. Election Procedures:
The participants voted in favor of the raised-hands method against the secret balloting method. This may be, due to the fact that secrecy is unfamiliar in the cultural context of Somalis.

3. Criteria for selection
Members voted for criteria which state that the association is open to all vets and vet assistant professionals provided he or she goes through the normal procedures of application as illustrated in the constitution. If 2/3 of executive committee members vote in favor the applicant can be a member of ULPA.

4. Umbrella VS A Single Association:
Majority of the members voted in support of being a single association that has branch offices in the respective regions

5. Different fees for the association:
- Registration fees: it was unanimously decided to be $ 20/member
- Membership fees: the group voted for $1/ month against $2/month/indivitual. Ways and procedures to collect the fees will be determined in the by-laws.

Working members fees:
The assembly preferred such a member to pay $10/month as ordinary membership instead of proposed amount of $ 5/month.
Members of this category will not pay the monthly fee mentioned above.

Contract members fee:
The assembly unanimously voted the fee to be $15/month.

Other Benefits (to be determined in the by-lows):
Members drawing other benefits should pay $ 20 as contribution to the association for every event to be identified in the by laws.

Project Proposal/Consultancy
The assembly approved to be 1% of the total earnings

Service Delivery (Export Animals):
The decision was delayed until the livestock export ban is lifted and regulations enforced.

Project Monitoring and Evaluation:
The participant favored such contribution to be $20/evaluation activity.
Later on, the secretary general presented some contents of strategic planning of the association. Although the members raised a heated debate on some points of the paper, they showed interesting and positive impression towards the contents. The remaining goals and objectives will be presented at tomorrow is meeting.

Date: 3rd day of AGM

The chairman of ULPA presided the meeting as usual and introduced the agenda of the second day as:

1. Completion of the strategic paper review for presentation to the assembly

2. Revision of some points of the constitution regarding the functions of:
- Board of directors

- Executive committee

3. Distribution of personal profile and use of personnel forms.

Mr. Ali, the secretary general of ULPA opened the floor for discussions. The flowing contributions and reformulation of the strategies of the associations made by the members:

1. Participate in implementing extension programs
2. Involvement in advancing marketing systems, lift-ban campaign of livestock through disease surveillance, disease reporting and transparency sharing ideas
3. Exchange of inter- zonal visits
4. Seek contributions from l/stock traders and other business groups
5. Establish libraries in the main office

The formal l/stock Minister of Somaliland, Mr. Suleman Gure who was one the main founders of PULPA came to the AGM. The chairman introduced him to the members stating that Mr. Suleman assisted ULPA in many ways, facilitated the registration process of the association in the Ministry of l/stock and made lobbing campaign for it to be accepted by the community. Mr. Suleman said a few wards on the occasion expressing his pleasure about the success of the association. He hoped that the present Minister of l/stock to collaborate with PULPA as Mr. Suleman personally often advises the authority. He was invited to participate in the closing ceremony in the next day.

2. Functions of a board of directors

- Acts as arbitration body
- Sets policy guidelines for the committee

Functions of executive committee:

- Run the day-to-day activities of the association.

Mr. Ibrahim, one of the members of PULPA shared his experiences with colleagues about his participation in Kenyan veterinary association AGM held in KOSUMU. He made the following report:

Firs day-

- Arrival of participants from their locations
- Briefing to members about the second day of meeting

Second day-

- Field day held in a site of 10km away from the location of the conference.
- Professionals, drug sellers and livestock producers with their animals all take part as demonstration day.

Third day-

Holding a scientific meeting where new findings are exposed as related to different sections of vet. Science.

Fourth day-

Only ordinary members elect general election of executive committee members.

Finally, personal profiles as well as use of auxiliary personnel forms were distributed to the members of the association. The group demanded some clarifications about the objectives of filling these forms. Dr Henry Wamwayi told that the purpose is to use as database for the profiles of the association members. Although participants initially were reluctant they accepted to seize

such opportunity after long discussions and interventions made by PACE representatives including Mr. Hennery Wamwayi, the zonal adviser and a number other PULPA members. Some showed suspicions towards SPLF .It is, may be due to misunderstanding of UMBRELLA concept.

4th day of AGM

Agenda:

- Election of:

a) Board of directors

b) Executive committee members

- Constitution endorsement
- Strategic paper endorsement
- Reviewing of filling profile personal forms
- Filling of registration forms for renewal prepared by ULPA
- Constitution revising

According to the association's constitution, Mr. Ismail, the chairman of ULPA resigned and recommended one of three other members to be elected to temporarily chair the meeting Mr. Botan was chosen to be chairing the AGM at the day with 18 votes against 11 votes for his opponent. One of the three suggested members was excluded due to his candidacy for BOAD membership.

Dr. Rabile, PACE Networking officer and a member of the association highlighted some articles of the constitution that need to be amended.
The following changes were made:

- Non-religious word was omitted
- The association to all public and private professionals
- L/stock professional instead of Vet professionals
- Put (BOAD) instead of council
- (Quarterly meetings) of BOAD instead each 4 months
- Executive committee will hold office for two years instead of one year.
- Executive chairman can be re-elected once instead of twice excluding the first period.
- He/she instead of he 8.3.4 the secretary shall receive and reply all correspondence on behalf of the association.
- Several other phrases were added or subtracted to the articles of the constitution. This was approved through voting by members of the association

ELECTION

a. Board of Directors:

Seven members out of eight candidates were elected the list attached in the appendix. Hands-up procedure were used during the election process

1. Ahmed H. Osman Hussein (Bahnaan)
2. Ahmed H. Abdillahi
3. Abdi Hussein Ainan
4. Mohamoud Mohamed Farah
5. Jama Ahmed Muse
6. Ibrahim Farah Hersi
7. Adan Yusuf Mohamed (Timir)

b. Executive Committee:

Seven members including four former office bearers ran for election. Some members who raised a question why only these seven individuals are listed to be candidates got answer saying no other members stood for the position.

The group unanimously elected the executive committee candidates. The members congratulated the four former office bearers, the chairman, and the secretary, the treasurer and networking officer for coming again to the office.

1.	Ismail H. Ibrahim Warsame	Chairman
2.	Mohamed Hussein Hassan	Vice Chairman
3.	Ali Mohamed Ali	Secretary
4.	Yusuf Mohamed Jama	Treasurer
5.	Daud Ismail Nur	Member
6.	Hussein Muse Sh. Abdillahi	Member
7.	Deqa Abdi Hashi	Member

The elected Chairman, Mr. Ismail said a word of gratitude to the participants and thanked them for freeing/librating the executive committee from suspicion that they are not legitimate because AGM of the absence of AGM.

CLOSING CEREMONY:

Present were the former Minister of livestock, present deputy minister of L/stock and other distinguished guests. Mr. Ali, the secretary general gave the floor to Mr. Suleman, the former minister of livestock. He thanked the association's members for not having wasted his efforts of founding the ULPA. He advised the present ministry of livestock to support such privatization programs. He said that he was one of the voters for Mr. Ismail to be chairman of the association in the first term because of his age and tremendous experience he possessed and to his pleasure the members again felt the same.

Deputy to the minister of livestock also delivered a viable speech stressing again the importance of opening the door of the association to all livestock professional, who fulfilled the set criteria for selection in the constitution Mr. Nuh, one of the prominent members of the association addressed the audience with a short speech but full of spirit of advice. He urged both the elect houses to adhere core values of the association presented in the strategic paper, which can be summarized in one word (Rice):

R- stands for Respect

I – stands for integrity

C- stands for commitment

E- stands for efficient and effective performance.

If one of the above letters is missing the association's values are incomplete, no tangible success will be achieved and no rice will be eaten together.

Mr. Iidan, one of the x-members of executive committee warned against repetition of past obstacles such that:

- Annual assembly not realized
- Board never functioned
- Low attendance in AGM meeting by members

Observations:

- Attendance of working members was high
- New applicants came to conference
- Participation by non-member group was active
- Venue was conducive and quite

ANNEX B3: REVISED ULPA CONSTITUTION

(1ST NOVEMBER 2004 – 31ST MARCH 2005)

ULPA

DHAKHAATIIRTA XOOLAHA EE MADAXABANAAN.
UNITED LIVESTOCK PROFESSIONAL ASSOCIATION

CONSTITUTION

Hargeisa, 1 February 2005

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UNITED LIVESTOCK PROFESSIONAL ASSOCIATION (ULPA)

CONSTITUTION

1.0 NAME:

The name of the Association shall be the United Livestock Professional Association (**ULPA**). It is a unified single Association for veterinary professionals (Private and Public) with either a degree in veterinary science or technicians from a recognised veterinary institute. It is a non-political and non-clan based organisation. It has branches in the regions of the Somaliland.

2.0 EMBLEM:

The emblem of the association is a circle flanked by two leaves. In the middle of the circle there are animals (a sheep, a bull and a camel).

3.0 ADDRESS:

Head office:

The head office is in Hargeisa.

Telephone: 527349

Fax

E-mail: ulpaveterinary@hotmail.com

4.0 AIMS AND OBJECTIVES.

- To protect the rights and professional interest of its members.
- To look after the welfare of the ULPA members i.e. conditions under which ULPA members work.
- Maintain and uphold the ethics of the veterinary profession in Somaliland.

- To promote the animal health by undertaking both curative and preventive measures.
- To look after the welfare of all animals in Somaliland.
- To enhance the capability of the veterinarians and advance veterinary science.
- To provide a venue for information exchange among ULPA members and other similar organizations in Somaliland and overseas.

5.0 MEMBERSHIP:

5.1 Category of members:

5.1.1 Ordinary: ordinary membership shall be open to all persons (Vet and vet assistance) either public or private, who are registered or licensed by the Ministry of Livestock or the Board of Veterinary surgeons who ever is authorized at the time.

5.1.2 Honorary: honorary membership may be offered to members of the association or to non-veterinarians whom the association deems to have rendered outstanding service to the veterinary profession in Somaliland. Honorary membership shall be for life and shall be limited to a maximum of 3 persons

5.2 Admission Of Membership:

5.2.1 Ordinary: application for membership shall be on properly prescribed form and the applicant must be proposed and seconded by two ordinary and paid up members of the association.

Each application shall be laid before a properly constituted executive committee meeting for consideration and admission shall be on two third vote of the committee members present and voting.

5.2.2 Honorary membership: - a recommendation of honorary membership shall be proposed and seconded by ordinary paid up members in writing to the secretary of united livestock association.

The secretary shall circulate the names of the proposed individuals in writing to the entire membership of the **ULPA** for scrutiny- at least three months in advance of the annual general meeting.

The branches shall in turn forward their recommendations to the council of ulpa at least eight weeks prior to the annual general meeting. The council shall prepare a recommendation and place it on the ulpa annual general assembly meeting agenda. Admission shall be by majority vote at a properly constituted general meeting of the association. Honorary members are exempted from the payment of subscription fees.

5.3 Rights to membership

5.3.1 Shall have full voting rights provided that they are fully paid up members.

5.3.2 Can be elected and can hold office in the association.

5.3.3 Propose and second motions

5.3.4 Can take part in the activity of the association.

5.3.5 Honorary members who are not professional veterinarians have no voting, right but have the right to attend assembly meetings.

5.4 Termination of membership:

5.4.1 Failure of the payment of annual fees, which will be not later than 1st January each year.

5.4.2 Breaking of rules and regulations of ULPA.

5.4.3 Any criminal offence committed by a member will result in the automatic expulsion.

5.5 Suspension of membership:

Non-payment of subscription fees. The member will however be reinstated when the member pays again his fees.

6.0 MEMBERSHIP FEES:

The payment of fees begins at 25th of December and ends at 1st January each year.

Ordinary members must pay both the annual subscription and registration fees.

Honorary members will not pay fees. The Board of Directors can modify the yearly subscription fees

6.1	**Registration Fees:**	20USD per individual
6.2	**Monthly fees:**	1USD per month
6.3	**Working member fees:**	10 USD per month
6.4	**Contract member fees:**	15 USD per month
6.5	**Other benefits:**	20USD per event

7.0 ORGANS OF THE ASSOCIATION.

The organs of the association shall be:

7.1 The General Assembly:

The General Assembly, which shall be either a properly constituted Annual General meeting or an Emergency Meeting. This shall be the highest organ of the association in terms of legislation and decision-making.

7.2 The Board Of Directors

The BOD shall be an arbitrator and the policy making body. It shall also be the body setting guidelines among others on application fees, subscriptions, and discipline of **ULPA** members and present these to the general assembly for adoption.

7.2.1. The **BOD** will consist of the seven senior members selected among the branches of **ULPA** on the Annual General Meeting.

7.2.2. Regular meetings shall be held every three months. The chairman of **BOD** may call extraordinary meetings.

7.2.3. Decisions shall be made by simple majority vote when the quorum is ¾ of all members present

7.2.4. No member of the board will receive monetary or other compensation for duties performed on behalf of the association

7.2.5. Minutes of the board meetings and decisions shall be written in Somali language

7.2.6. The board will appoint an auditor for the association every general assembly. The auditor shall be a qualified accountant and shall not be a member or an employee of the organization.

7.2.7. The members of the Board during their first meeting shall elect the secretary of the Board.

7.2.8. In the event of the chairman being absent then the members present shall elect a chairman for the session

7.2.9. The BOD secretary on advice from the chairman shall call BOD meetings.

7.2.10. The BOD shall hold a minimum of three meeting yearly and preferably once every four months.

7.2.11. Any of the Board members failing to attend two consecutive BOD meetings without apologies will be considered to have resigned. The branches to be notified in writing of dismissal of their representatives to the council. The remaining members shall have power to co-opt other members to serve on the council or the remaining term of office.

7.3 The Executive Committee:

7.3.1 The Executive Committee of **ULPA** shall be the administrative committee of the association. Ordinary members shall elect this committee through hand rising at the Annual General Meeting. The elected officials shall comprise of the chairman, the vice chairman, secretary, treasurer and three other committee members.

7.3.2 The executive committee has power to co-opt at most three ordinary members of the association to the committee and to form such subcommittees it deems necessary for the execution of its duties.

7.3.3 The tenure of office bearers of the committee shall be two years, but they will be eligible for re-election.

7.3.4 The chairman shall hold office for two years only. He/she shall be eligible for re-election for one more terms. He/she shall however not be in office for more than three years consecutively, for the next two years out of that office.

7.3.5 The vice chairman may become chairman. He/she shall be eligible for election to any post.

7.3.6 The secretary shall hold office for two years. He/she may be elected to serve for a second year. But no longer consecutively. At the end of one year or two year as secretary he/she shall be eligible for election to any other post.

7.3.7 The treasurer shall hold office for two years. He/She may be elected to serve for a second year, but not longer consecutively. He/She shall be eligible at the end of one or two years for election to any other post.

7.3.8 The secretariat shall be the collecting, storing and dispatching office.

7.3.9 Employees of ULPA shall be accountable to the executive committee.

7.3.10 The day to day running of the secretariat shall be the responsibility of the secretary.

7.3.11 The executive committee shall establish and run the secretariat and shall be responsible for personnel and financial decisions concerning the secretariat.

8.0 DUTIES OF THE OFFICE BEARERS.

8.1 Chairman:

8.1.1 The chairman shall preside over all the meetings of the association other than the council. He/She shall represent the association in all fora.

8.1.2 After consulting with the **BOD**, the chairperson can call meeting.

8.1.3 Sign agreements on behalf of the association.

8.2 Vice-Chairman:

8.2.1 The vice chairman shall assist the chairman and chair meetings in the absence of the chairman.

8.2.2 In the unlikely event where the chairman and vice chairman are both absent and provided that those present will constitute a quorum then the committee will elect a chairman for that meeting.

8.3 Secretary

8.3.1 The secretary shall record and keep the minutes of all the meetings of the executive committee and the annual general meeting or special general meeting. He/She shall avail copies of all minutes to each member of the committee. Such minutes shall be made available within a fortnight of holding the meeting.

8.3.2 The secretary shall send notice of all committee meeting to the members of the committee along with an agenda not less than 14 days before any such meeting.

8.3.3 The secretary shall also send out notices of the annual general meeting, at least eight weeks before the date thereof. The secretary shall send notice of any special general meeting not less than 21 days before the date thereof.

8.3.4 The Secretary shall assist the Chairman to receive and reply all correspondence on behalf of the association.

8.3.5 The Secretary shall execute all decisions of the committee meeting except where such are specifically designated in the meeting for action to another committee member.

8.3.6 The secretary shall prepare and submit an annual report on the activities of the association at the annual general meeting.

8.3.7 The secretary shall be the office administrator to the secretariat on behalf of the association.

8.3.8 In the absence of the secretary, the executive committee shall appoint a member of the executive committee to take the minutes of the meeting.

8.4 Treasurer

8.4.1 The Treasurer shall be responsible for all the financial affairs of the association.

8.4.2 The Treasurer shall receive all sums of money and non-monetary gifts or donations on behalf of the association.

8.4.3 The Treasurer shall keep up to date books of accounts showing receipts and payments on behalf of the association.

8.4.4 The Treasurer shall be one of the bank signatories for the association funds, and shall remain solely responsible for the association funds in the bank, and shall advise the committee on bank balances, withdrawals and deposits.

8.4.5 The Treasurer shall liaise closely with council on matters concerning raising of funds for the association, and shall advice the committee on the most suitable methods of investing or depositing of association funds.

8.4.6 The Treasurer shall liaise with the secretarial through the secretary on receipting, and petty cash administration in the secretariat office. He/she shall also see to the proper keeping of all documents for presentation to the auditor, and together with the auditor, to the preparation and presentation of the audited report to the annual general meeting.

8.4.7 The Treasurer shall be responsible for keeping a current register with names and addresses of all members of the association and update the same regularly.

9.0 RESIGNATION FROM THE EXECUTIVE COMMITTEE.

Any member of the committee shall be free to resign from office for whatever reason at any time during the tenure of office, provided He/She writes a letter of resignation to the chairman, stating his/her reasons for resignation. The chairman may, however

only tender his resignation during an executive committee meeting in which case the vice chairman will act as the chairman for the term.

9.1 Any resignation shall be considered effective from the date of receipt of the letter.

9.2 If a member of the committee fails to pay his/her subscription within the prescribed period, the secretary of the chairman (here the defaulting member is the secretary) shall require in writing the payment or tendering of resignation within one-month notice. Such letter shall be effective from the date it is posted or delivered.

9.3 If any member of the committee ceases for any cause to be a member of the **ULPA**, or dies in office, resigns or is forced out of office due to misconduct or proven inefficiency he/she will automatically ceases to be a member of the committee.

The executive committee shall have the right to require the resignation of any member of the executive committee due to proven inefficiency in carrying out the duties assigned to him/her by the committee, misconduct in office, bankruptcy or acting in a way that brings into disrepute the veterinary profession. The executive committee will discuss the conduct of such committee member in his/her absence, and he/she will be given an opportunity to defend himself/herself. A vote shall be taken and the action to remove the member from the committee will be taken if two thirds of those present excluding the member concerned vote for such action.

9.4 Any vacancies arising in the committee for whatever reason shall be filled by co-option by the remaining committee members, to be effective until the next annual general meeting.

10.0 MEETINGS.

10.1 There shall be four types of meetings.

A) Annual General Meetings:

B) Emergency Meeting

C) Board of Directors or council Meeting

D) Executive Committee Meeting

10.2 The AGM shall be held not later than 30th December each year and attended by all categories of membership. The date of the meeting will be determined during the previous AGM.

10.3 The notice of intention to hold an AGM shall be sent by telephone to the last address of each member or communicated in any other form available to the member not less than eight weeks before the date thereof. The notice shall be recorded in the AGM notice book showing the address and date of notification.

10.4 The agenda for the AGM will be sent to all the members at least 14 days before the date of the meeting.

10.5 The quorum for the AGM shall be thirty (30) paid up ordinary members present at the time of convening the AGM when the number of the association is (60) members.

10.6 The business of the AGM shall be to: - receive the chairman's address, which shall be based on a subject of the chairman's choice and there shall not be a discussion on the address thereafter in the meeting.

10.7 To receive the secretary's report which shall be based on the activities of the association through the year. This report shall be open for discussion in the meeting.

10.8 To receive the treasurer's report, which shall give a financial review of the affairs of the association and present, audited accounts. The treasurer's report should be distributed to the members with the agenda at least two weeks before the congress to allow the members to study it before the treasurer tables it.

10.9 All motions intended for discussion during the AGM shall be submitted in writing signed by a proposer and seconder and received (and noted as such) by the secretary at least 21 days before the date of the AGM. Motions received later than 21 days before the AGM shall be deferred to the next AGM. Any motion properly proposed, seconded, debated and a resolution accepted shall not be presented again as a substantive motion for debate until the expiry of at least one year, unless the executive committee accepts that there have arisen substancially altered circumstances that warrant the calling of a special general meeting to debate the motion.

10.10 To discuss motions of which proper notice has been given. The incumbent chairman shall chair the session. The processing of motions properly

introduced for discussion in the AGM shall be the duty of the outgoing committee. The introduction of the motion for discussions shall be done by the proposer.

11.0 ELECTIONS TO THE EXECUTIVE COMMITTEE:

11.1 For the elections of the executive committee, the outgoing chairman vacates his/her seat and a senior officer nominated from among the ordinary members present, by a general vote shall take the chair for the purpose of the election.

11.2 The names of candidates for the election to the executive committee shall be submitted in writing. All candidates shall give consent of the proposal in writing and be proposed and seconded by ordinary paid up members. All nominations shall be presented to the secretary.

11.3 Balloting for election shall be hand raising.

11.4 No voting by proxy is to be allowed.

12.0 BRANCHES.

There shall be one type of branch of the association i.e. Regional branches.

Regional branches shall consist of ordinary or honorary members of the ULPA who within any defined area of the Republic of Somaliland form a branch of the United Livestock professional Association.

13.0 OPERATION OF THE BRANCHES.

13.1 Any Eight or more ordinary and honorary members may associate themselves together to form a branch. They shall apply in writing to the Executive committee of the ULPA for recognition as a branch of and affiliation to the United Livestock Professional Association.

13.2 Each branch applying for membership shall accept by endorsing a proforma constitution for the branch association, which has been prepared by the ULPA. The branch shall have the discretion to add to the proforma constitution any clauses it deems necessary for the proper operation of that branch. Such additions however must be acceptable to **ULPA** and not contravene or contradict those of the parent Organization.

13.3 The executive committee of the United Livestock Professional Association shall affiliate no branch to **ULPA** until it receives a written approval of its constitution.

13.4 Where a branch feels aggrieved by being denied recognition, or its constitution not accepted by the executive committee, it should have right to appeal to the council or **BOD** for a review of the executive committee's decision

13.5 Upon receipt of application by a branch of review of the executive committee's decision, the council shall sit and communicate a decision within three months from the date of the complaint thereof.

13.6 In the event of the BOD upholding the executive committee's decision start the whole process of application a new after two year from the proceedings application or refer the issue to the next AGM where it will be decided by a simple majority vote after a debate not exceeding 30 minutes.

13.7 No branch shall amend or alter its constitution without approval by the executive committee.

13.8 A branch committee shall not meet less than five times a year and every branch shall submit copies of its minutes three weeks after every meeting to the National Executive Committee.

13.9 Every branch shall update the executive committee annually of the names of office bearers and committee members and the total membership of the branch including the addresses of its members.

13.10 Subject to the constitution of the **ULPA** and of the branch, the branch shall be free to govern itself and carry out its activities as it shall deem fit free of interference from the executive committee of the parent **ULPA**.

13.11 For the purpose of interpretation of the constitution, where the constitution of the branch and that of the **ULPA** seem to conflict, the broad meaning derived from the **ULPA** constitution shall always prevail over that of the branch.

13.12 Audited accounts of the branches shall be submitted annually to the executive committee of the **ULPA** to reach them not later than 31stDecember each year. The executive committee of **ULPA** shall have power to levy a sum not exceeding 10% of branch funds annually. Likewise the **ULPA** executive body shall have powers to provide funds for any branch. Such subsidy shall not exceed 40% of the branch's contribution towards that purpose or in such sum that shall from time to time be determined by the executive committee of **ULPA**.

13.13 A branch shall elect from its committee such representatives as shall from time to time be determined by the branch's AGM to sit in the council of **ULPA**.

13.14 If the executive committee of a branch is deemed to be operating in contravention of the constitution this shall be pointed out in writing by the council. If such contravention continues then the council shall discuss this

matter. All the executive committee members of the executive branch in question shall attend the meeting.

13.15 If no remedial measures are taken then the council will dissolve the executive and a caretaker executive committee appointed by the council to serve until such time that another executive be elected

14.0 FINANCE AND ASSETS.

14.1 The funds of the association shall be derived from annual subscriptions from members, sponsorship, registration fees, donations and legacies from well wishers, and income from accumulated capital. These sources are not exclusive, and other methods which shall be considered by the executive committee from time to time, and recommended to the Board for approval and be adopted only after majority vote. The executive committee will have powers to set up a subcommittee whose mandate will be to look into and formulate ways of raising or generating funds for the association.

14.2 The United Livestock Professional Association shall open operate Bank Account (s) in the name of the association with a reputable Bank selected by the executive committee.

14.3 Branches of the Association shall after seeking written permission from the parent council be allowed to open and operate bank accounts in their respective local regions. Such accounts shall be opened into the name of United Livestock Professional Association but may also bear the name of the branch.

14.4 At the first meeting of the newly elected executive committee, the committee shall nominate three members of the committee to operate the association's account.

14.5 In the case of branch accounts, the respective branches will nominate three signatories to their accounts during the first meeting of the newly elected branch executive committee.

14.6 All the cheque books, ledger accounts, bank statements, banking and withdrawal documents shall be the property of the parent body but shall be kept by the body operating the account and shall be made available for scrutiny by the parent body on demand.

14.7 Any two of the appointed three signatures shall sign every cheque issued by the association.

14.8 The parent body shall have authority after sanction by the Board, to suspend the signatories to any branch account and operate it for the best interests of the branch, provided the branch is allowed to resolve the prevailing difference within a calendar year. Failure to do so will give the council authority to determine whether to freeze the branch accounts, and

operate the same with the central account, pending the election of a new branch executive committee.

14.9 An auditor shall be appointed each year by the Board of Directors.

14.10 All the respective branches of the association will also appoint their auditor each year at their respective annual general meeting.

14.11 A consolidated audited account inclusive of branches and parent accounts shall be presented each year at the association's general meeting.

14.12 A financial report shall be presented at every meeting of the executive committee, unless under exceptional circumstances. The executive committee waives this requirement and provided it shall not waive the requirement at any two consecutive meetings

14.13 A printed book of receipts for all monies received on behalf of the association from all sources shall be kept. The Treasurer shall sign each receipt. The source of money and the date received shall also be recorded. In the case of subscription the receipt shall record the period, which is covered.

14.14 All instructions to the accountant or cashier must be in writing.

14.15 Funds and other assets of the association cannot be loaned to any individual or organization.

14.16 An approved purchase order is required before any payment is made to any vendor.

14.17 Separate ledgers must be maintained for each different funding source.

14.18 Expenditures for each budget line and project activity are to be accumulated and reported quarterly.

14.19 A system of cash advances to contracts shall be established and maintained. No contractor will be advanced more than 30% of the total budget. Advances will be suspended whenever receipts supporting the advances are not submitted within two week

14.20 The financial year of the association including its branches shall run from the 1st January to 31st December. Half yearly trial balances shall be prepared by the Treasurer by 31st July each year and circulated to the National Executive.

14.21 The United Livestock Professional Association shall be able to acquire property and own assets. The property of the association shall be in form of tangible assets. The association may however be involved in commercial ventures if it forms a limited company to handle such ventures as described above.

Acquisition of property by the association shall be on the basis that such an act would either benefit the association financially, morally, culturally and otherwise or further the interests of the association locally or internationally and or bring a closer cooperation of the association and other professional bodies or bring the association's wellbeing and strength in line with that of other such associations.

The association may be involved in commercial projects which are in the interest of furthering the veterinary profession in furtherance of this the association may enter into agreements on behalf of its members with possible donors to facilitate this activity.

14.1 All the assets either with the main body or the branches shall be acquired and registered in the associations name (United Livestock Professional Association) if possible, or trustees for the association.

14.2 The association office shall open an inventory book with codes for all the assets held in the National office as well as the branches.

14.3 The association and branches shall on acquisition of any non-consumable stores and assets allocate an inventory number using the appropriate coding allocated. The branches shall furnish such numbers to the association's office within two months of acquisition for entry and storage in the main associations inventory.

14.4 All the branches shall send a list of inventories and liabilities together with their financial returns at the end of each financial year.

14.5 Assets may only be disposed of by permission granted in writing by the parent executive committee quoting the pertinent of the parent or branch executive committee meeting.

14.6 In the event of disposal of any of the association's assets documentary evidence together with the letter of authority to dispose of such assets from the parent executive committee shall be filed and kept for a period of not less than four years, failing which the office concerned shall be held responsible and may be required to physically or otherwise replace the asset by the executive committee. The AGM and not branches will do disposal of major assets only after ratification.

14.7 All the ledger books detailing the inventory of the branch assets shall remain the property of the main office and can be repossessed from any branch office for scrutiny without prior notice to the branch office.

15.0 AMENDMENT OF THE CONSTITUTION

15.1 The constitution may be amended or altered only by majority vote of members at properly constituted annual general assembly or an emergency meeting provided that:

15.2 The quorum for such a meeting is a half of the membership of ULPA members and two thirds of the members present voting in favour

15.3 Any proposal for a new clause or amendment to an existing clause shall be circulated to every member together with the agenda for that meeting.

15.4 No voting by proxy shall be allowed.

15.5 All amendments are subject to the provisions of article 13.0.3 of the constitution

16.0 DISSOLUTION OF A BRANCH:

16.1 Dissolution of the branches of ULPA shall be effective when two thirds of members with full membership rights vote in favour at a special general meeting called in accordance with the constitution at which voting shall be by balloting and at which votes by proxy are allowed.

16.2 Upon dissolution of the branch, all depts and liabilities legally or owing by the association have been satisfied, any surplus assets of the association shall be divided among the paid up members or they can choose to donate the assets to a charity of their choice

17.0 DISSOLUTION OF ULPA

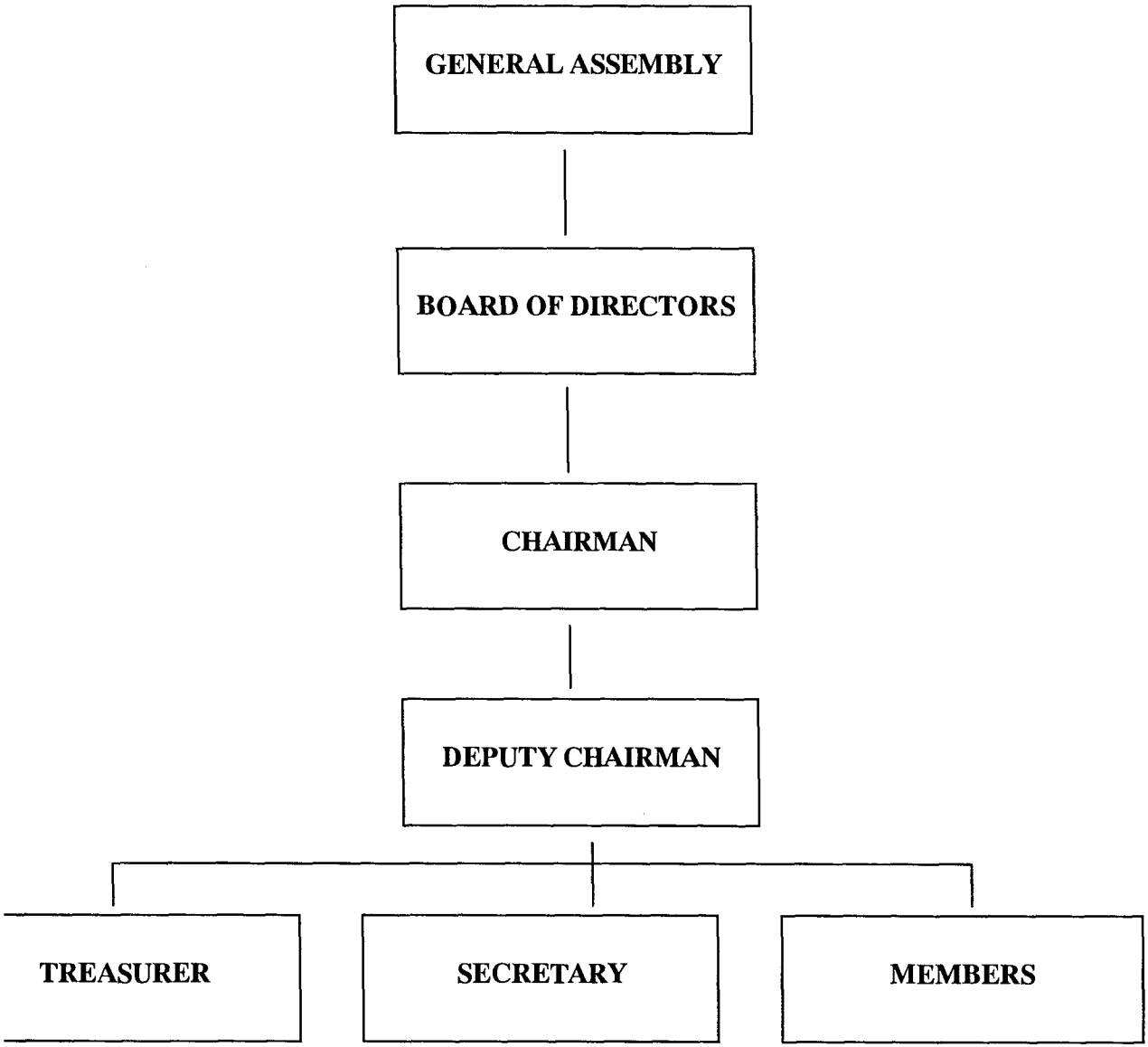
17.1 Dissolution of **ULPA** shall be effective when three fifth of all paid up members shall present themselves and vote in favour of the resolution at a emergency meeting called in accordance with the constitution.

17.2 Voting in such an emergency meeting shall be by secret ballot and no voting by proxy shall be allowed

17.3 Upon voting for dissolution, a dissolution committee constituting for ten persons shall be appointed by the executive committee at least among whom shall be an advocate, a religious leader and a social worker from public or private institution shall be appointed for the purpose of winding up the association.

17.4 In the event of the association being dissolved, all the assets remaining after discharge of all liabilities shall be transferred to such other non-profit making and/or charitable organisation having objectives similar to those of **ULPA**, as may be deemed acceptable by the dissolution committee.

STRUCTURE OF THE ASSOCIATION



URURKA XIRFADLAYAASHA XOOLAHA EE BAHOODAY
(ULPA)

DASTUURKA URURKA

Hargeysa, 1da Febaraayo 2005

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URURKA XIRFADLAYAASHA XOOLAHA EE BAHOOBAY (ULPA)

DASTUURKA URURKA

1. **Magaca Ururka:**

   Magaca ururka wuxuu noqonayaa Ururka Xirfadlayaasha xoolaha ee Bahooday (ULPA). Waa hal urur oo ay ku bahoobeen xirfadlayaasha xannaanada xoolaha (lahaansho gaar iyo dowli) ee haysta shahaadada cilmiga xoolaha ama mid xirfadeed ee machad la aqoonsan yahay. Waa urur aan siyaasad iyo qabiil midna ku salaysneyn. Wuxuu faracyo/laamo ku leeyahay Gobolada Soomaaliland.

2. **Astaanta:**

   Astaanta ururka waa goobo ay calaamadda V ku dhexjirto, caleemana kor uga wareegsan yihiin. Dhexda goobada waxaa ku jira xoolo (Ido, Dibi iyo geel).

3. **Cinwaanka:**

   Xarunta Dhexe

   Xarunta dhexe ee ururka waa Hargeysa.
   Telefoon: 527349
   Fax:
   E-mail: ulpaveterinary@hotmail.com

4. **Hadafka iyo Ujeedada Ururka:**

   - In la dhowro xuquuqaha iyo danaha xirfadeed ee xubnaha.
   - In la ilaaliyo daryeelka xubnaha ULPA, sida xaaladaha ay ku shaqeeyaan xubnaha ULPA.
   - Joogteeynta iyo sugidda nidaamyada xirfadda xannaanada xoolaha ee Soomaaliland.
   - Horumarinta caafimaadka xoolaha iyadoo la qaadayo tallaabooyin daweyn iyo kahortagba ah.
   - In la ilaaliyo daryeelka dhammaan xoolaha Soomaaliland.

- In kor loo qaado awoodda xoola-yaqaannada, lana horumariyo cilmiga xoolaha.
- In la siiyo goob ay macluumaadka isku dhaafsadaan xubnaha ULPA iyo ururada la midka ah ee Soomaaliland iyo kuwa waddanka dibadiisa ah.

5. XUBINNIMADA:

5.1 Heerarka Xubnaha

5.1.1 **Xubin Joogto ah:** waa in xubin joogto ah u furnaadaan dhammaan (xooloyahannada/**Dhaqaatiirta Xoolaha, Kalkaaliyaasha Dhaqaatiirta Xoolaha)** ha noqdeen kuwa gaar iyo kuwo dowli ah oo ay diiwaan gelisay Wasaaradda Xannaanada Xoolaha ama Guddiga Dhaqaatiirta Xoolaha ee la awood siiyay.

5.1.2 **Xubin Sharafeed:** Xubin Sharafeed waxaa loo fidin karaa xirfadlayaasha ama Xirfadlaaweyaasha Xoolaha kaasoo ururku u arko inuu ka geeystay adeeg raali laga yahay (lala dhacay), xirfadda xoolaha ee Soomaaliland. Xubin Sharafeedka waxay abid ahaaneysaa joogto.

5.2 OGGOLAANSHO XUBINNIMO

5.2.1 **Xubin Joogto:** Codsiga xubinnimada waa in uu noqdaa mid si fiican loo soo qoray, codsiguna waa in ay soo jeediyaan ama soo gudbiyaan laba xubnood oo dhigaal bixiyaasha ururka ah. Codsi kastaa waa in la hordhigaa kulan sharciyeedka Guddiga Fulinta, mudnaanta iyo xulashada waa in ay u codeeyaan saddex meelood laba meel xubnaha codka leh ee jooga kulankaas.

5.2.2 **Xubin Sharafeed:** Ku talinta xubin sharafeed waa in ay ka timaadaa si qoraal ahna ugu soo gudbiyaan xoghaynta ururka xirfadlayaasha xoolaha ee bahoobay xubnaha dhigaal bixiyaasha joogtada ah.

Xoghaynta waa in ay magacyada shaqsiyaadka la soo gudbiyay si qoraal ah ugu qeybisaa dhammaan xubnaha ururka ULPA ugu yaraan saddex bilood ka hor kalfadhi sannadeedka guud, si ay u hubiyaan.

Faracyadana/laamahana sidoo kale waa in ay ku talintooda u soo gudbiyaan golaha ULPA ugu yaraan siddeed toddobaad ka hor kalfadhi sannadeedka guud. Goluhuna wuxuu diyaarinayaa cidda u ku talinayo, wuxuuna ku darayaa qobodada wadahadalka ee

kalfadhi sannadeedka guud ee golaha. Ansixintana waa in ay u codeeyaan inta badan kulanka sharciyeedka ururka. Xubin sharafeedyada waxaa laga dhaafay bixinta dhigaalka xubinnimada.

5.3 XUQUUQAHA XUBNAHA

5.3.1 Waa in ay yeeshaan xuquuqda codeynta buuxda kadib marka ay si buuxda u bixiyaan dhigaalka xubnaha.

5.3.2 Waa la dooran kara xil xafiisna waa ka qaban karaan ururka.

5.3.3 Waxay soo jeedin karaan ama hakin karaan mowduucyo loo tixgelinaayo ka hadalkooda (motions).

5.3.4 Waa ka qeyb qaadan karaan howlaha ururka.

5.3.5 Xubinaha Sharafeed ee aan xirfadlayaasha xoolaha ahayn cod ma laha, laakiin waxay xaq u leeyihiin in ay ka qeyb galaan kalfadhiga golaha.

5.4 BAABI'INTA XUBINNIMADA

Qofka wuxuu xubinnimadiisa ku baabi'in karaa:

5.4.1 Ku guul dareysiga bixinta dhigaal sannadeedka oo aan ka dib dhicin 1da Jannaayo sannad walba.

5.4.2 Jebinta xeerarka iyo shuruucda ULPA.

5.4.3 Fal dambiyeed kasta oo uu ku kaco xubinta wuxuu keeni karaa in isla markiiba la cayriyo.

sh) **Hakin Xubinnimo:** Xubnaha Joogtada ee si kastaba u awoodi waaya in ay dhigaaladooda bixiyaan waxay codsi qoraal ah u soo gubinayaan Xoghayaha.

5.5 HAKINTA XUBINNIMADA:

Bixin la'aanta dhigaalada xubinta waxay ka hakineysaa xubinnimada. Waxayse xubinnimada u soo noqoneysaa marka uu dib u bilaabo bixinta dhigaalka.

6. DHIGAALADA XUBINNIMADA

Bixinta dhigaalada waxay sannad kasta ka bilaabaneysaa 25ka Diseembar waxayna ku eg tahay 1da Jannaayo.

Xubnaha dhigaal bixiyaasha joogtada ah waa in ay bixiyaan dhigaal sannadeedka iyo dhigaalka is diiwaan gelinta labadaba.

Xubno sharafeedka ma bixindoonaan dhigaalada. Guddiga Agaasinka ayuunbaa wax ka beddeli karo dhigaalada la bixinayo.

6.1	**Dhigaalka diiwaan gelinta:**	**20 USD qofkii**
6.2	**Dhigaal bileedka:**	**1 USD bishii**
6.3	**Dhigaalka xubnaha shaqeeya:**	**10 USD bishii**
6.4	**Dhigaalka xubnaha qandaraaska haysta:**	**15 USD bishii**
6.5	**Dhigaalka faa'iidooyinka kale: xaaladdiiba**	**20 USD**

7. QAAB DHISMEEDKA URURKA

Qaab dhismeedka ururka wuxuu noqonayaa:

7.1 Golaha Guud:

Golaha Guud oo sharci ahaan ah kalfadhi sannadeedka guud ama kalfadhi

deg-deg ah. Golahan waa xubinta ugu sarreeysa ururka dhinacyada sharci dajinta iyo go'aan gaarista.

7.2 Guddiga Agaasinka:

Guddiga Agaasinka waa guddi dhex-dhexaadin iyo sharci sameeyn. Waxaa kale oo uu yahay guddi sameeya habraaca dhigaalada ee codsiyada, macaamiisha, anshaxmarinta xubnaha ULPA dhexdooda, isla markaana hor dhiga kalfadhiga guud si loomeel mariyo.

7.2.1 **GA** wuxuu ka koobnaan doonaa toddoba xubno sare oo laga soo xulay faracyada/laamaha ULPA xilliga kalfadhiga guud.

7.2.2 Kulamo joogta ah waa in la qabtaa saddexdii biloodba mar. Guddoomiya **GA** ayaa isugu yeeri kara shir aan caadi ahayn.

7.2.3 Go'aanada waa in lagu gaaraa cod hal dheeri ah marka kooramka ¾ xubnuhu xaadir yihiin.

7.2.4 Xubinna kuma heli doonto kharash ama magdhow howl ay ku fuliyeen maga ururka.

7.2.5 Qoraalka wada hadalka iyo go'aannada waa in lagu diiwaan geliyaa afka Soomaaliga.

7.2.6 Guddigu wuxuu u magacaabayaa hantidhowr ururka kalfadhi guud kasta. Hantidhowrkuna waa inuu noqdaa xisaabiye xirfad leh oo aanan ka mid ahayn, ama aan u shaqeyn ururka.

7.2.7 Xubnaha guddiga waxay dhirkooda koowaad ku dooranayaan Xoghayaha Guddiga.

7.2.8 Marka guddoomiyaha ka maqan yahay shir, xubnaha xaadirka ah ayaa iska dhex dooranaya shir guddoon shirka xilligaas.

7.2.9 Xoghaynta asagoo ka tala qaadanayo guddoomiyaha wuxuu kulan isugu yeerayaa xubnaha Guddiga Agaasinka.

7.2.10 **GA** wuxuu qabanayaa ugu yaraan saddex shir sannadkii isagoo door bidaya afartii biloodba mar.

7.2.11 Xubin Guddi karta ee aan soo xaadirin laba shir oo is xiga cudur daar la'aan waxaa loo tixgelinayaa in ay is casishay. Faracyada/laamaya waxaa lagu war gelinayaa qoraal ka fariisinta wakiilkooda golaha. Xubnaha soo haray waxay awood u yeelanayaan in ay howl geliyaan xubno kale si ay ugu adeegaan golaha inta xilliga xafiiska ka harsan.

7.3 Guddiga Fulinta

7.3.1 Guddiga fulinta ee ULPA waxay noqonayaan guddiga maamul ee ururka. Xubnaha joogtada ah waxay si gacan taag ah ku dooranayaan guddi xilliga kalfadhi sannadeedka guud. Saraakiisha la doortay waxay ka koobnaan doonaan Guddoomiyaha, Ku-Xigeenka, Xoghayaha, Khasnajiga iyo saddex xubin guddi kale.

7.3.2 Guddiga fulinta waxay awood u leeyihiin in ay doortaan saddexda xubnood ee ugu mudan xubnaha joogtada ah si ay uga mid noqdaan guddiga iyo in ay magacaabaan guddi hoosaadyo sidii loogu baahdo si ay u gutaan waajibaadkooda.

7.3.3 Xilliga ay guddiyadu xafiiska haynayaan wuxuu noqonayaa laba sono, laakiin dib ay isugu soo taagi karaan doorasho kale.

7.3.4 Guddoomiyaha wuxuu xafiiska hayn karaa laba sano oo kaliya. Wuxuuna isu soo taagi karaa xafiiska mar kale. Si kastaba, xafiiska ma qaban karo in ka badan saddex sanno oo isku xigta, kana maqnaada xafiiska labada sano ee xigta.

7.3.5 Ku-Xigeenka wuxuu noqon karaa Guddoomiye. Darajo kastaana waa loo dooran karaa.

7.3.6 Xoghayaha wuxuu xafiiska haynayaa laba sano. Sannadka xiga in uu shaqeeyana waa loo dooran karaa. Mase sii joogayo. Marka ay

dhammaato sannadka ama labada sano ee xoghayenimada waxaa loo dhiibi karaa darajo kale.

7.3.7 Khasnajiga wuxuu xafiiska haynayaa laba sano. Sannadka xiga in uu shaqeeyana waa loo dooran karaa, mase sii joogayo. Marka ay dhammaato sannadka ama labada sano ee xoghayenimada waxaa loo dhiibi karaa darajo kale.

7.3.8 Xoghayntu waa inay ururisaa, habeysaa, kada dirtaa xogta xafiiska.

7.3.9 Shaqaalaha ULPA waxaa la xisaabtamaya Guddiga Fulinta.

7.3.10 Socodsiinta howl maalmeedka xafiiska waa xil saran Xoghaynta.

7.3.11 Guddiga fulinta wuxuu abuurayaa, socodsiinayaana guddi howlfulineed oo mas'uul ka noqda go'aannada khuseeya shaqaalaha iyo maaliyadda.

8. XILALKA XAFIIS HAYAYAASHA

8.1 **Guddoomiyaha:**

8.1.1 Guddoomiyaha wuxuu hoggaaminayaa dhammaan kulamada ururka marka laga reebo golaha. Wuxuu kulan kasta matalayaa ururka.

8.1.2 Kadib marka uu la tashto Guddiga Agaasinka, Guddoomiyaha wuxuu isugu yeeri karaa kulan.

8.1.3 Wuxuu ku saxiixayaa heshiisyada magaca ururka.

8.2 **Guddoomiye Ku-Xigeenka:**

8.2.1 Guddoomiye Ku-Xigeenka wuxuu caawinayaa Guddoomiyaha, guddoominayaa shirarka marka uu maqan yahay Guddoomiyaha.

8.2.2 Mararka dhifka ah ee Guddoomiyaha iyo Ku-Xigeenkiisaba ay wada maqan yihiin, loona baahdo xubnaha jooga in ay qabtaan kulan, markaa guddiga wuxuu shirkaas oo kaliya u dooranayaa guddoomiye.

8.3 **Xoghaye:**

8.3.1 Xoghayaha wuxuu diiwaan gelinayaa, xafidayaana qoraalka wada hadalka ee dhammaan kulamada guddiga fulinta iyo kan golaha guud ee sannadlaha ah ama kulan guud oo gaar ah. Wuxuu u qeybinayaa qoraalada wada hadalka dhammaan xubnaha guddiga. Qoraaladaas waa in ay diyaar noqdaan laba toddobaad gudahood qabashada shirka.

8.3.2 Xoghayaha wuxuu ogeysiin u dirayaa xubnaha markasta oo uu guddigu kulmayo isagoo raacinayo qodobada wada halka muddo aan ka yareyn 14 maalmood ka hor qabashada kulanka.

8.3.3 Xoghayaha waxaa kale oo uu dirayaa ogeysiinta kulan sannadeedka guud ugu yaraan siddeed toddobaad ka hor qabasha shirka. Xoghayaha wuxuu ogeeysiinta kulan kasta oo gaar ah dirayaa ugu yaraan 21 maalmood ka hor qabashada kulanka.

8.3.4 Xoghayuhu wuxuu ka caawinayaa Guddoomiyaha inuu magaca ururka ku helo ugana jawaabo dhammaan war is dhaafsiga.

8.3.5 Xoghayuhu waa inuu fuliyaa dhammaan go'aanada guddiga ee kulanka lagu gaaray marka laga reebo wixii fulinteeda uu kulanka si gaar ah ugu xil saaray xubin guddi kale.

8.3.6 Xoghayuhu waa inuu diyaariyaa una soo gudbiyaa kalfadhiga guud ee sannadlaha, warbixin sannadeedka waxqabadka ururka.

8.3.7 Xoghayaha wuxuu noqonayaa maamulaha xafiiska ee matalayo ururka.

8.3.8 Marka uu xoghayuhu maqan yahay, guddiga fulinta ayaa xubin guddiga ka mid ah u xilsaaraya in uu qaado qoraalada wada hadalka kulanka.

8.4 **Khasnajiga:**

8.4.1 Khasnajigu wuxuu mas'uul ka yahay dhammaan arrimahya maaliyadda ururka.

8.4.2 Khasnajigu wuxuu magaca ururka ku qabanayaa dhammaan lacagaha iyo haddiyadaha ama deeqaha ururka.

8.4.3 Khasnajigu wuxuu magaca ururka ku haynayaa buugga xisaabaadka ee muujinaya dakhliga iyo kharajka ururka.

8.4.4 Khasnajigu wuxuu ka mid noqonayaa saxiixayaasha bankiga ee lacagaha ururka, kaligiina wakiil lacagaha ururka uga noqonayaa bankiga, guddigana la socodsiinayaa haraaga bankiga, inta lagala baxay iyo rahanta taal.

8.4.5 Khasnajigu wuxuu golaha si dhow ula socodsiinayaa arrimaha ku saabsan dhaqaalaha ururka, talana ka siiyaa guddiga meesha ugu habboon ee lagu bixin karo ama la rahan dhigan karo maaliyadda ururka.

8.4.6 Khasnajigu wuxuu si dhow ula socodsiinayaa maalmulka isagoo u sii maraya xoghayaha, helidda iyo isticmaalka kharaj xafiiseedka maalmulka ururka. Waxaa kale oo uu ilaalinayaa habsami u haynta dokumentiyada oo dhan si loogu bandhigo hantidhowrka iyo inuu la

diyaariyo lana soo bandhigo hantidhowrka warbixin xisaabeedka xilliga kulan sannadeedka guud.

8.4.7 Khasnajigu wuxuu mas'uul ka yahay hayta diiwaanka socda oo ay ku qoran yihiin magacyada iyo cinwaannada dhammaan xubnaha ururka, si joogta ahna u cusbooneysiiyaa.

9. IS CASILAADA GUDDIGA FULINTA

Xubin kasta oo ka mid ah guddiga waxay xor u ahaan doontaa in ay iska casisho xafiiska sabab kasta iyo xilli kasta oo ka mid ah muddada uu xilka xafiiska hayo haddii uu/ay warqadda is casilaadeeda oo qoraal ah u soo gudbiyo/gudbiso guddoomiyaha iyadoo sababta lagu caddeynayo. Si kastaba guddoomiyuhu wuxuu is casilaadiisa ku soo qadimi karaa oo kaliya xilli lagu jiro kulanka guddiga fulinta, markaasoo guddoomiye ku-xigeenka uu qabanayo xilka guddominta xilligaas.

9.1 Is calisaad kasta waxaa loo tixgelin doonaa mid fusha laga bilaabo taariikhda la guddoomo warqadda is casilaadda.

9.2 Haddii xubin ka mid ah guddiga ay ku guul dareysato bixinta dhigaalkeeda/kiisa inta lagu jiro muddadii la cayimay, xoghaynta guddoomiyaha (xubinta buuxini xoghaynta) waxay u baahan doontaa si qoraal ah bixinta ama waxay u bandhigi doontaa digniin is casilaad qoraal ah muddo hal bil gudeheed. Qoraalkaas wuxuu dhaqan gal noqon doonaa laga billaabo muddada loo gudbiyay ama la gaarsiiyay xubinta.

9.3 Haddii xubin ka mid ah guddiga joojiso xubinnimada ULPA sabab kastaa ha ku timaadee ama dhimato inta uu xafiiska hayo, ama is casisho, ama lagu qasbo in ay ka tagto xafiiska dhaqan xumo awgeed, ama ay ku caddaato awood darri waxay si toos ah u lumineysaa xubinnimada guddiga fulinta.

Guddiga fulinta wuxuu xaq u yeelanayaa in ay ka dalbadaan xubin kasta oo ay u caddaato awood darri xil qaadistiisa/teeda, dhaqan xumo xafiiska dhexdiisa, fataalnimo, ama u dhaqmid si magic xumi u keeneysa xirfadda xannaanada xoolaha, guddiga fulinta wuxuu ka wada hadlayaa anshaxmarinta xubintaa guddi iyada/isaga oo ka maqan kulankaa. Waxaase la siinayaa fursad ay/uu isku daafacdo. Cod waa in loo qaadaa, tallaabo xilka guddiga looga qaadayana waa in la qaadaa haddii saddex meelood laba xubnaha xaadirka ah oo aysan ku jirin xubinta ay arrintu khuseyso ay u codeyaan tallaabadaas.

9.4 Jagooyin kasta oo ka bannaanaada guddiga sabab kasta ha ku bannaanaadeene, waxaa lagu buuxin doonaa sidii ay isku raacaan

(u doortaan) xubnaha guddiga ee haray, inay u howl galaan ilaa laga gaarayo kalfadhiga guud ee xiga.

10. SHIRARKA

10.1 Waxaa jiraya afar nooc oo shirar ah:

A) Kalfadhi Guud ee sannadlaha

B) Kalfadhi xaalad deg-deg ah

C) Shirka Golaha ama Guddiga Agaasinka

D) Shirka Guddiga Fulinta

10.2 Qabashada kalfdhiga guud ee sannadlaha kama dib dhici doono 30ka Disembar ee sannad walba, waxaana ka soo qeybgalayo dhammaan qeybaha leh xubinnnimada. Taariikhda la qabanyo shirka waxaa go'aaminaya kalfadhigii ka horreeyay.

10.3 Ogeysiinta ujeedada lagu qabanayo kalfadhiga guud waxaa telefoon loogu dirayaa cinwaankii ugu dambeeyay ee xubin kasta, ama loogu gudbin doonaa xubinta qaabkii kale ee jira, muddo aan ka yareyn siddeed usuuc ka hor taariikhda qabashda. Ogeysiinta waxaa lagu diiwaan gelin doonaa buugga ogeysiiska ee kalfadhiga guud, iyadoo lagu muujinayo cinwaanka iyo taariikhda wargelinta.

10.4 Qodobada looga hadlayo kalfadhiga guud waxaa dhammaan xubnaha loo diri doonaa ugu yaraan 14 maalmood ka hor taariikhda qodobada shirka.

10.5 Quorumka (tirade ugu yar) ee kalfadhiga guud ku ansaxayo waxay noqon doontaa (30) xubin dhigaal bixiyaal xubnaha caadiga ah, xaadirna ah waqtiga isugu yeeridda kalfadhiga guud, marka tirada ururku yahay (60) xubnood.

10.6 Howlaha kalfadhiga guud waxay ahaan doonaan dhageysiga khubdadda guddoomiyaha oo ku saleysnaan doonto mowduucii uu guddoomiyuhu doorto inuu ka haldo. Mana jiri doonto ka wada haladlid ka dambeeyn doonto khudbada shirka gudihiisa.

10.7 Dhegeysiga warbixinta xoghaynta oo ku saleysnaan doonto, howlihii ururku soo qabtay sannadkaas waxa shirka dhexdiisa si furan looga wada hadli doonaa (doodi doonaa) warbixingtaa.

10.8 Dhegeysiga warbixinta maaliyadda, taasoo bixin doonta dib u eegidda arrimaha dhaqaale ee ururka iyo soo bandhigidda xisaabaad la soo hubiyay. Waa in warbinta maaliyadda loola

qeybiyaa xubnaha qodobada looga hadlayo kalfadhiga guud ugu yaraan laba usbuuc ka hor shirka, si ay xubnaha ugu oggolaato in ay ka soo baaraan degaan warbixinta ka hor inta uusan khasnajigu miiska soo saarin (soo bandhigin).

10.9 Dhammaan soojeedinnada in laga wada hadlo loogu tala galay inta uu socdo kalfadhiga guud waxa lagu soo gudbin doonaa qoraal iyadoo ay wada saxiixeen soo jeediyaha iyo taageeraha, uuna guddoomay (sidaana u diiwaan geliyay) xoghaynta 21 maalmood ka hor taariikhda kalfadhiga guud. Soo jeedinnada la guddoomay 21 maalmood ka dib inta uusan dhicin kalfadhiga guud waxaa dib loogu dhigi doonaa kalfadhiga guud ee xiga. Soo jeedin kasta ee si quman loo soo jeedi, loona taageeray, lagana dooday, qaraarna laga gaaray mar labaad looma soo bandhigi doona si mid kii hore ka geddisan ilaa ugu yaraan muddo sannad kasoo wareegto, haddaysan guddiga fulintu u aqbalin inay ka dhalatay soo jeedintaa xaalad ka duwan oo u fasixi isugu yeerid shir guud oo si qaas ah looga doodo soo jeedintaan.

10.10 Si looga wada hadlo soojeedinnada wargin gaar ah lagu bixiyay, Guddoomiyaha xilka haya ayaa guddoominaya shirka. Soojeedinnada si habboon loogu soo bandhigo in looga wada hadlo kalfadhiga guud ee sannadlaha wuxuu noqon doonaa waajibaadka guddiga xilka banneeynaya. Soojeedinta wada hadalka waxaa soo bandhigaya soo jeediyaha.

11. DOORASHOOYINKA GUDDIGA FULINTA

11.1 Doorashada Guddiga fulinta, guddoomiyaha xilka ka degaya wuxuu banneeynayaa kursigiisa/kursigeeda, sarkaal sare oo laga soo dhex doortay xubnaha guddiga joogtada ah ee xaadirka ah kadib codeyn guud ayaa doorashada kursiga qaadanaya.

11.2 Magacyada musharixiinta doorashada guddiga fulinta waxaa lagu soo bandhigaya qoraal. Dhammaan musharixiinta waxay si qoraal ah ku oggolaanayaan qorshaha, waxaana soo jeedinaya, taageerayana xubnaha dhigaal bixiyaasha joogtada ah. Dhammaan doorashooyinka waxaa soo bandhigaya xoghayaha.

11.3 Qaabka doorashada waxay noqoneysaa gacan taag.

11.4 Wakiilasho codbixin lama oggolaanayo.

12. LAAMANA

Waxaa jiri doona hal nooc oo farac/laan ah (Farac/laan goboleedyo).

Laan goboleedyada waxay ka koobnaan doonaan xubnaha joogtada ah ama xubna sharafeedyada ULPA kuwaas oo meela cayiman ee

Soomaaliland ka sameeynaya laan midowga ururka xirfadlayaasha xoolaha.

13. HOWLFULINTA LAAMAHA

13.1 Siddeedii kasta ama ka badan ee xubnaha caadiga iyo xubno sharafeedyada waxay isugu tagi karaan si ay u sameeyaan laan/farac. Waxay si qoraal ah uga codsanayaan Guddiga Fulinta aqoonsiga laanta iyo ku xiranka ururka ULPA.

13.2 Laan kasta ee codsaneysa xubinnimo waa in ay oggolaato ku wareejinta nuqulka dastuurka laanta ururka ee ay soo diyaariyeen ULPA. Laanta waa in ay lahaato akhtiyaarka ay ugu dari karto nuqulka dastuurka qodob kasta oo ay u aragto in ay lagama maarmaan u tahay habsamida howl fulinta ururka. Si kastaba, ku darid qodobada waa in ay ahaato mid ay isku waafaqsan yihiin laanta iyo ALPA, isla markaana aan ka hor imaaneyn ama burineyn dastuurka urur weynaha.

13.3 Guddiga fulinta ee ULPA waa inuusan ku xirmin faracna/laanna inta aysan ka helin oggolaanshaha qoraal ah ee dastuurkooda.

13.4 Halka ay laani ka tabani cabasho ah aqoonsigeeda la beeniyay ama dastuurkooda oo aanay aqbalin guddiga fulinta waxay laanta xaq u leedahay in ay u cabato Golaha Agaasinka si ay dib ugu eegaan go'aanka guddiga fulinta.

13.5 Marka goluhu ka guddoomo arji laan, si dib loogu eego go'aan ay ka gaareen guddiga fulinta waa in goluhu ka fariistaa, go'aanna ku soo saaraa saddex bilood gudahood, laga billaabo taariikhda cabashada soo baxday.

13.6 Muddada Golaha Agaasinku ku hakinayo go'aan guddiga fulintu gaaray waxaa billaabanayo howlfunita araajida mid cusub, laba sano kadib arjigii kan ka horreeyay ama loo tixraaco arrinka kalfadhiga guud ee xiga, halkaas oo marka laga doodo in aan ka badnayn 30 daqiiqo lagu gaaro go'aan si fudud cod aqlabiyad ah.

13.7 Ma jirto laan dib u sixi karta ama wax ka beddeli karta dastuurkeeda iyadoon oggolaansho ka haysan guddiga fulinta.

13.8 Shirarka guddiga laan kama yaraan karo shar jeer sannadkii, waana in ay u soo gudbiyaan nuqulka qodobada shirka looga hadlay saddex usbuuc ka dib qabashada shirka guddiga fulinta ee heer qaran.

13.9 Laan kasta waa in ay casriyeysaa (cusbooneysiisaa) sannad walba magacyada xil hayeyaasha xafiiska iyo xubnaha guddiga kale ee guddiga fulinta iyo wadarta xubinnimada laanta oo ay ku jirto cinwaankooda.

13.10 Iyadoo la raacayo dastuurka ULPA iyo kan laanta waa in ay laantu si xor ah ugu hoggaansanto una gudato howlaheeda sida ay ugu muuqato in ay kaga madax bannaan tahay faragelin kaga timaada guddiga fulinta ee UPLA.

13.11 Iyadoo laga turjumayo ujeedada dastuurka, meesha ay u muuqato in ay ku khilaafsan yihiin dastuurka laanta iyo kan ururka ULPA, micnayaha ballaaran ee laga soo dhirindhiriyay dastuurka ULPA waa in uu mar walba ma sarreeyo kaa (dastuurka laanta).

13.12 Waa in sannad walba loo soo gudbiyaa guddiga fulinta ULPA xisaabaha laamaha oo la hubiyay, waana in ay kama dambeyntii soo gaaraan 31da Diseembar sannad walba. Guddigas fulinta ULPA wuxuu awood u yeelan doonaa inuu canshuurto in aan dhaafsiisneyn 10% miisaaniyad sannadeedka laanta. Si taa la mid ah guddiga fulinta ee UPLA wuxuu yeelan doonaa awoodda uu ku siin karo miisaaniyad laantii la doono. Kaalmadaas dhaqaale waa inaysan dhaafin 40% tabaruca laanta ee ku wajahan ujeedadaas ama xisaab lacageed uu go'aansado guddiga fulinta inta u dhexeeysa laba xilli.

13.13 Laantu waa inay ka doorataa guddigeeda wakiiladeeda inta u dhexeysa laba xilli, waxaana lagu go'aansanayaa kalfadhiga guud ee sannadlaha laanta marka uu ka fariisto golaha ULPA.

13.14 Haddii guddiga fulinta ee laan uu u muuqdo inuu ku shaqeynayo si ka soo hor jeedda dastuurka, waa inuu goluhu si qoraal ah u soo saaraa (muujiyaa) arrintaas. Haddii uu qilaafkaas dastuurku noqdo mid sii socda, golaha ayaa ka wada haldi. Dhammaan xubnaha guddiga ee laanta laga wari arritaas waa in ay goobjoog ahaadaan shirkaas.

13.15 Haddii go'aan xal ah lagaari waayo, goluhu waxa uu kala diri guddigaas fulinta ee laanta, waxa uuna magacaabi guddi fulin xannaaneeyn (gaarsiis) oo howsha sii wada ilaa laga soo doorto guddi fulin kale.

14. HANTIDA IYO MAALIYADDA

14.1 Dhigaalada u soo xerooda ururka waxaa laga soo dhirindhiriyaa lacago ay bixiyaan xubnaha rukunnada sannadka, kafaalasho, ujuurada diiwaan gelinta, tabarucaadyo iyo dhaxalsiin ka timaado sammadoonno iyo dakhli ka soo xerooda dhigaal la ururiyay.

Ilahaas kama baxsano qaabab kale oo guddiga fulintu inta u dhexeysa laba xilli u tixgelin doono, ugala talin doono goluhu oggolaansho, lana dhaqan gelin doono marka inta badan u codeyso. Guddiga Fulinta waxa uu yeelan doonaa awoodo uu ku abuuro guddi hoosaad waajibadkiisu yahay inuu soo baaro, soona

qeexo jididkii lacag loogu ururin lahaa ama ururka maaliyado loogu dhalin lahaa.

14.2 Ururka ULPA waxa uu magaca ururka ugu furi doonaa xisaab banki shaqeeysa oo sumcad leh oo uu guddiga fulinta soo xulay.

14.3 Laamaha ururku kadib marka ay si qoraal ah uga dalbadaan gola-weynaha oggolaashaha ka furashada iyo howlgalida xisaab banki goboleed, xisaab bankiyeedyadaas waxaa lagu furi doonaa magaca ULPA, waxaa kaloo ka muuqdan doona magaca laanta.

14.4 Guddiga fulinta ee dhowaan la doortay kulankooda ugu horeeya waxay ku dooranayaan saddex xubnood oo ka shaqeeya xisaabaadka ururka.

14.5 Xisaabaadka laamaha, laan waliba waxay ku magacaabaneysaa kulanka ugu horreeya ee guddiga fulinta laanta saddex saxiixe xisaabaadkooda.

14.6 Dhammaan qoraalada ay ka mid yihiin jeegagga, buugaagta xisaabaadka, koontada bankiga iyo caddeymaha lacag qaadashada waxay noqon doonaan hantida urur weynaha oo uu xafidayo ururka ku shaqeeynayo, una soo bandhigaya urur weynaha marka uu u baahdo in uu hubiyo.

14.7 Laba kasta oo ka mid ah saddexda saxiixayaal ee la doortay ayaa saxiixaya jeeg kasta oo uu ururku bixinayo.

14.8 Urur weynaha wuxuu awood u leeyahay, marka uu mamnuuco Guddiga in uu joojiyo saxiixayaasha xisaab laameed kasta uguna shaqeeyo danta laanta, waxaa laanta loo oggol yahay in ay xalliyaan khilaafaadkooda inta lagu jiro sannadkaas. Haddii ay laantu ku guul dareysato taasi waxay golaha awood u siineysaa in uu go'aansado joogínta xisaab laameedka ama uu ugu shaqeeyo sida xisaabaadka dhexe ee ururka inta guddiga fulinta ee laanta laga soo dooranayo.

14.9 Sannad walaba Guddiga Agaasinka ayaa magacaabaya hanti dhowrka.

14.10 Dhammaan laamaha ururka waxay hantidhowrkooda ku magacaabanayaan kalfadhi sannadeedkooda.

14.11 Kalfadhiga guud ee ururka waxaa lagu soo bandhigayaa xisaabaadka la hubiyay oo kooban oo ay ku jiraan kuwa laamaha oo lahubiyay iyo kuwa urur weynaha.

14.12 Warbixin maaliyadeedka waxaa lagu soo bandhigayaa shir kasta oo ay yeelanayaan guddiga fulinta, haddii aanay jirin xaalad gaar ah. Guddiga fulinta wuxuu laalayaa baahida, mase laali karo laba shir oo is xiga.

14.13 Dhammaan qoraalada lacagaha lagu helay magaca ururka waxaa lagu xafidayaa buugaag daabacan. Lacag qabasha kasta khasnajiga ayaa saxiixaya. Waa in la diiwaan geliyaa meesha iyo taariikhda ay ka soo xerootay. Arrinta rukunnada, lacag qabashadu waa in ay diiwaan geliso muddada ay dabooleyso.

14.14 Dhammaan awaamiirta xisaabiyaha iyo lacag hayaha waa in ay qoraal noqotaa.

14.15 Hantida iyo maaliyadda kale ee ururka si shaqsi ama koox ah looma amaahan karo.

14.16 Oggolaanshaha dalabka soo gadidda ayaa loo baahanayaa ka hor inta aan lacag la siin iibiyaha.

14.17 Ilaha dhaqaale ee kala duwan waa in lagu joogteeyo diiwaan xisaabeedyo kala duwan bil kasta.

14.18 Kharajyada miisaaniyad kasta ee degsan iyo howlaha mashruucadaba waa in laysugu geeyaa lagana warbixyaa afartii biloodba mar.

14.19 Waa in ka abuuro lana joogteeyo qaab loogu bixiyo horumarin qandaraasyada. Qandaraas kasta wax ka badan 30% lacagtiisa lama horumarin karo. Waa la hakinayaa horumarin kasta haddii aan caddeymo kaabaya lagu soo gudbin laba toddobaad gudahood.

14.20 Sannad xisaabeedka ururka oo ay ku jiraan laamihiisa waxay soconeysaa laga bilaabo 1da Jannaayo ilaa 31ka Disembar. Sannad walba 31ka Luuliyo waxaa uu diyaarinayaa xisaab xir, wada gaarsiinayaana guddiga fulinta ee heer qaran.

14.21 Midow xirfadlayasha xoolaha wuxuu awood u yeelan doonaa inuu kasbado hanti iyo maaliyad. Hantida uruku waxay noqon doontaa mid la taaban karo. Ururku waxaa laga yaaba inuu lug ku yeesho gacasi wadaag haddii ay tahay qaab shirkad xaddidan oo gacan ugu qabato ganacsi wadaagga sida sare ku qeexan.

Hanti kasbashadaas ururku waa inay ku saleysnaato si uu ururku uga faa'iideysto dhaqaale ahaan, niyad ahaan, dhaqan ahaan ama dano intaa ka ballaaran ee gudaha iyo debaddaba ah ama keeneysa iskaashi dhow oo ay yeeshaan ururka iyo ururada kale ee xirfadlayaasha ah, ama awoodda iyo magaca ururka kor ugu qaadeyso marka loo eego ururada kale ee la midka ah.

Waxaa laga yaabaa in ururku lug ku yeesho mashaariic gacansi, kuwaa soo horumarinaya danaha xirfadda xannaanada xoolaha. Siiwadidda horumarinta ururkan waxay heshiis magaca xubneheeda

kula gali kartaa ayadoo ay howsha fududeeynayaan deeq bixiyaal suura gal ah.

14.22 Hanti kastaa ha ahaato midda ururweynaha ama laamaha waxaa lagu kasbanaya laguna diiwaan gelinayaa haddii ay suurta gal tahay magaca ururka (Midowga Xirfadlayaasha Xoolaha) ama aasaasayasha ururka.

14.23 Xafiiska ururka waxaa uu u furayaa buugga agabka oo lambareysan hantida lagu hayo xafiis qarameedka ama kan laamaha.

14.24 Ururweynaha ama laamaha waa inay hantida ama qalabka aan duugoobin ee keydkooda soo galayaa u sameeyaan lambar keyd ku habboon. Laamuhuna waa in ay laba bilood gudahood ugu bandhigaan keydkooda xafiiska ururweynaha si uu u geliyo diiwaanka keydka guud.

14.25 Dhammaan laamaha waa inay liiska keydooda iyo isticmaalkooda oo ay la socoto xisaab celintooda soo gudbiyaane dhammaadka sannad xisaabeedka.

14.26 Hantida waxaa kaliya oo lagu baabi'in (Xaraashi) karaa amar qoraal ah oo uu bixiyay guddiga fulinta ee ururweynaha oo xiganaya go'aan kulan guddi fulineed ee laam ama ururweyne.

14.27 Goorta la baabi'inayo(Xaraashayo) hanti urur kasta waa in markhaati cad oo ay la socoto warqadda uu guddiga fulintu ku amray in hantidaa la baa'iyo la keydiyaa, faylkana lagu hayaa muddo aan ka yareyn afar sano, haddii uu ku guul dareysto xafiiska ay khuseyso mas'uuliyaddaas waxaa laga doonayaa hantidii ama beddelkeed. Kalfadhi sannadeedka guud oo aysan laamaha ku jirin oo kaliya ayaa baabi'in (Xaraashi) kara hantida muhiimka ah kadib marka laysku raaco.

14.28 Dhammaan buugaag xisaabeedyada faahfaahinaya keydka hanti ee laan waxay kayd ku ahaanayaan hantida xafiisweynaha waana lagala wareegi karaa xafiiska laan iyada oo aan hore loo sii ogeysiin si baaritaan loogu sameeyo.

15. WAX KA BEDDELKA DASTUURKA

15.1 Dastuurka waxaa wax ka beddeli kara ama wax ku kordhin kara oo kaliya codka inta badan ee xubnaha kulanka golaha guud ee sanadlaha oo si sharci ah ku qabsoomay ama kulan xaalad deg-deg ah oo arrintaas loo qabtay.

15.2 Tirada uu ku qabsoomi karo kulankaas waa kala bar tirada xubaha ka ah ULPA oo saddex meelood laba xubnaha xaadirka ah kulanka ay u codeeyaan.

15.3 Soojeedin kastaa ee qodob cusub ama wax kabeddelka mid hore u jiray waa in agendaha kulanka loola qeybiyaa dhammaan xubin.

15.4 Cod wakiilasho lama oggolaan doono.

15.5 Dhammaan isbeddeladu waa in ay waafaqsanaadaan sida uu dhigayo qodobka 13.0,3 ee dastuurka.

16. KALA DIRIDDA LAAN

16.1 Kala diridda laamaha ULPA waxay dhaqan galeysaa marka ay u codeeyaan saddex meelood laba xubaha xaqa u leh xubinnimada oo laysugu yeeray kulan guud oo qaas ah dastuurina ah halkaas oo ay codeyntu noqoneyso mid gacan taag ah lana oggol yahay cod wakiilasho.

16.2 Kala diridda laamaha, dhammaan deymaha uu si sharti ah u leeyahay ururka waa in ay noqdaan kuwo lagu qanco, wixii hanti dheeraad ah oo uu ururku leyahayna waxa qeybsanaya xubnaha dhigaal bixiyaasha ah ama haddii ay doonaan waxay hantida ugu tabaruci karaan kaalma bixiye kale

17. KALA DIRIDDA ULPA

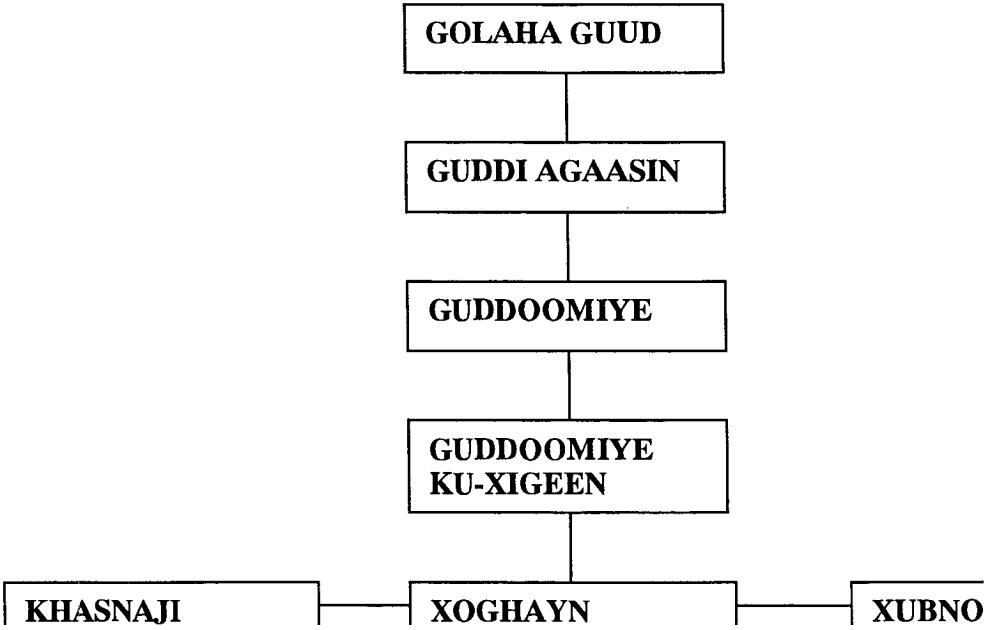
17.1 Kala diridda **ULPA** waxay dhaqan galeysaa marka shan meelood saddex xubnaha dhigaal bixiyaasha ah ay iyada qudhooda oo bandhigaan ayna qaraarka u codeeyaan kolka kulan deg-deg ah oo dastuuri ah laysugu yimaado.

17.2 Codeynta kulankaas deg-degga ah waa inay noqotaa cod dhiibasho qarsoodi ah oo aan cod wakiilasho la oggoleeyn.

17.3 Codeynta kala diridda, waa in guddiga fulintu u magacaabaa guddiga kala diridda toban qofood oo ugu yaraan ay ka mid yihiin kuwa taageera, hoggaamiyaasha diinta iyo shaqaale horumarinta bulshada oo ka socda hay'ad dowli ama mid gaar loo leeyahay waa in loo magacaabaa si ururka arrimihiisa loo soo gaba-gabeeyo.

17.4 Marka ururka la kala diro, dhammaan hantida ka soo harta bixinta deymaha ururka lagu lahaa waxaa loo wareejinayaa urur kale oo aan faa'iido sameynin ama/iyo hay'ad kaalmo bixisa oo leh ujeeddooyin la mid ah kuwa ULPA, sida ay ula muuqato guddiga kala diridda.

QAAB DHISMEEDKA URURKA



ANNEX B4: REPORT OF ULPA ANNUAL GENERAL MEETING

(1ST NOVEMBER 2004 – 31ST MARCH 2005)

ANNEX B 4:

REPORT OF THE UNITED LIVESTOCK PROFESSIONAL ASSOCIATION (ULPA) ANNUAL GENERAL MEETING HELD ON THE 29/01 – 1/02/2005 IN HARGEISA

1.0 VENUE

The AGM was held in a conference room at the Ming Sing Hotel in Hargeisa.

2.0 DAY 1

2.1 OPENING CEREMONY

The Deputy Ministry of livestock Mr. Ali Ahmed Abdi and the Somali PACE Project Advisor, Dr. Henry Wamwayi together with PACE Zonal officers and representatives from several other NGOs were present at the ceremony.

Almost all professional members including the Executive committee members of ULPA participated in the meeting. The AGM was opened by verses of the holy "Qoran" read by PACE Zonal Coordinator in Somaliland, Mr. Ahmed Hashi Nur. He also said a few sentences expressing his happiness to see that differences between ULPA and the PACE Zonal Office have been resolved and the AGM has been held; finally Mr. Hashi stressed that it is time for members to elect appropriate leadership for the association.

Mr. Ismail, chairman of ULPA made a few comments emphasizing that conflicts are now over and gave the floor to Mr. Ali, ULPA Secretary General.

The secretary briefed the members on the history of the formation of ULPA and the difficulties the association faced to hold the Annual Meeting. Finally he thanked PACE for facilitating and supporting the AGM for the association. Mr. Ali further clarified that the association is open to all veterinary professionals.

Dr. Henry Wamwayi, the PACE Project Advisor addressed the participants and highlighted the mandate of PACE regarding capacity building support for both public and private sectors professionals and institutions. He also pointed out the importance of having a strategic vision and good strategies to achieve the set goals of the association. The advisor called upon the members to spare no effort to establish and amend the Constitution as a mechanism to guide the association. Finally, Dr. Wamwayi assured the assembly that PACE will not dictate any directions for the members but is interested in the outcomes of the Association's General Assembly.

The Deputy Minister of livestock delivered a short but constructive speech, telling to the members the perceptions of the public sector (Ministry of Livestock) about ULPA. He urged members to strengthen transparency and accountability to avoid mistrust. "***ULPA should represent all veterinary professional members and should not be confined to a certain small group***," added the deputy minister. The deputy minister advised the members to resolve conflict constructively to abort current rumors that ULPA is a closed house to a certain group.

After the guest speakers left, the AGM meeting started. Mr. Ali, the secretary general was asked to talk briefly about past achievements and problems. First, he introduced the agenda of the day to the assembly.

2.2 AGENDA:

- Revision of the PULPA structure

- Election procedures
- Criteria for selection of new members
- Revise executive committee number
- Any other issues of concern

The Chairman with the assistance of the assembly's members in open discussion listed the past achievements of the Association and the problems it is addressing in these days.

2.3 PAST ACHIEVEMENTS OF ULPA:

- Establishment of the association in 2002
- Setting up of ULPA office with the assistance of PACE.
- Draft constitution in collaboration with VET AID
- Establishment of regional offices
- Visits to regional offices
- Networking with all In –NGOs and UN Agencies.
- Carrying out drug distribution project funded by COOPI which involved 30 members
- Workshops and conferences attendance.

2.4 PROBLEMS:

- Finance shortage
- Office Rent is temporarily provided by one of the members
- Location of office far from down town
- Annual General meeting failed to be held

After finishing the above presentation by the Chairman gave the floor to the treasurer, Mr. Yusuf, who proceeded with the financial report.

2.5 FINANCIAL REPORT:

Initially the treasurer divided the members into three categories:

- Members who have paid only registration fees
- Members who have never paid anything
- Members who have paid all the due fees and more

The total amount collected since inception of ULPA in 2002 is **US$3651**. The amount was used to cover all facilities' costs. Only **US$ 135.90** is remaining in the Bank Account.

3.0 DAY 2

More than 40 members attended the 2nd day of the meeting. Mr. Ali, secretary General of ULPA introduced the same agenda of first day to the assembly and asked them to constructively discuss the topics.

3.1 STRUCTURE OF ULPA:

- The assembly reviewed the existing structure of the Association

- Members acknowledged the importance of having a Board of Directors
- Majority of the group voted for a **seven (7) members of the board** to be elected by the assembly with the task of governing and controlling the execute committee
- The assembly voted for the number of **executive committee members to be seven (7)** who also will be elected by the assembly. The committee members will play the role of running the day-to-day activities of the association.

3.2 ELECTION PROCEDURES:
The participants voted in favor of the raised-hands method against the secret balloting method. This may be, due to the fact that secrecy is unfamiliar in the cultural context of Somalis.

3.3 CRITERIA FOR SELECTION
Members voted for criteria which state that the association is open to all vets and vet assistant provided he or she goes through the normal procedures of application as illustrated in the constitution. If 2/3 of executive committee members vote in favor the applicant can be a member of ULPA.

3.4 UMBRELLA VERSUS A SINGLE ASSOCIATION:
Majority of the members voted in support of being a single association that has branch offices in the respective regions

3.5 DIFFERENT FEES FOR THE ASSOCIATION:
- Registration fees: it was unanimously decided to be $ 20/member
- Membership fees: the group voted for $1/ month against $2/month/indivitual.
- Ways and procedures to collect the fees will be determined in the by-laws.

3.6 WORKING MEMBERS' FEES:

The assembly preferred such a member to pay $10/month as ordinary membership instead of proposed amount of $ 5/month.
Members of this category will not pay the monthly fee mentioned above.

3.7 CONTRACTED MEMBERS' FEES:
The assembly unanimously voted the fee to be $15/month.

3.8 OTHER BENEFITS (TO BE DETERMINED IN THE BY-LAWS):
Members drawing other benefits should pay $ 20 as contribution to the association for every event to be identified in the by laws.

3.9 PROJECT PROPOSAL/CONSULTANCY

The assembly approved to be 1% of the total earnings

3.10 SERVICE DELIVERY (EXPORT ANIMALS):
The decision was delayed until the livestock export ban is lifted and regulations enforced.

3.11 PROJECT MONITORING AND EVALUATION:

The participant favored such contribution to be $20/evaluation activity.

Later on, the secretary general presented some contents of strategic planning of the Association. Although the members raised a heated debate on some points of the paper, they showed interesting and positive impression towards the contents. The remaining goals and objectives will be presented on the second day of the meeting.

4.0 DAY 3

The chairman of ULPA presided the meeting and introduced the agenda of the second day as:

1. Completion of the strategic paper review for presentation to the assembly
2. Revision of some points of the constitution regarding the functions of:
    - Board of directors
    - Executive committee
3. Distribution of personal profile and use of personnel forms.

4.1 DISCUSSIONS

Mr. Ali, the secretary general of ULPA opened the floor for discussions. The following contributions and reformulation of the strategies of the Associations were given by the members:

1. Participate in implementing extension programs
2. Involvement in advancing marketing systems, lift-the-ban campaign of livestock through disease surveillance, disease reporting and transparency
3. Exchange of inter- zonal visits
4. Seek contributions from livestock traders and other business groups
5. Establish libraries in the main office

The formal livestock Minister of Somaliland, Mr. Suleiman Gure who was one the main founders of ULPA came to the AGM. The chairman introduced him to the members stating that Mr. Suleiman assisted ULPA in many ways, facilitating the registration process of the Association in the Ministry of livestock and making lobby campaign for it to be accepted by the community. Mr. Suleiman said a few wards on the occasion expressing his pleasure about the success of the Association. He hoped that the present Minister of livestock will collaborate with PULPA as Mr. Suleiman personally often advised the authority. He was invited to participate in the closing ceremony in the next day.

A brief discussion was held between members that led to the clarification of the roles of the two institutions vital for the life of the Association.

4.1.1 FUNCTIONS OF A BOARD OF DIRECTORS:

- Acts as arbitration body
- Sets policy guidelines for the committee

4.1.2 FUNCTIONS OF EXECUTIVE COMMITTEE:

- Run the day-to-day activities of the association.

Mr. Ibrahim, one of the members of PULPA shared his experiences with colleagues about his participation in the Kenyan Veterinary Association AGM held in KISUMU (Kenya). He made the following report:

First day	Arrival of participants from their locations	Briefing to members about the second day of meeting
Second day	Field day held in a site of 10km away from the location of the conference.	Professionals, drug sellers and livestock producers with their animals all take part as demonstration day.
Third and fourth days	Holding a scientific meeting where new findings related to different sections of Veterinary Science were exposed	Ordinary members held general election of executive committee members.

Finally, personal profiles as well as use of auxiliary personnel forms were distributed to the members of the association. The group demanded some clarifications about the objectives of filling these forms.
Dr Henry Wamwayi told that the purpose is to use as database for the profiles of the association members.
Although participants initially were reluctant, they accepted to seize this opportunity after long discussions and interventions made by PACE representatives including Dr. Henry Wamwayi, the Zonal Coordinator and a number other PULPA members.
Some of the members showed suspicions towards the role of SPLF. This may be due to some misunderstanding on the concept of National UMBRELLA Association.

5.0 DAY 4

5.1 AGENDA OF THE DAY:

- Elections of:
  - a) Board of directors
  - b) Executive committee members

- Constitution revision and endorsement
- Strategic paper endorsement
- Reviewing of filling profile personal forms
- Filling of registration forms for renewal prepared by ULPA

In harmony with the Association's constitution, Mr. Ismail, the chairman of ULPA resigned and recommended one of three other members to be elected to temporarily chair the meeting.

Mr. Botan was chosen to be chairing the AGM at the day with 18 votes in his favor against 11 votes for his opponent. One of the three suggested members was excluded due to his candidacy for BOARD membership.

Dr. Rabile, PACE Networking officer and senior member of the Association highlighted some articles of the constitution that needed to be amended.

The following changes were made:

- Non-religious word was omitted
- The association to be opened to all public and private professionals
- Livestock professional instead of Vet professionals
- The word BOARD should be used instead of council
- Quarterly meetings of BOARD instead of one every 4 months
- Executive committee will hold office for two years instead of one year.
- Executive chairman can be re-elected once instead of twice excluding the first period.
- He/she instead of He
- The secretary shall receive and reply all correspondence on behalf of the Association.
- Several other phrases were added or subtracted to the articles of the constitution. This was approved through voting by members of the Association (See ULPA Constitution)

5.2 ELECTION

a. Board of Directors:

Seven members out of eight candidates were elected

Hands-up procedure was used during the election process.

The following members are the members of the Board of directors:

Ahmed H. Osman Hussein (Bahnaan)
Ahmed H. Abdillahi
Abdi Hussein Ainan
Mohammed Mohamed Farah
Jama Ahmed Muse
Ibrahim Farah Hersi
Adan Yusuf Mohamed (Timir)

b. Executive Committee:

Seven members including four former office bearers ran for election. Some members who raised a question why only these seven individuals are listed to be candidates got answer saying that no other members stood for the position.

The group unanimously elected the executive committee candidates. The members congratulated the four office bearers, the chairman, and the secretary, the treasurer and networking officer for coming again to the office.

Ismail H. Ibrahim Warsame, Chairman

Mohamed Hussein Hassan, Vice Chairman

Ali Mohamed Ali, Secretary

Yusuf Mohamed Jama, Treasurer

Daud Ismail Nur, Member

Hussein Muse Sheik Abdillahi, Member

Deqa Abdi Hashi, Member

The elected Chairman, Mr. Ismail said a word of gratitude to the participants and thanked them for freeing the executive committee from the suspicion that they are not legitimate because AGM was not legal.

5.3 CLOSING CEREMONY:

Present were the former Minister of livestock, the present Deputy Minister of Livestock and other distinguished guests.

Mr. Ali, the secretary general gave the floor to Mr. Suleiman, the former Minister of Livestock.

He thanked the association's members for not having wasted their efforts in founding the ULPA and advised the present ministry of livestock to support such privatization programs. He said that he was one of the voters for Mr. Ismail to be chairman of the Association in the first term because of his age and tremendous experience and with his pleasure the members again felt the same.

The Deputy to the Minister of Livestock also delivered a valuable speech stressing again the importance of opening the door of the Association to all livestock professionals, who fulfilled the selected criteria for selection in the Constitution.

Mr. Nur, one of the prominent members of the Association addressed the audience with a short speech but full of spirit of advice. He urged both the elected members to adhere to the core values of the Association presented in the strategic paper, which can be summarized in one word (Rice):

R - Stands for respect

I - Stands for integrity

C - Stands for commitment

E - Stands for efficient and effective performance

If one of the above letters is missing the Association's values are incomplete, no tangible success will be achieved and **"no rice will be eaten together".**

Mr. Iidan, one of the members of Executive Committee warned the colleagues against repetition of past obstacles such that:

- The Annual General Assembly does not take place
- A non- functional Board of Directors
- Low attendance in AGM meeting by members

5.3.1 OBSERVATIONS:

- Attendance of working members was high.
- New applicants came to the annual general meeting.
- There was active participation of non members present at the AGM.
- The meeting venue was conducive and quiet.

ANNEX B5: ULPA STRATEGY PAPER

(1ST NOVEMBER 2004 – 31ST MARCH 2005

UNITED LIVESTOCK PROFESSIONAL ASSOCIATION
(ULPA)

STRATEGIC PAPER
2005 – 2010

INTRODUCTION

Strategic planning is desired state of affairs or preferred results that an organization attempts to realize and achieve. It is the process of identifying, selecting, implementing and evaluating basic courses of action for the organization. Strategic planning concerns the impact of current decisions on future events and the alternatives that are open to the manager. It involves envisaging process that attempts to anticipate the future with belief that aspects of the future can be influenced and changed by what the organization does today.

PURPOSE:

The purpose of the strategic planning is to:

- Change direction
- Gain control of operation
- Develop better internal coordination
- Adapt to changing environment
- Accelerate growth

ZONAL BACKGROUND

Livestock sector has always been the major source of income, food, employment and foreign currency earning business for the Somali people. For that reason, subsequent Somali governments have put emphasis on developing the livestock supporting infrastructures such as veterinary schools, universities, clinics and free drugs

This highly centralized system of government required that all veterinary professionals work for the ministry of livestock.

After the collapse of the previous government of Somalia and disintegration of the country, many livestock professional become unemployed. They had no equipments, training and experience of the private business and management skills necessary for the current environment.

In the following years, the veterinary professionals tried with some success, to establish veterinary associations. Those private veterinary groups are engaged in the delivery of the certain aspects of veterinary services. They are involving in treating animals in the nomadic and pastoral communities and also selling

veterinary-drugs. But many of them were hired by livestock traders to provide clinical inspection and brucella testing for exports animals.

Those vet. Professional were dispersed and separated by war and other factors. For that reason, they had no voice in many forums where their fate was being decided.

Having realized that, the livestock professionals in Somaliland had a meeting in Hargeisa on 2-01-200 and established an organization called United Livestock Professional Association (ULPA). Eight vet-groups that existed in the country merged together and formed this organization. It has currently sixty-three (63) registered members including vets, vet assistants and auxiliaries who work closely with the association.

Over the past year, the association has observed remarkable changes and having assessed its activities and in the areas it operates in, the General Assembly of the association decided that the organization needed to be more responsive and more focused on its activities. It is in this context that ULPA has developed its strategic plan for the year 2004-2008 and activities plan for March 2004-March 2005, placing emphasis on reviving livestock service delivery systems to the communities in the ULPA zone.

VALUES OF THE ASSOCIATION:

- Impartiality
- Trust/trustworthy
- Sharing ideas
- Code of conduct
- Moral integrity
- Commitment
- Patience
- Professional ethics
- Transparency/accountability
- Creditability
- Non- political

A) External Analysis

Threats	**Opportunities**
Drought:	Collaborating Government systems
Natural Disaster:	Security

Traditional Healers:	I –NGOs
Public Sector (conflict):	Donors
L/stock Ban:	L/stock traders
Completive NGOs:	L/stock producers
Information:	Traditional elders
Wrong perception:	Legal drug sellers,
Absence of legal regulatory	Relatively good infrastructure
Framework	Importing countries
Absence of proper government	
Policy regarding animal health	
Delivery services	

B) Internal Analysis

Strengths	**Weaknesses**
L/professionals	Structure
Office Availability	Fundraising
Office facilities:	Physical facilities
Management:	Vet. Equipment and Instruments
Communication:	Office location
Field activities:	Use of technology
Good Relation with:	Special Services
Some I-NGOs (PACE)	Limited administrative capacity
	Poor networking between Board and Executive Committee

STRATEGICAL ISSUES

- Delivery of livestock health services
- Inadequacy of fund raising
- Capacity building for members of the Association

VISION STATEMENT

We want to be strong credible association that represents all livestock professionals in the zone to establish private sustainable veterinary services in Somaliland in order to improve the livelihood of livestock community as well as to prosper the welfare of its professional members".

MISSION STATEMENT

We stand to mobilize human resources for effective delivery services to livestock sector to ensure the improvements in animal health and production systems as well as the enhancement of the welfare of member professionals.

GOALS- STRATEGIES AND OBJECTIVES

Goal One

- To create and establish excellent private health veterinary services in all regions of Somaliland

Strategies for goal one

- Establishment of ULPA regional offices
- Setting-up private veterinary pharmacies
- Establishment of veterinary private clinics and health post in main L/stock concentrated villages
- Participate in the extension programme.

Objectives for Goal 1

- Set up two offices in Awdal and Sahil Regions
- Awareness raising through media for the 5 regions of Somaliland
- Strengthen existing 3 regional Vet. Pharmacies.

Goal two

To create and establish a sustainable fundraising system for the association

Strategies for goal two

- Increasing of local contribution by the members of the association
- Seeking donor assistance through extensive lobbing

- Preparing sound project proposals
- Encouraging of government contributions
- Producing bulletins and newsletters
- Preparing consultancy activities
- Seeking contributions from livestock traders and other business group.

Objectives for Goal 2

- Collect all due fees from different respective members

Goal Three

To promote technical and managerial skills for the members of the association.

Strategies for goal three

- Soliciting training opportunities for ULPA members from NGO partners and government
- Participating in international conferences and workshops relating to L/stock issues.
- Networking with regional and international institutions and universities etc.
- Establishing a library in the main office.

Objectives for Goal 3

- Organize request for 5 training workshops (technical+ managerial) from I-NGOs/PACE.
- Encourage at least 6 members to participate in international conferences and training courses abroad.
- Networking with veterinary association in neighboring countries
- Network with the four other zonal associations.
- Soliciting book contribution by members of the association and any other related individuals and institutions.

Goal Four

To establish good networking systems with all key stakeholders

Goal Five

To contribute in improving animal production systems.

Goal Six

To encourage environmental protection programs

Goal Seven

To create job opportunities for association members

Goal Eight

Contribute to influence governmental policies towards livestock sector.

Goal Nine

Establish consultancy centers in the regions

Goal Ten

Taking part in advancing marketing systems and campaign against livestock ban through disease surveillance, disease reporting and transparency sharing ideas/information

ANNUAL ACTIVITY PLANNING

A) Goal One

To create and establish excellent health Vet. Services in all regions of Somaliland

Objective One

Set up two offices in Awdal and Sahil Regions of Somaliland.

Activities	Time	Target Group	Expected Outcome	Output Indicator	Responsible Agency	Assumption
Awareness raising	2005	Community	Regions informed	Participation Report	Team	Communications exist
Fund raising	2005	I-NGOs	Forecast amount	Financial Reports	ULPA	Proposals +Collaborative NGO
Selection of Location	2005	Borama, Berbera	2 office sites	Report	ULPA	Community contribution
Office facilities	2005	I-NGOs/ULPA	Computers etc	Report	ULPA	Funds Available
Transportation	2005	ULPA/partners	1 truck	Report	ULPA	Donations Available
Opening Ceremony	2005	Government/community/NGO	Representation report	Report	ULPA	Invitees/ Come
Evaluation +monitoring	2005	2 Offices	Evaluation repot of 2 offices	Report	ULPA	Experts

B. Goal Two

To create and establish a sustainable funding Base for the association.

Objective Two

Seek local and international contributions Amounting to 10,000 U.S.D.

Activities	Time	Target Group	Expected Outcome	Output Indicator	Responsible Agency	Assumption
Registration fees	2005	ULPA New members	$600	Report	Ex. Comm.	New members enrollment
Membership Fees	2005	All members	$2160	Report	Treasurer	Availability members
Working members	2005	W/members	$10/month/ individual	Report /receipts	Treasurer.	Some member work

Contractual members $ 15/month	2005	C/members	$ 3600	Report	Executive committee	Contracts Available
Members other benefits $20/event	2005	Some members	$ 200	Report	ULPA	Variety/benefits
Conferences/20dollars/event	2005	P/members	$ 1200	Report	ULPA	Availability/ conferences
Project Proposals 1% of total earnings	2005	Project/Members	$ 2000	Report	ULPA	A availability/projects
Evaluation and Monitoring	2005	Team	$ 10,360	Report	ULPA	Reports Available

C) Goal Three

To upgrade technical and managerial skills for members of the association

Objectives Three

Propose 5 training courses from I-NGOs partners.

Activities	**Time**	**Target Group**	**Expected Outcome**	**Output Indicator**	**Responsible Agency**	**Assumption**
Need Assessment	2005	ULPA members	10 Participants	Report	Partner NGO	Availability of Funds
Training Preparation	2005	Team	Training material	Report	ULPA	Facilitators
Logistics	2005	ULPA	Accommodation	Report	ULPA	Funds Available
Inform Participants	2005	ULPA	All Participants	Report on absentee	ULPA	Funds Available
Venue Selection	2005	ULPA	Appropriate site	Report	ULPA	Funds Available
Transportation	2005		Buses/Trans/cost	Report	ULPA	Funds available

RECOMMENDATIONS

- Awareness raising
- Office relocation
- Improvement of management
- Soliciting local and external funds for capacity building
- Strengthening networking with stakeholders
- Enhancement of association profile
- Exchange of inter-zonal visit
- Network with vet. Associations of neighboring countries.
- Observing regular annual meeting

SECTION C: DISEASE SURVEILLANCE TECHNICAL REPORT

(1st November 2004 – 31st March 2005)

ANNEX C: DISEASE SURVEILLANCE TECHNICAL REPORT

1. PROJECT BACKGROUND AND OVERVIEW

The operations of the Somali PACE Component were govemed by the overall PACE objective aimed at relieving the poverty of those involved in the livestock-farming sector (producers, service providers and consumers) in Africa by improving animal productivity, trade and food security. In Somalia, this entailed strengthening of the capacities of livestock owners, traders, public institutions and private sector animal health workers to cooperate for effective delivery of services to improve animal health in order to enhance trade in livestock and livestock products.

Surveillance activities are a fundamental component of the Somali PACE Project, which aims at establishing a functional epidemio-surveillance system in the country with the initial aim of tangibly contributing to the final eradication of RP from Somalia. In order to establish a functional epidemio-surveillance network both active and passive surveillance must be established and emergency preparedness plans must be created in order to respond to major livestock disease outbreaks.

During this quarter, the surveillance activities in Somalia focused mainly on four areas of intervention: (i) follow up and consolidation of the RP sero-surveillance results obtained in 2002-03 in Central and Southern Somalia, (ii) continuous active disease search in order to identify and confirm clinical cases of RP, (iii) investigation of the cause of reported livestock mortality in Puntland in October 2004 and in Marerey area (Lower Juba) in March 2005, and (iv) initial training on the use of performance indicators for the evaluation of national epidemio-surveillance systems.

(i) The follow-up and consolidation of the available RP serological results was achieved by the implementation of a randomized cross-sectional sero-survey which was designed to cover 8 administrative regions of central and southem Somalia, namely: Lower & Middle Juba, Lower & Middle Shabele, Bay, Bakool, Gedo and Hiran. The survey was planned to be implemented in February 2005, but due to the failure of ECHO flight to deliver their service during this period only five (e.g. Lower & Middle Juba, Bay, Bakool and Gedo) out of eight administrative regions could be covered. The three remaining regions (e.g. Lower Shabelle, Middle Shabelle and Hiran) will be covered in August-September under the framework of the Somali Animal Health Services Project (SAHSP). The finalization of the survey has been timed during this period in order to guarantee the smooth implementation of field activities which will take place during dry season. The sero-survey was designed and implemented as a follow-up of the recommendations of SERECU meeting held in Nairobi in October 2004, which requested to the three Somali Eco-System Countries (e.g. Ethiopia, Kenya and Somalia) to update their RP epidemiological data. This was part of an effort to gather most recent data on the RP situation in the region in order to plan coordinated RP eradication efforts under the guidance of SERECU.

(ii) The active disease search was conducted using Participatory Disease Search (PDS) techniques as an effort to detect and confirm clinical cases of mild RP in the areas of interventions. The field activities were carried out in response of reports of mortality in cattle which presented symptoms compatible to enteritis-stomatitis syndrome. PSD is part of the active surveillance activities planned under the RP eradication strategy from Somalia and they are meant to complement the results obtained from the cross-sectional sero-surveys.

(iii) The prompt investigation of reported livestock disease outbreaks is an important component of any national epidemio-surveillance systems. During the quarter two main livestock mortality events were reported and investigated by the Somali PACE Project. In both cases mortality in livestock was reported

after the onset of heavy rains in Puntland in October 2004 and in Lower Juba in March 2005. Since livestock mortality occurred in concomitance of heavy rains the suspicion of an outbreak of Rift Valley fever (RVF) was initially considered. During the field investigations samples for laboratory diagnosis were collected and semi-structures interviews were conducted in order to ascertain the cause of death.

(iv) Any national epidemio-surveillance system needs to be periodically evaluated in order to assess its performance, identify weakness and, if needed, undertake corrective actions. Over the years a number of techniques have been used in order to evaluate the performances of epidemio-surveillance systems and they area based on the identification and the use of suitable performance indicators. The latest are meant to provide quantifiable and objectively interpretable data on the performances of national epidemio-surveillance systems. One of the recommendation of the workshop on "Optimization of Epidemio-Surveillance System in PACE member countries" held in Dakar in August 2004, was that each PACE country would start the process of identifying the most suitable performance indicators for the national epidemio-surveillance system. In Somalia an initial training was held in Dinsor in November 2004 in order to introduce to the national staff of central and southern Somalia the concept of performance indicators, which could then be developed and used when a national epidemio-surveillance system will be fully established.

2. PROJECT OBJECTIVES

The project aims at contributing to sustainable enhancement of production as well as trade in livestock and livestock products. The immediate impact of the project will be to enable livestock owners, traders, public and private sector animal health workers in Somalia to co-operate in order to combat major livestock diseases.

3. EVENTS AND ACTIVITIES IMPLEMENTED THIS QUARTER

Result 1

- ***Capabilities of public sector AHWs to regulate, coordinate, monitor and evaluate the livestock development sector are strengthened***

Result 2

- ***Capabilities of private AHWs to engage in curative and preventive services are enhanced***

Result 3

- ***Livestock disease surveillance system is functioning with specific reference to Rinderpest***

i) Random Cross-sectional RP Sero-Survey

The sero-survey was designed and implemented as a follow-up of the recommendations of the SERECU meeting held in Nairobi in October 2004, which requested to the three Somali Eco-System Countries (e.g. Ethiopia, Kenya and Somalia) to update their RP epidemiological data. This was part of an effort to gather most recent data on the RP situation in the region in order to plan coordinated RP eradication efforts under the guidance of SERECU.

The area of intervention was identified using the data generated under the implementation of cross-sectional sero-surveys carried out in central and southern Somalia in 2002-03. The survey was designed to cover eight administrative regions of the country (e.g. Lower & Middle Juba, Lower & Middle Shabele, Bay, Bakool, Gedo and Hiran) and it was based on a two stage cluster sampling design. The randomization of the primary sampling units (sampling sites) was obtained by randomly generating the needed number of random map coordinates in each region of interest. The sample size was calculated for a two-stage cluster sampling design for each region for: (i) 50% expected prevalence, (ii) 95% confidence interval, and (iii) 5% desired absolute precision. The between cluster variance (V_c) used for the calculation of the sampling size

by region was obtained from the data generated under the 2002-03 sero-surveys. The following table provides the sample size of the survey by region.

Region	Obs. Prev. (%) in 2002-03	Obs. V_c in 2002-03	Exp. Prev (%)	Adj. V_c	Total Samples	Samples/ Site	Total Sites
Bakool	0.61	0.000115	50	0.004782	510	15	34
Bay	0.74	0.000417	50	0.001427	360	15	24
Gedo	17.83	0.010653	50	0.018178	810	15	54
Hiran	4.28	0.002819	50	0.017226	780	15	52
L. Juba	16.98	0.028193	50	0.036253	1050	15	70
L. Shabele	2.62	0.002255	50	0.022113	900	15	60
M. Juba	15.99	0.024319	50	0.030004	900	15	60
M. Shabele	0.64	0.000780	50	0.003082	450	15	30
TOTAL					**5760**		**384**

An awareness campaign was carried out before the implementation of field activities in order to sensitize relevant stakeholder on the aim of the planned sero-survey. Field operations were conducted by 10 contracted investigating teams which received an initial training on "Basic Applied Epidemiology focused on RP Cross-Sectional Sero-Surveillance" and operated under the close supervision of permanent PACE staff. The training manual which provides the details of the survey design and the modalities of field implementation is provided in Annex **. Each team was composed by three private veterinary professional (e.g. one team leader, one assistant and one monitor). Field activities were coordinated from the PACE office of Afmadow for Lower & Middle Juba Regions and from the PACE office of Dinsor for Bakool, Bay and Gedo Regions. Hiran, Lower & Middle Shabele could not be covered due to the failure of ECHO flight to deliver their service during this period. The total number of collected serum samples and questionnaires and visited sampling sites is provided in the following Table:

Region	Num. of Samples	Num. of Sites	Num. of Questionnaires
Bakool	496	24	16
Bay	527	31	31
Gedo	880	53	39
Lower Juba	1190	70	129
Middle Juba	1020	60	120
Total	***4113***	***238***	***335***

The sera were sent to the KARI-Muguga Regional Veterinary Laboratory and they are currently under testing.

ii) Participatory Disease Search

Active disease search using Participatory Disease Search techniques was carried out in March 2005 in Bur-Hakaba District (Bay Region) and Northern Gedo in response of reports of mortality in cattle presenting symptoms compatible to enteritis-stomatitis syndrome. The sign were detected during the implementation of the cross-sectional sero survey and the suspected herds were investigated by two independent teams. The adjacent areas were also thoroughly investigated. The breakdown of type and quantity of samples collected is provided in the following Table:

Region	Eye Swabs	Lymph Node Aspirates
Bay	15	11
Gedo	5	2
TOTAL	***20***	***13***

All samples were preserved in Trizol® and send to the KARI-Muguga Reference Laboratory for testing. No RP virus could be detected in the collected samples by means of PCR.

iii) Initial training on the use of performance indicator for the evaluation of national epidemio-surveillance systems

Training on the identification and use of performance indicators was carried out in the Dinsor PACE office in order to introduce to the Somali permanent technical staff of central and southern Somalia the principles of assessment and evaluation of national epidemio-surveillance systems. The main topics discussed at the workshop on "Optimization of Epidemio-Surveillance System in PACE member countries" held in Dakar in August 2004 were presented and discussed in order to start to identify the most suitable performance indicators for the country.

Result 4

- *Emergency preparedness and response systems are functional, initially to Rinderpest*

i) Investigation of reported livestock mortality in the country

Two field assessment missions were carried out during the quarter in order to assess the cause of reported livestock mortality.

a) Heavy livestock mortality was reported by the Puntland authorities and other organisations working in the area in September 2004. The mortality was observed mainly in small ruminant and camels in concomitance with the onset of heavy rains that "affected" localized areas of the Puntland State of Somalia after a prolonged drought period. Since the mortality was observed in concomitance with heavy rains and a few human cases were also reported, the suspicion of an outbreak of RVF was initially considered. Following the recommendations of the SASB livestock working group an *ad hoc* meeting was held in the FAO headquarter. During this meeting the Somali PACE Project, in collaboration with

VSF-Suisse and COOPI, was mandated to thoroughly investigate the cause of the heavy mortality and to provide guidance on the actions to be taken. The investigating team visited several sites of the affected areas where semi-structured interviews were carried out. From the assessment it could be concluded that deaths were not as a result of disease but due to drastic decrease in temperature that resulted in hypothermia. This was supported further by the report from the pastoralists that the deaths occurred in the early dawn time when the temperatures were at their lowest. The detailed mission report is provided in Annex **.

b) Livestock mortality was reported along the Juba River in Marerey area (Lower Juba Region) in March 2005. The mortality occurred in areas flooded after heavy rains. Also in this case the suspicion of an outbreak of RVF was initially considered. This suspicion was further reinforced by the communication of a human case of hemorrhagic syndrome, which was reported by the team of MSF-Holland operating in the area. Several locations of the affected areas were investigated and several samples were collected for RVF laboratory confirmation. Since during field operations symptoms compatible with mild RP were detected in cattle, samples for RP laboratory confirmation were also collected. The samples collected were as follows:

- Serum: 98
- EDTA Blood: 8
- Eye Swabs (in Trizol®): 97
- Lymph Nodes Aspirates (in Trizol®): 74

Serum and EDTA Blood samples were sent to the KARI Biotechnology Centre for the detection of RVF virus, while eye swabs and lymph nodes aspirates were submitted to the KARI Muguga Reference Laboratory for the detection of RP virus.

Sera were inoculated into vero cell cultures, but the results indicated no presence of live virus. EDTA blood was also inoculated into vero cell cultures and mice. Also in this case the results indicated that there was no live virus in the samples.

The samples collected from the human case of hemorrhagic syndrome were tested by MSF-Holland for the detection of several agents that could induce hemorrhagic syndromes in humans. All performed tests failed to detect any of the investigated potential causal agents. The affected person recovered after receiving a symptomatic therapy and the observed hemorrhagic syndrome was suspected to have been caused by some king of poisoning.

No RP virus could be detected by means of PCR at KARI Muguga. During field investigation several cases of anthrax were reported by pastoralists and this could have been the cause of the observed mortality in livestock.

Result 5

- ***Local networks for promoting livestock health are functioning***

Result 6

- ***The programme is effectively co-ordinated***

4. ADHERENCE TO THE WORKPLAN

4.1. Activities not implemented

All activities planned for the period under Results 3 & 4 have been implemented. However the cross-sectional sero survey could not be successfully concluded in all the eight target administrative regions. This was due to the cancellation of all ECHO flight operations from February 2005. This resulted in the impossibility of mobilizing the needed personnel in the central regions, unless by referring to private air companies. However, since no evacuation could be guaranteed by ECHO flights it was recommended to maintain the expatiate field staff in Somalia at its minimum.

4.2. Other activities

The investigation of two suspected RVF outbreaks was carried out during the quarter.

5. WORKPLAN FOR UPCOMING QUARTER

6. EXTERNAL AND INTERNAL FACTORS INFLUENCING THE PROJECT

6.1. Political Developments and Security Issues

Despite the very recent creation of a Somali Transitional Federal Government, the security situation in Southern Somalia remains volatile. Despite the cross-sectional sero-survey could the successfully implemented in five regions, several security accidents occurred during the implementation of field activities. A clanic clash for water access occurred in Jennay Habdalla (along the main Afmadow – Kysimayu road). The tension that rose in the area forced the investigating team operating in Kysimayu and Badhadhe District (Southern Lower Juba Region) to utilize alternative roads in order to reach the target sampling sites. The same team encountered various problems during the implementation of field activities. These were mainly created by free-launching militia that tried to collect money or looting equipment from the team. In Gedo security problem were also encountered by the team covering the northern part of the region and field operations had to be suspended for 5 days after which the investigation was resumed.

6.2. Internal Problems

7. UPDATED INVENTORY

As per the EC guidelines, an updated list of physical goods exceeding the value of ∈500 Euro (USD 450) that have been acquired by the project to date is included below:

Description	Qty	Purchase Date	Value (USD)	Condition

8. PERSONNEL

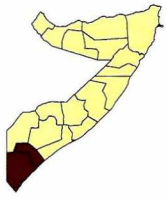
Details of the expatriate and local personnel employed by the project to date are given below:

9. LIST OF ANNEXES

Annex C1 – Training manual on Basic Applied Epidemiology Focused on Rinderpest Sero-Surveillance Based on Random Map Coordinates.

ANNEX C1 – TRAINING MANUAL ON BASIC APPLIED EPIDEMIOLOGY FOCUSED ON RINDERPEST SERO-SURVEILLANCE BASED ON RANDOM MAP COORDINATES.

(1ST NOVEMBER 2004 – 31ST MARCH 2005)



INVESTIGATING RINDERPEST

IN CENTRAL AND SOUTHERN SOMALIA

(Lower Juba & Middle Juba)

Training on Basic Applied Epidemiology Focused on Rinderpest Sero-Surveillance Based on Random Map Coordinates

December 2004

PACE

- Somali Component -

Funded by: - European Development Funds - Swiss Disaster Relief - Italian Cooperation - Department for International Development of the United Kingdom

INVESTIGATING RINDERPEST IN SOUTHERN SOMALIA

Training on Basic Applied Epidemiology focused on RP Sero-Surveillance Based on Random Map Coordinates

1. Introduction

Over the years, veterinary science has attempted to control particularly the devastating diseases for the livestock industry. Great importance has been given also to diseases that are transmissible from livestock to humans (zoonosis) and to diseases that are causing ban to livestock trade.

Despite these efforts, the livestock sector continues to suffer from numerous animal diseases that affect large parts of the world to varying extents. Consequences of these diseases are seen in the national economies as well as the trade of livestock and livestock products at international levels.

Animal diseases can be classified according to the impact they have on an animal population. Thus, they are classified according to the speed in which they spread, the losses they cause and the risk they present to humans (zoonosis).

- Livestock transmittable diseases, which have the potential for very serious and rapid, *spread, irrespective of national borders*, which are of serious socio-economic or public health consequences and which are of *major importance* in the international trade of animal and animal products have been classified under the List A of OIE.

A010	Foot and mouth disease
A020	Vesicular stomatitis
A030	Swine vesicular disease
A040	Rinderpest
A050	Peste des petits ruminants
A060	Contagious bovine pleuropneumonia
A070	Lumpy skin disease
A080	Rift valley fever
A090	Bluetongue
A100	Sheep pox and goat pox
A110	African horse sickness
A120	African swine fever
A130	Classical swine fever
A150	Highly pathogenic avian influenza
A160	Newcastle disease

- Livestock transmittable diseases which are considered to be of serious socio-economic and/or public health importance *within countries* and which are *significant* in the international trade of animal and animal products have been classified under the List B of OIE.

Multiple species diseases

B051	Anthrax
B052	Aujeszky's disease
B053	Echinococcosis/ hydatidosis
B055	Heartwater
B056	Leptospirosis
B057	Q fever
B058	Rabies
B059	Paratuberculosis
B060	New world screwworm (Cochliomyia hominivorax)
B061	Old world screwworm (Chrysomya bezziana)

Cattle diseases

B101	Bovine anaplasmosis
B102	Bovine babesiosis
B103	Bovine brucellosis
B104	Bovine genital campylobacteriosis
B105	Bovine tuberculosis
B106	Bovine cysticerosis
B107	Dermatophilosis
B108	Enzootic bovine leukosis
B109	Haemorrhagic septicaemia
B110	Infectious bovine rhinotracheitis/ infectious pustular vulvovaginitis
B111	Theileriosis
B112	Trichomonosis
B113	Trypanosomosis (tse-tse borne)
B114	Malignant catarrhal fever
B115	Bovine spongiform encephalopathy

Sheep and goat diseases

B151	Ovine epididymitis (Brucella ovis)
B152	Caprine and ovine brucellosis (excluding B. ovis)
B153	Caprine arthritis/ encephalitis
B154	Contagious agalactia
B155	Contagious caprine pleuropneumonia
B156	Enzootic abortion of ewes (ovine chlamydiosis)
B157	Ovine pulmonary adenomatosis
B158	Nairobi sheep disease
B159	Salmonellosis (S. abortusovis)
B160	Scrapie
B161	Maedi-visna

Particular importance is given to diseases that, because of their potential for very serious and rapid spread, irrespective of national borders (list A), represent a high risk for the national and international livestock industry. Control efforts of these diseases may have a real impact on the economy of a country only if control measures are implemented at national or international livestock population level. A clinical approach, targeting a single or limited number of individuals, is insufficient to control such highly infectious and devastating diseases.

Rinderpest is a contagious viral disease of domestic and wild animals which can kill over 95% of susceptible animals. Rinderpest causes fever, discharge from the eyes and nose, dribbling, erosions

of mucous membranes, diarrhoea containing blood and mucus, and death. It is spread by close contact. In highly susceptible herds it will cause severe clinical signs and many deaths.

However, nowadays some strains are mild and RP may cause few clinical signs which make the disease difficult to be detected in the field. For instance, the African type 2 lineage is characterised by a very mild clinical expression in domestic animals, while it seems to be more virulent and thus more clinically recognisable in wildlife.

In fact, until 1994, when a mild form of Rinderpest was detected and diagnosed in Tsavo East National Park and subsequently in the Nairobi National Park (1994-96), the main endemically infected area in East Africa was believed to be Southern Sudan and from this source infection regularly invaded adjacent areas of Uganda, Kenya and occasionally Ethiopia. All virus isolates recovered from Southern Sudan and these neighbouring areas since 1983 were of the African type 1 lineage (classical RP). Initially the Tsavo Rinderpest outbreak was thought to have originated from here but the molecular evidence clearly showed that the Tsavo virus and the isolates from Nairobi National Park were completely different genetically and fell into the African type 2 lineage (mild form). Isolates of this lineage have been recovered from West Africa as late as 1983 but not since 1962 in East Africa. Thus a second main focus of Rinderpest in East Africa had been revealed after having remained undetected throughout the period of JP15 campaign and eight years of PARC. The exact location of this focus was uncertain but surveillance has concentrated on North Eastern Kenya and Southern Somalia (Barrett et Al.; 1998).

In the North Eastern Kenya – Southern Somalia ecosystem RP reappeared periodically showing a cycle of about five years:

- 1980-1983 A moderately severe epidemic of Rinderpest entered Mandera and spread to extensive areas of Southern Somalia

- 1985-1988 A second wave of Rinderpest affected the Middle and Lower Juba Regions of Somalia

- 1991-1993 Coincident with the onset of drought in 1991, two waves of Rinderpest spread out from Wajir District, Kenya. The first in April travelled through Simper Fatima in central Mandera District to cause moderate mortality in Eastern Mandera District. The second wave

passed Liboi, Kenya to enter Lower Juba causing moderate to severe mortality (30 to 70%) at Tabta, Bilis Qooqaani, Afmadow, and Badhade in Somalia

- 1994-1996 The Rinderpest in Mandera District persisted and assumed a mild form. From Mandera the disease spread to no-mans-land between El Wak, Kenya and El Wak, Somalia where it was sighted by Somali veterinary personnel in mid-1994. Subsequently, low to moderately severe outbreaks occurred in border regions on both sides of the border until the onset of the rains in early 1996. To date, the furthest known eastern extension of the focus was at Fafadum in the Western Gedo Region, Somalia. Clinically mild Rinderpest was observed in numerous herds in the Fino, Hashino, Lafey, Alunga, Warengara area of Mandera District. Ocular and nasal swabs from affected cattle at Fino and Hashino were positive for the presence of Rinderpest antigen in AGID tests conducted by the Government of Kenya at NVRC, Muguga. No clinical disease was observed in Somalia and no first-hand reports of active clinical disease were received from Somalia since the onset of the rain in April (Flanagan & Mariner 1993).

In Somalia endemic foci of African type 2 lineage were considered to be confined to the Trans-Juba Region (south from the Juba River). More recent investigations have shown RP Abs. presence also in unsuspected areas of Central Somalia.

- 1998-1999 Clinically mild cases of Rinderpest were detected in several locations of Afmadow District. Serum samples tested were detected RP Abs. positive (using the RP cELISA H) in Lower and Middle Juba and Gedo Regions of Somalia (Terra Nuova - Rinderpest Vaccination Campaign in Trans Juba Region, Somalia / Phase I; Final Report 1999).

- 1999-2001 Serological investigations carried out on unvaccinated young stock of cattle showed positive results (using the RP cELISA H) in various locations of Bay, Hiran, Mudug and Galgadud Regions of Southern and Central Somalia (see ***Annex I****) (Terra Nuova – Itinerant Training Programme for Somali Veterinary Professionals / Phase II; Progress Reports 1999-2001)*

- Oct. – Nov. 2001 An outbreak of mild RP was detected and confirmed on buffaloes in the Meru National Park, but so far no evidence of RP virus circulation was found in domestic animals (Ministry of Agriculture and Rural Development – Press Release on Rinderpest Situation in Meru National Park).

During PARC Somalia Project – Phase I & II, investigations were carried out to better understand RP occurrence and pattern in the project area (e.g. Afmadow, Garissa and Ijara Districts) according to the local knowledge. It appears that two main epidemics can be identified in the area during the last decade. The first one in 1991-93/94 and the second one in 1997-99. The results show a mean inter-epidemic period of about 2 years and a mean epidemic period of about 3 years (Terra Nuova - Rinderpest Vaccination Campaign in Trans Juba Region, Somalia / Phase II; Final Report 2000). If this cyclic behaviour of RP epidemic waves persists then the next onset of RP is expected in the year 2001/02 and it should persist till the year 2003/04. The Meru National Park outbreak is timely and coinciding with the expected RP epidemic wave.

During the last two decades the Somali livestock industry has been suffering for the imposition of several livestock ban from the importing countries. Some of them were related to the suspicion of RP virus circulating among the Somali cattle population.

-1983: Rinderpest ban imposed by Saudi Arabia
-2000: Kenya – Somalia border close to the cattle trade due to the suspicion of RP virus introduced into Kenya from Somalia
-2001: Rinderpest vaccination requirement imposed by Yemen for cattle imported from Somalia

"The creation of WTO and the subsequent signing of the Agreement on the application of sanitary and phytosanitary measures (SPS Agreement) have laid the foundation for the reduction of tariff barriers to trade. As a result, sanitary barriers will now be the only legitimate non-tariff barriers to trade in livestock and livestock products. Alternatively, countries wishing to export livestock and livestock products will be requested to substantiate claims of being free from specific livestock diseases. Both will require animal health data of a quality and quantity, which is currently not available in a large number of countries, particularly developing ones. To prove freedom from disease, a passive and historical register of disease occurrence, although valuable, is not enough. Official Veterinary Services **must have a credible surveillance system** where (a) any suspicious signs of disease activity are reported and (b) **statistically selected samples from the host population** are collected in order to detect clinical signs or other evidence of transmission of infection. In either case, suspicion of disease must be followed by quarantine, confirmatory diagnostic work and any necessary disease control activities".[1]

[1] Supporting claims of freedom from disease. Second FAO Electronic Conference on Veterinary Services, 23 June 1998

*For the specific case of RP, according to the GREP (Global Rinderpest Eradication Programme) Blueprint for Africa, the continent should be free from infection by the end of the year 2008. This goal will be accomplished by the implementation of the "OIE pathway" (see **Annex II**), which plans to discontinue mass vaccination campaigns and implement disease surveillance and sero monitoring. However, targeted vaccination campaigns will be implemented in those areas where the presence of the virus has been demonstrated.*

During PARC Somalia (Phase 1 & 2), recent immunization campaigns and sero-surveillance activities were carried out in Southern Somalia in order to control the disease and to lower the risk of spreading to the neighboring Kenya.

The final eradication of RP will however require the identification of all remaining foci and the implementation of appropriate control measures.

The RP Sero-Survey, together with an Active Disease Search, is an attempt to identify the remaining foci of RP virus circulation in Somalia in order to generate the baseline information for the subsequent eradication. To do so the cattle population of Somalia must be investigated.

In order to carry out those activities, a focused training (on 'Basic Applied Epidemiology with a particular emphasis on RP Investigation') of the Somali Veterinarians selected to lead each investigation team is required.

In recent years, veterinary epidemiology has developed as a tool for investigating the health status of animal populations through the analysis of factors that enhance their occurrence and development and through the quantification of the spread of animal diseases over space and time.

Epidemiology may be defined as *"**the study of the health status of populations**"* or *"**the study of disease and its determinants in a population**"*.

All information gathered through epidemiological investigations is essential to design proper animal health surveillance and control systems.

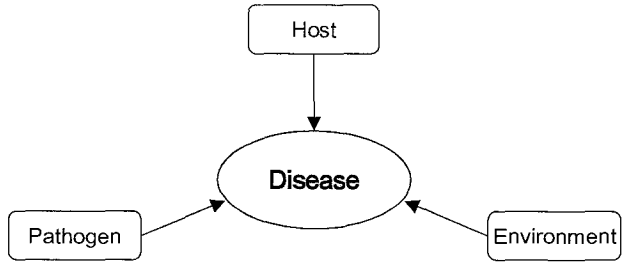
2. Determinants of disease

The key words coming from the definition of epidemiology - *"the study of disease and its determinants in a population"* - are '**disease'**, '**determinants'** and '**population'**.

Epidemiology is distinguished from clinical examination by its concern with health problems at a population level, rather than the individual or herd/ flock level. However, there are a number of steps that both approaches follow in their attempt to gather information on which to base a decision and subsequent intervention.

Individual approach	**Population approach**
Methods	
Clinical examination	**Epidemiology**
Anamnesis	Knowing a disease and its determinants
Visual appraisal	Selecting parameters for investigation
Physical examination/ post mortem	Investigating (qualitatively + quantitatively)
Differential diagnosis	Analysing + processing results
Tentative diagnosis	Describing a disease
Decision maker	
Veterinarian / AHA	Veterinarian institutions at national, regional, worldwide levels
Intervention	
Do nothing	Do nothing
Treat	Control
Prevent (e.g. vaccination)	Eradicate
Impact	
Benefit for the single livestock owner	Benefit for the whole sector / country

The first step to undertake when planning an epidemiological investigation is to find out about a disease and its determinants. Disease occurrence is the result of the interaction among a host, an agent (or pathogen) and the environment in which the host population is living. The host, pathogen and environment are called determinants of disease.



Each determinant has its own particular characteristics, for example:

Host: susceptibility, sensibility, receptivity, carrier, and reservoir.

HOST		
Characteristic	**Rinderpest (RP)**	**Rift Valley Fever (RVF)**
Susceptibility	Cattle, Buffaloes, Kudus, etc.	Sheep, Goats, Cattle, Camels and Humans
Sensibility	Small Ruminants, Camels, Impala, etc.	Several species (if experimentally infected)

Receptivity	Hippopotamus, Dogs and Rabbits, Hamsters, etc. (if experimentally infected)	Several species (if experimental infected)
Carrier	None	None
Reservoir	Large, heterogeneous population of animals with A sufficient supply of susceptible animals	Aedes mosquitoes / eggs

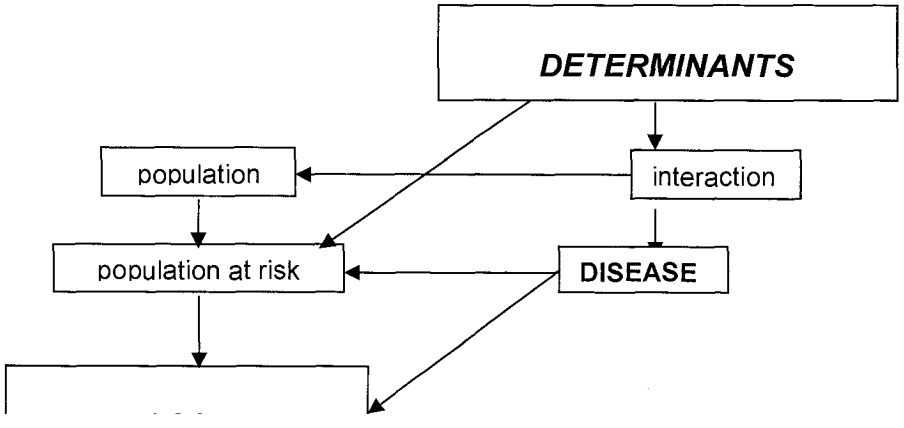
Pathogen: pathogenicity, tropism, and resistance.

PATHOGEN		
Characteristic	**Rinderpest (RP)**	**Rift Valley Fever (RVF)**
Pathogenicity	Severe or Mild form	Peracute or Acute in domestic animals. Mild or Acute in humans.
Tropism	Endothelio- / Lymph-trope	Hepato- / Viscero- / Pan-trope
Resistance	Not resistant in the environment	For some month in dry blood at ambient temperature

Environment: vector, climate, and husbandry system.

ENVIRONMENT		
Characteristic	**Rinderpest (RP)**	**Rift Valley Fever (RVF)**
Vector	None	Mosquitoes (e.g. Aedine) and Biting Flies
Climate	Normally not related to climate even if prolonged drought periods can lead to massive gathering (aggregation) of animals around available watering points, favouring the spread of the virus	Normally related with heavy, prolonged and often unseasonal rainfalls
Husbandry System	Highly dynamic husbandry systems (e.g. transhumant or nomadic) favour the widespread of the disease	Normally not related to any particular husbandry system. Contact between host and vector is normally a condition for a first outbreak

Below, Figure 1 shows how interactions between determinants give diseases and havoc loses at population level.

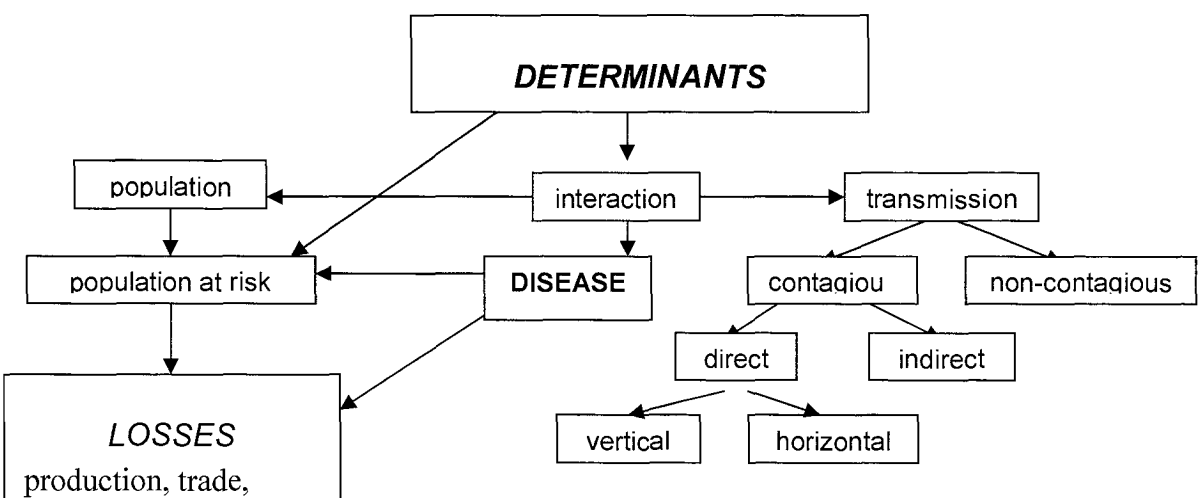


The interaction between disease determinants, according to their characteristics, gives different ways of disease transmission within a population at risk.

Transmission is another essential factor for the spread of a disease. It can be classified as contagious and non-contagious. Contagious diseases can be transmitted directly (direct transmission) and/ or indirectly (indirect transmission). Direct transmission can further be classified as vertical and horizontal.

TRANSMISSION		
Types	**Rinderpest (RP)**	**Rift Valley Fever (RVF)**
Contagious (disease)	Yes	Yes
Direct	Yes	Yes
Indirect	Theoretically is possible (e.g. by air) but unlikely to happen under natural condition.	Human infection trough contact with dry biological material.
Vertical	No	Infection *in utero*
Horizontal	Yes	Contact with abortion and infected materials, inhalation, milk and colostrums.
Non-Contagious (disease)	No	Mosquitoes (biological vector) and Biting Flies (mechanical vector).

Below, Figure 2 shows how characteristics of each disease determinant give different ways of transmission.



A thorough knowledge of disease determinants, their characteristics and the related way(s) of transmission of a pathogen within a population at risk are the basis for a successful epidemiological investigation.

3. Selecting parameters and investigating a disease

When investigating a disease in a population it is essential to select parameters that can provide relevant information about the disease itself. Appropriate parameters can be selected only if you have a thorough knowledge of the disease. This knowledge comes from knowing disease determinants and their interactions. For instance, *cattle are the host species for RP but Kudus, buffaloes and warthogs are also highly susceptible species. Small Ruminants are poorly susceptible but can be good indicators of RP virus circulation. Such information is useful to select the relevant species to be investigated in a survey that aims to detect the presence of the disease or the circulation of RP virus. Rinderpest is transmitted by direct contact. The disease is identifiable by its symptoms on affected cattle. The virus can be isolated in specimens when collected from the sick animal at the febrile phase. Otherwise the infection can be detected using serological methods.*

When the relevant parameters according to disease determinant characteristics have been selected, each parameter needs to be investigated using appropriate techniques. In epidemiological investigation, there are two main ways of collecting data: qualitative and quantitative.

3.1. Qualitative investigation

Data collected using qualitative methods usually ***describe*** disease characteristics or patterns in an objective and standard way. Relevant information can be gathered on animal movements, important markets and trade routes. It is possible to find out if a disease is epidemic or not (retrospective studies) and the presence of relevant wildlife species in the study area, clinical symptoms, etc. In epidemiology, qualitative data are usually collected using questionnaires; group exercises, studying records of clinical and post-mortem findings, etc. During an outbreak investigation, which is normally detected by identifying disease-related symptoms, relevant samples for antigen detection can be collected. Once again, the choice of the samples for disease confirmation is based upon the knowledge of the disease itself. *For example, knowing that RP virus is lymphotrope and endotheliotrope can give an idea of the organs or body fluids where the virus can be isolated from.*

The most appropriate samples to collect to detect antigens are:

- *from live animals:* - *EDTA blood samples to look for the presence of the virus in the blood*
  - *lymph nodes aspirate to look for the presence of the virus in the lymphatic tissue*
  - *Eye-Mouth-Nasal swab to look for the presence of the virus in the ocular, mouth and nasal discharges.*

- *from dead animals:* - *Mesenteric lymph-nodes, pre-scapular lymph-nodes, tonsils, ileo-ceacal entrance*

All samples must be properly collected, recorded, processed, stored and submitted to competent laboratories.

3.2. Quantitative investigation

Data collected with quantitative methods usually ***measure*** disease variables, distribution, etc., in an objective and standard way. Relevant information can be gathered on morbidity, mortality, prevalence (e.g. sero-prevalence), incidence, case fatality, etc. of a disease. Most of these measurements of a biological event are calculated as rates, ratios or proportions.

Example: A flock of 500 small ruminants has been affected by a disease for 3 months. When the veterinarian visited the herd, 68 animals were sick and 36 had died. The veterinarian visited the same flock a week later. The number of sick had reached 77, but no new animals had died and no sick animals had recovered.

- The *morbidity* at the first visit was 36+68 = 104, as 104 is the total number of animals that got sick since the beginning of the outbreak (number of sick (68) plus number of dead after getting sick (36)). Morbidity is normally calculated as *morbidity rate* 104/500 (number of animals that got sick (104) out of the total number of animals composing the herd (500)). Morbidity rate is expressed as a percentage 104/500*100 = **20.8%**.
- The *mortality* in the herd was 36, as 36 animals had died during the period. Mortality, like morbidity, is normally calculated as *mortality rate* 36/500 (number of animals that died (36) out of the total number of animals composing the herd (500)). Mortality rate is expressed as a percentage 36/500*100 = **7.2%**.
- The *prevalence* of the disease at the first visit was 68, as 68 animals were found sick by the veterinarian. Also prevalence is usually calculated as a ratio 68/(500-36) (prevalence considers the number of animals found sick (68) out of the total number of animals still alive (500-36 = 464) at the time of the visit). Prevalence is expressed as a percentage 68/464*100 = **14.6%**.

- The *incidence* of the disease at the second visit was 77-68 = **9**. Incidence represents the number of new cases (e.g. new sick animals) over a period of time. In this case the period of time is 1 week.
- The *case fatality* at the first visit was 36/104. Case fatality considers the number of animals that died (36) out of the total number of animals that got sick (104). It is expressed as a percentage 36/104*100 = **34.6%**.

Appropriate techniques must be used according to the selected parameters. In epidemiology, sero-surveillance (surveillance) is an important quantitative technique to investigate sero-prevalence and incidence of a disease in a study area. The "RP Sero-Surveillance structure for Central and Southern Somalia is given in **Annex III**.

4. Sampling

As we have seen, information on diseases and other events can be obtained from *surveys* (investigations). If all animals in a population are investigated, the survey is considered a *census*. A census is the only way of measuring the exact distribution of a variable in a population (e.g. sero-prevalence). Carrying out a population census is costly and time consuming, and therefore it is not also possible to obtain these exact measures. However, if a survey is well designed, a fairly accurate and acceptable *estimate* of a variable can be made by examining some of the animals in the relevant population. This is called a *sample*.

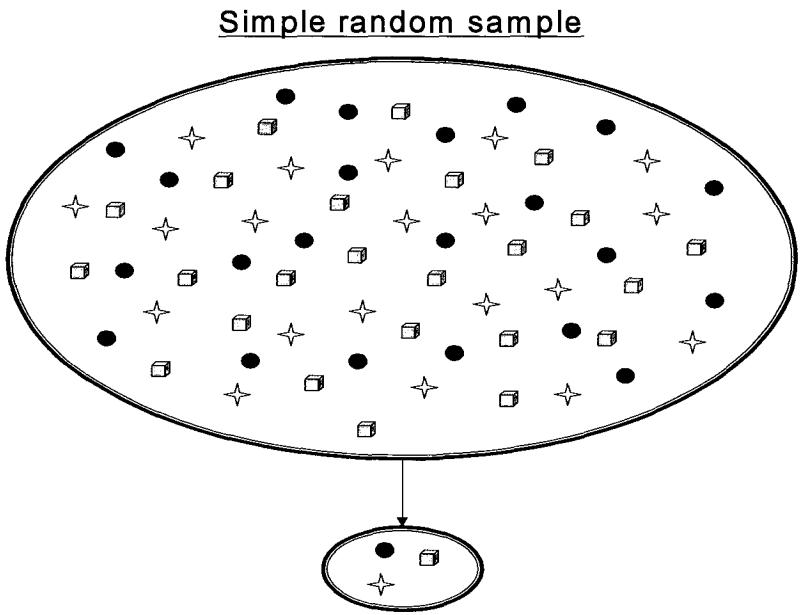
From a theoretical point of view, sampling is based on the idea that a population (a group of units) can be divided into sub-units (sample) that are *representative* of the whole. From these sub-units or sample it is possible to estimate certain characteristics or variables. In order to obtain a good estimate of a population variable, the sample must be representative of the population itself.

A representative sample is obtained by using a *deliberate*, *unbiased* process, so that *each sampling unit* (e.g. animal, herd, location, etc.*) in a group has an equal probability* (chance) *of being selected*. This is the basis of random sampling. Different types of random sampling can be used according to the needs and "environment" in which the survey is being carried out. Here only methods that are relevant to the Somali situation are discussed.

4.1. Random sampling

4.1.1. Simple random sampling

Simple random sampling is commonly used, but is not applicable to the Somali situation. Briefly, a simple random sample is selected by preparing a list of all animals or other relevant sampling units (e.g. herds) in a study population, and then selecting the sampling units randomly.

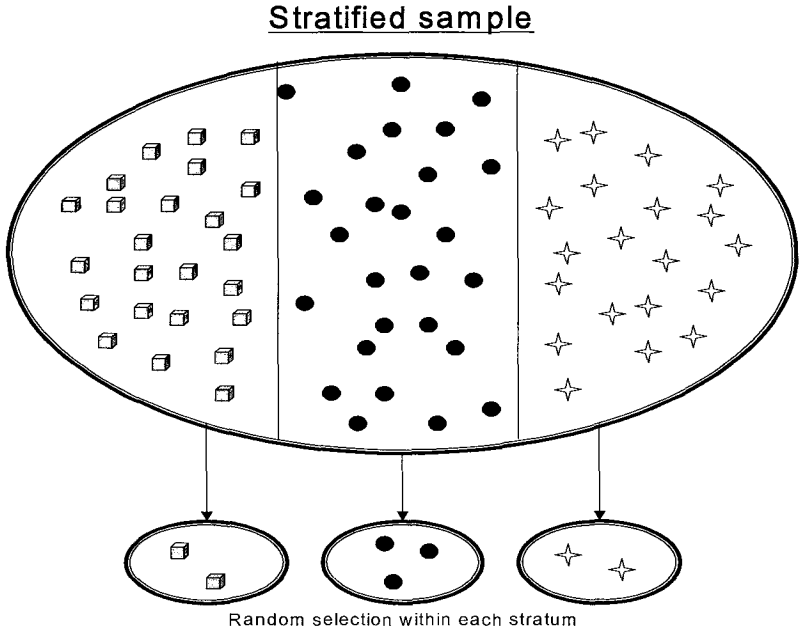


This method implies that all individuals / herds / etc... in the study population can be identified individually so as to select each unit before starting the survey. These conditions make this method unsuitable for the Somali context (as well as most developing countries).

4.1.2. Stratified sampling

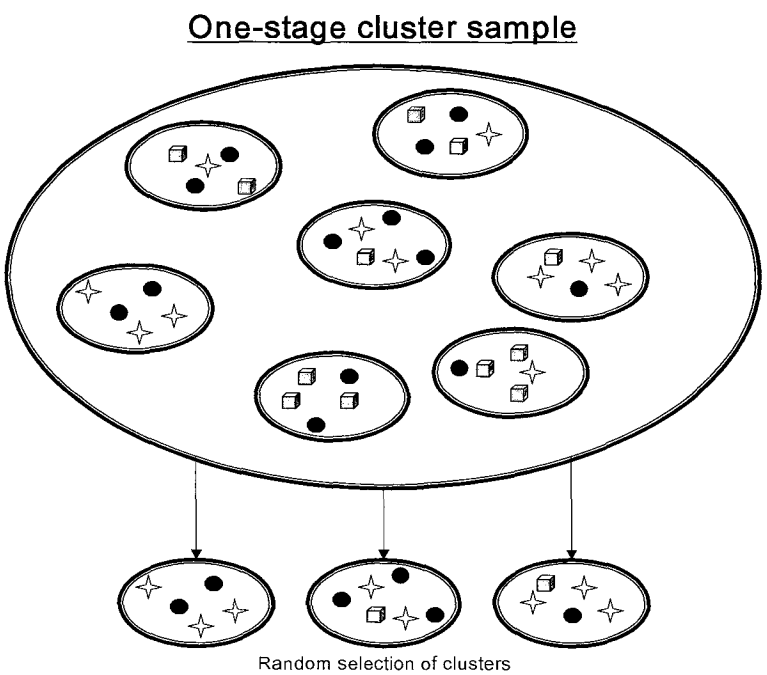
A stratified random sample is obtained by dividing the study population into independent groups (strata), and randomly selecting units from each of the individual strata. Stratification can improve the accuracy of a sample as it overcomes the tendency of a simple random sample to either over- or under-represent some section of the sampling frame.

Strata can be age or sex of an animal, districts, vaccination status, etc. Information explaining the difference between strata should be given to help understand the disease pattern (e.g. a higher RP sero-prevalence in an age group can provide information on the years of occurrence of an epidemic of the disease in the area).

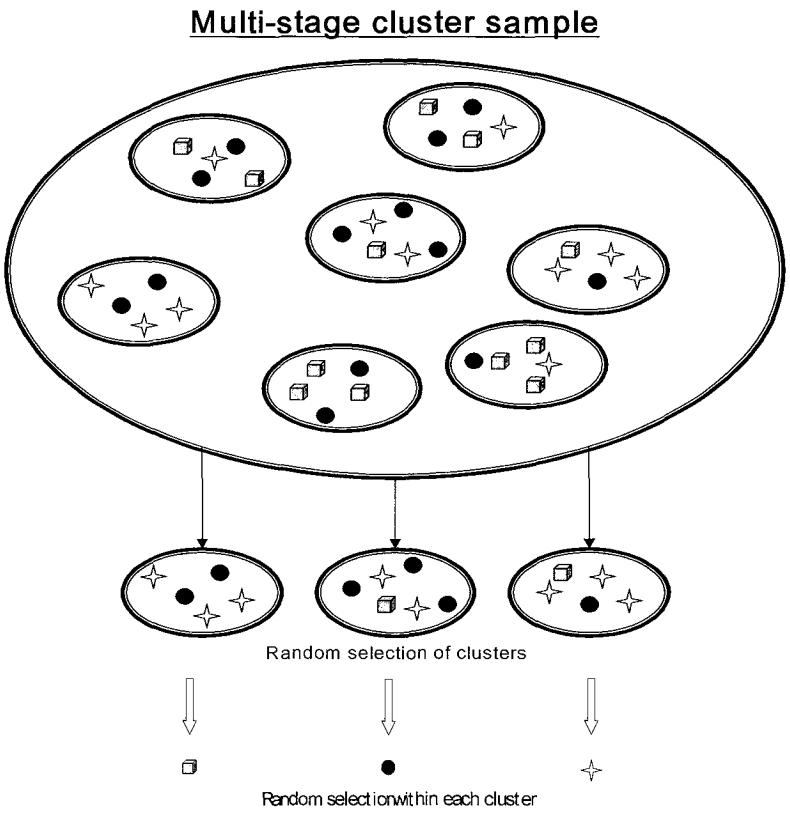


4.1.3. Cluster sampling

Strata can be defined as geographical locations, such as countries, villages, watering points, etc. These strata are called clusters. Sampling from these types of clusters can be time consuming and costly. Selecting a few clusters, and sampling the animals only in these clusters can overcome this disadvantage. If all animals in the selected cluster are sampled, it is called a *one-stage cluster sampling*. The stratification is the clusters themselves. For example, in the Somali context, villages and watering points are often considered as clusters (animals share the same risk of exposure to a pathogen).



Often huge animal populations are found in each cluster so that further selection of individuals within each sampling site (cluster) is needed. This means that the sample is selected in more than one stage. In this case, a sample of clusters is selected and then a sub-sample is made of some animals in the cluster (in contrast to all animals in one-stage cluster sampling). Other stratifications can be done within the selected animals in each selected cluster (e.g. sex and age of animals, etc.). This procedure is called *multi-stage cluster sampling.*



Sometimes, certain areas within a study zone are inaccessible and it is not possible to randomly select sampling sites. In these cases, the survey results can be applied only to the visited areas and not generalised to the whole zone.

4.2. Non random sampling

4.2.1. Convenience sampling

Is the collection of easily accessible sampling units. When convenience (ease) is the main criterion for selecting a sample, it is unlikely that the sample will be truly representative of the study population. Despite its disadvantages, convenience sampling may be the only means of providing information quickly and cheaply. However, care must be taken in interpreting the results of surveys based on this method of sampling.

4.2.2. Purposive selection

Is when a sample is chosen because it has characteristics similar to those of the target population. Before starting an investigation, the purpose of the survey must be identified. For example, if it is decided to carry out a RP survey in Somalia to understand if the disease is present and to what extent, the objectives and constraints of the study need to be identified first. If the purpose of the survey is to investigate a recent circulation of the virus, only young animals (i.e. 1-2 years) should be selected for the sampling unit. Furthermore, if the survey wants to detect naturally infected animals and not positive animals that have reacted to the virus after vaccination, only unvaccinated calves should be included in the survey. In this kind of survey, only categories of animals that correspond to the purpose of the investigation are selected. Different sampling methods for survey are given in Annex **IV**.

4.3. Precision of a sample

When investigating a disease, the results coming from the selected samples must be representative of the target population. This is obtained by randomly selecting the individuals within the sample. In this way, all individuals within the target population have the same chance of being selected. Another important parameter to respect during an investigation is the number of units (e.g. animals, herds, locations, etc.) to be sampled (**sample size**). When measuring a variable (e.g. prevalence) in a population, using a sampling method, the results obtained from the sample must be as close as possible to the true ones in the target population. The precision (or accurateness) of estimating the value of a variable of a target population is directly proportional to the sample size. In other words, the more units sampled, the more precise the results. However, increasing the sample size does not increase the precision if the sampling units are not selected at random. A balance must be found between the cost of sampling a huge number of animals and an acceptable precision in measuring a variable. In order to know the level of precision obtained from different sample sizes, certain formulas are used. These formulas use three parameters:

1) **Expected prevalence**: this is the prevalence expected to be found in the study area. It is obtained by consulting previous results (e.g. publications, results of previous surveys or surveys carried out in neighbouring areas). If this information is not available, a 50% expected prevalence is used as a default. It gives the biggest sample size.

2) **Confidence interval**: this is the trust given to the results from a survey. In epidemiology, a 95% confidence interval is normally used. This means that if a survey was repeated, there is a 95% chance that the results obtained would correspond to the results of first survey.

3) **Desired absolute precision**: this is the precision with which the survey intends to estimate the prevalence in a given population. In epidemiology, a 1 or 5% desired absolute precision is

normally used. This means that the observed results will differ 1 or 5% from the value of the target population.

The higher the desired absolute precision (e.g. 1%) and confidence interval (e.g. 99%), the bigger the sample size must be. The conclusions drawn from the results of an investigation can be misleading if the characteristics of a good sample (e.g. representative and precise) are not respected.

Different survey sampling methods are given in **Annex IV.**

*Procedures to investigate RP in Central and Southern Somalia are given in **Annex V.** Basically a serological survey is to be carried out. A questionnaire aiming at gathering information on outbreak rumours and occurrence of Stomatitis-Enteritis Syndrome is concurrently carried out.*

5. Results, interpretation, decision-making, control strategies and evaluation

5.1. Interpreting laboratory results

Samples are sent to a laboratory in order to confirm the presence of antigen and/or antibodies of a specific pathogen. Serological results can show sero-positive or sero-negative animals. But when interpreting the biological meaning of these results, it is important to remember that the results may be false. A positive result can be a true positive (the animal is/was really infected by a pathogen), but it may also be a false positive (the animal is/was not infected by the pathogen, although the result is positive). In the same way, a sero-negative animal may be free from infection (true negative) or it may be infected (false negative).

A false positive result can be caused by a non-specific reaction. This means that the test has detected an antibody induced by an agent other than the one targeted. This may occur when an animal has been infected by a pathogen whose antibodies cross-react with those of the targeted pathogen (e.g. PPR c-ELISA test cannot selectively differentiate between antibodies induced by RP or PPR infections).

False positive results are thus caused by the lack of *specificity* of the test used.

The specificity of a test can be defined as the ability of the test to give a negative result when the animal is not infected (a truly non-infected animal). The specificity can be calculated using the following formulae:

$$Sp = \frac{\text{number of non-infected animals negative to the test}}{}$$

total number of non-infected animals tested

A test with low specificity tends to classify non-infected animals as sero-positive. Therefore if, for example, a farm or country wants to prove that a given disease has been eradicated in order to lift an exportation ban, the use of a test with low specificity could result in false positive results and the maintenance of the ban.

A false negative result is mainly due to the lack of *sensitivity* of the test used.

Sensitivity can be defined as the ability of a test to detect infected animals. When a test is not sensitive, it tends to miss infected individuals and to identify them as negative (false negatives as they are really positive). The sensitivity of a test can be calculated using the following formulae:

$$Se = \frac{\text{number of diseased animals detected by the test}}{\text{number of diseased animals tested}}$$

Example: A RP virus has been detected to circulate in an area. In order to investigate prevalence and extension of the infection in the population a sero-survey is organized. Two tests are available with different levels of sensitivity and specificity.

- Test 1: Se = 65%; Sp = 96%
- Test 2: Se = 95%; Sp = 70%

Test 2 is selected as it is more sensitive. Test 1 is less sensitive and would give more false negative results, which would mean that prevalence, and extent of the infection would be underestimated.

5.2. Laboratories involved in disease surveillance diagnostic work in the Somali case

No diagnostic facilities are currently available within the Somali context for the examination of the statistically selected samples collected within the framework of surveillance activities. For this reason, samples collected in Somalia, particularly for the main transboundary diseases under investigation – Rinderpest (RP), Peste des Petits Ruminants (PPR), Contagious Bovine Pleuropneumonia (CBPP) and Rift Valley Fever (RVF) – are sent to the United Nations Food and Agricultural Organisation (FAO) regional reference laboratories.

Within the Eastern Africa region, the bodies acting as the FAO reference laboratories for the above diseases are KARI/ NVRC (Kenya Agricultural Research Institute/ National Veterinary Research Centre). They work together under OAU/ IBAR and provide technical assistance.

Regional laboratories must be able to meet specific technical and financial (either direct or through confirmed donor support) criteria set by FAO and / or OIE (International Office of Epizootics). For example, in the case of RP, they must be able to carry out virus isolation.

Higher up the hierarchy from the regional reference laboratories are the World Reference Laboratories. To be licensed as a World Reference Laboratory, additional criteria must be met. For example, for RP, the laboratory must be able to undertake molecular studies on virus isolates, so as to be able to identify other viruses that may confuse the diagnosis of RP, and to provide regional laboratories with positive identification of suspect virus isolates. Such a laboratory should also have a functioning research programme on RP.

The International Animal Health (IAH) in Pirbright, UK, is the world reference laboratory for RP.

5.3. Information from a disease investigation

Interpreting results from an investigation can provide information such as:

a) the presence or absence of disease depending on whether a pathogen, its antigens or antibodies following infection are found;
b) the level or prevalence of the disease – laboratory results allow for quantification as a certain number of sera are found to be positive out of the total tested;
c) the distribution in geographical terms – whether the disease is focused or spread, with a high or low prevalence in some areas;
d) the evolution over geographical area and over time – how the disease spreads and over what time frame.

Over time: if a number of surveys are carried out or if a disease is monitored for a period of time, information on its pattern can be obtained. Looking at the time frame of a disease – it can be seen if it is endemic, epidemic, pandemic or sporadic.

The way in which a disease evolves over time determines the urgency (speed) and type of measures that need to be taken for control purposes.

Over space: animal movements are important for disease investigation. Nomadic forms of herd movement present a particular challenge to carrying out surveys due to their unpredictability. Understanding the main paths followed by Somali livestock can help predict how a disease that may break out in one area can spread to another. With this knowledge, it is possible to take appropriate preventive measures (such as barrier vaccination) and prevent the pathogen from spreading.

5.4. Feedback to the field

During a field investigation or survey, livestock owners and local authorities will have contributed to the activities. They will be expecting feedback on the health status of their animals, information on any preventive or control measures that may be undertaken as well as the type of involvement or collaboration that may be requested from them.

5.5. Decision – making

Depending on the results of the survey, different decisions may be taken regarding the most suitable strategy of intervention. The strategy should however be cost effective: the cost of the control method should not be more expensive than the losses incurred by the disease when no control is carried out.

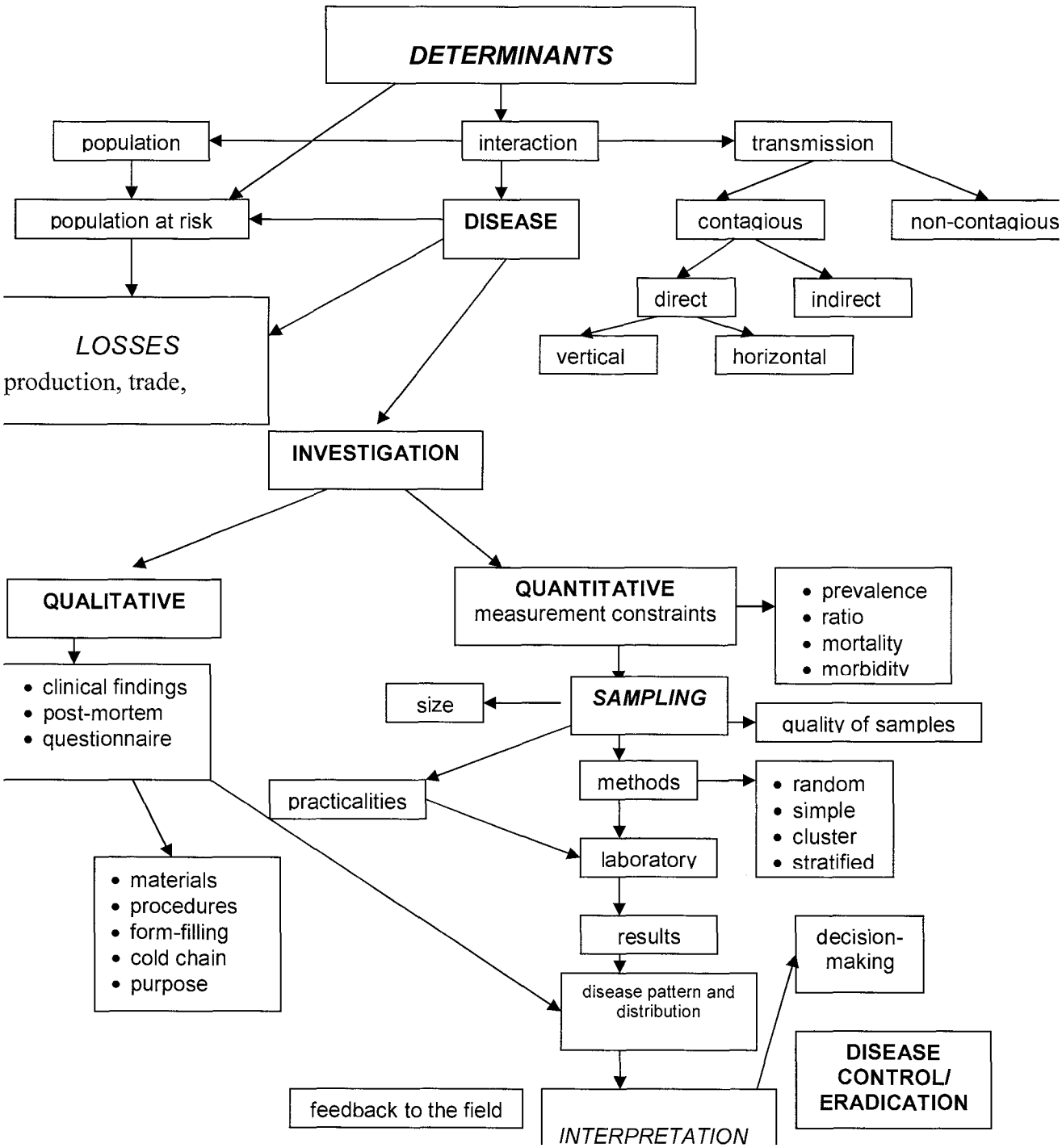
Nevertheless, for zoonosis and transboundary diseases of List A, the impact on public health and the trade restrictions imposed often make control and eradication necessary. This means that if people are at risk of contacting a disease or if trade in livestock or livestock products are going to be badly effected, the disease needs to be controlled whatever the cost.

5.6. Strategies of control

Strategies of control can be:

- immunising susceptible animals through mass vaccination
- stamping out (where feasible)
- control of animal movements; quarantine
- vector control, improvement of environment, improvement of husbandry
- 'doing nothing' – not all diseases need to be controlled. For example, with an endemic disease with no consistent losses or with decreasing incidence, there may be no need to control it.

Below, Figure 3 shows the inter-relations between the different concepts.



An example of the epidemiology process to investigate RP is given in **Annex V**.

5.7. Evaluation of control measures

Measures taken for the control or eradication of a disease need to be evaluated to see how effective the strategy has been and to what extent the objectives have been obtained. Criteria and points for evaluation need to be set at the same time that objectives are defined.

5.8. Ways to maintain a disease – free status

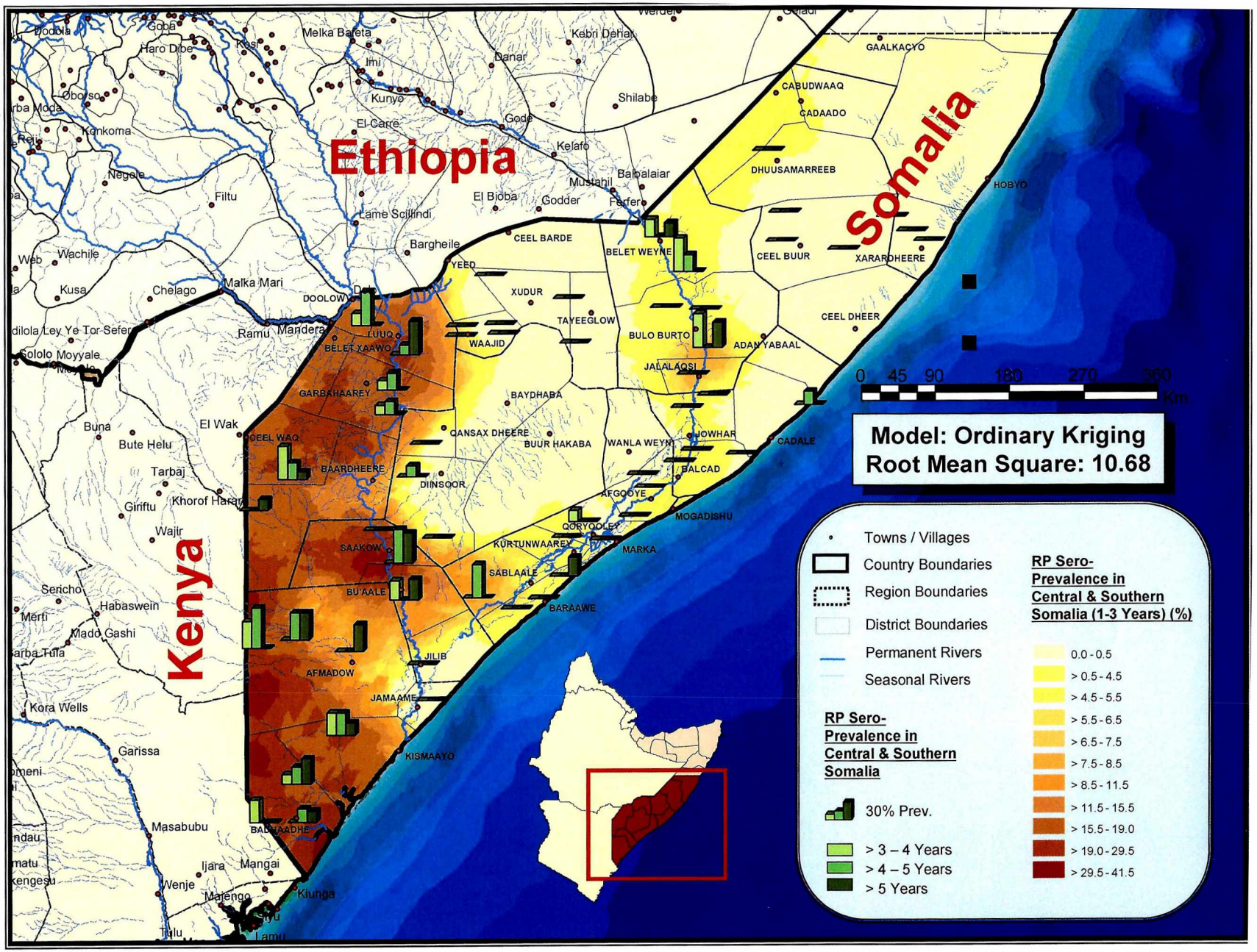
A country or area that is free from a disease or that has managed to eradicate a transboundary disease needs to make sure that it maintains its freedom. This requires:

- continuing surveillance activities
- controlling the health status of animals at entry points
- not importing animals from infected countries or areas

A Glossary on Epidemiological Terms is given in **Annex VI**.

Annex I

(Recent Rinderpest data for Somalia)


Ethiopia
Somalia
Kenya
Dodola
Goba
Haro Dobe
Kosi
Melka Bareta
Imi
Danar
Kebri Dehar
Werder
Geladi
GAALKACYO
CABUDWAAQ
CADAADO
Shilabe
Oboso
Konkoma
Negele
Filtu
El Carre
Kunyo
Gode
Kelafo
Mustahil
Balbalaiar
Farfer
Godder
El Bioba
DHUUSAMARREEB
HOBYO
Lame Scillindi
Bargheile
CEEL BARDE
BELET WEYNE
CEEL BUUR
XARARDHEERE
Wachile
Web
Kusa
Chelago
Malka Mari
YEED
XUDUR
TAYEEGLOW
CEEL DHEER
DOOLOW
LUUQ
BELET XAAWO
Ramu
Mandera
WAAJID
BULO BURTO
ADAN YABAAL
JALALAQSI
Sololo
Moyyale
GARBAHAAREY
BAYDHABA
Buna
El Wak
Bute Helu
CEEL WAQ
QANSAX DHEERE
BUUR HAKABA
WANLA WEYN
JOWHAR
CADALE
BAARDHEERE
DIINSOOR
BALCAD
Tarbaj
Giriftu
Khorof Harar
AFGOOYE
MOGADISHU
Wajir
QORYOOLEY
KURTUNWAAREY
MARKA
SAAKOW
SABLAALE
Sericho
Habaswein
Merti
Mado Gashi
BU'AALE
BARAAWE
JILIB
AFMADOW
JAMAAME
Kora Wells
KISMAAYO
Garissa
Masabubu
BARAAWE
Ijara
Mangai
Wenje
Majengo
Kiunga
Lamu
0 45 90 180 270 360
Km
Model: Ordinary Kriging
Root Mean Square: 10.68
Towns / Villages
Country Boundaries
Region Boundaries
District Boundaries
Permanent Rivers
Seasonal Rivers
RP Sero-Prevalence in Central & Southern Somalia
30% Prev.
> 3 – 4 Years
> 4 – 5 Years
> 5 Years
RP Sero-Prevalence in Central & Southern Somalia (1-3 Years) (%)
0.0 - 0.5
> 0.5 - 4.5
> 4.5 - 5.5
> 5.5 - 6.5
> 6.5 - 7.5
> 7.5 - 8.5
> 8.5 - 11.5
> 11.5 - 15.5
> 15.5 - 19.0
> 19.0 - 29.5
> 29.5 - 41.5

Annex II

(OIE International Animal Health Code for Rinderpest)

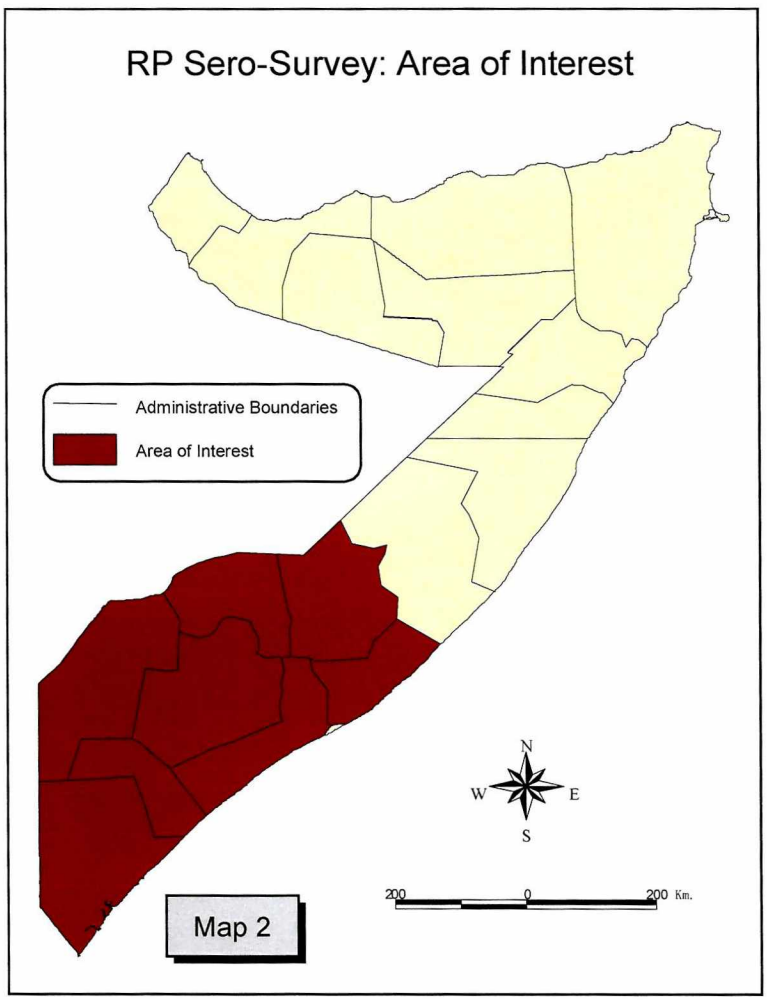
Annex III

(Rinderpest sero-surveillance structure for Central and Southern Somalia)

RINDERPEST SERO-SURVEY STRUCTURE FOR CENTRAL AND SOUTHERN SOMALIA

Several Rinderpest sero-surveys and active diseases search activities have been carried out in Somalia during the implementation phase of the Somali PACE Project. Despite the fact that serological results identified areas o Rinderpest circulation in Central and Southern Somalia, some members of the international community hac requested more data coming from the Somali eco-system (SES) (Ethiopia, Kenya and Somalia) as a whole ir order to allow the beginning of any vaccination campaign.

During a coordination meeting held at the AU/IBAR conference room from 7th to 8th October 2004, one of the mai recommendations was to consider the 3 countries of SES as one stratum for joint surveillance so as to generate the needed information that could lead future interventions.



The purpose of this survey is to accurately estimate the sero-prevalence o Rinderpest in Central and Southern Somalia. By comparing the estimated Sero-Prevalences by Region of this survey with the previous ones it will be possible to draw final conclusion about the epidemi areas and areas of endemic maintenanc of RP. In fact, by definition, an endemi disease situation is the **usual frequency of occurrence** of a disease in a population or the **constant presence** of a disease in a population. Having subsequent estimates of the prevalenc over time an estimate of the incidence wi be possible. Therefore this information wi prove extremely useful in the fina delineation of the areas of endemi maintenance of RP in the study zones.

The Survey will cover 8 Regions of Central and Southern Somalia namely Hiran, Lower Shabele, Middle Shabele Bay, Baakol, Gedo, Lower Juba and Middle Juba (Map 2).

The initial training as well as field operations will be coordinated from the three logistic bases of the Somali PACE Project as follows:

Regions:	Training and field operations coordinated from:
• Hiran, Lower & Middle Shabele	Johwar
• Bay, Bakool & Gedo	Dinsor
• Lower & Middle Juba	Afmadow

Taking into account the potentially large variation that can occur in the Somali Ecosystem (risk of exposure, sero prevalence by area, cattle population, presence of wild animals, presence or not of the aggregate point, trade route etc), the between clusters **variance** should be taken into consideration in the calculation of the samples size so as to obtain a reliable estimate after the completion of the survey.

Therefore the survey has been based on a two-stage cluster sampling design. The sample size for the prevalence estimation has been calculated for each region for a 50% Expected Prevalence, 95% Confidence Interval and 5% Desired Absolute Precision. The Between Cluster Variance (VC) observed in each region in the 2002 – 2003 RF Surveys has been adjusted for the 50% Expected Prevalence and used for the final calculation of the sample size by Region.

Region	Obs. Prev. (%)	Obs. VC	Exp. Prev. (%)	Adj. VC	Total Samples	Samples / Site	Num. Sites
Bakool	0.61	0.000115	50	0.004782	510	15	34
Bay	0.74	0.000417	50	0.001427	360	15	24
Gedo	17.83	0.010653	50	0.018178	810	15	54
Hiran	4.28	0.002819	50	0.017226	780	15	52
L. Juba	16.98	0.028193	50	0.036253	1050	15	70
L. Shabele	2.62	0.002255	50	0.022113	900	15	60
M. Juba	15.99	0.024319	50	0.030004	900	15	60
M. Shabele	0.64	0.00078	50	0.003082	450	15	30
Total	-	-	-	-	5760	-	384

Table 1: Two-Stage Cluster Sampling Design for 8 Regions of Central and Southern Somalia.

The sampling sites by region have been identified by generating random map coordinates so as to guarantee, a much as possible, the representativeness of the sample.

In each sampling site, previously selected and geo-referenced, at least 15 blood samples will b collected from unvaccinated animals between 1 and 3 years old. The purpose of this selection is t

identify relatively recent circulation of RP virus and to be consistent with previous surveys so as tc enable comparison of results.

Since the sampling points will be identified by randomly selected coordinates, the actual sampling site will become the village, watering point, market or grazing settlement closest to the selected point where animals can be found. All sampling sites will be geo-referenced.

Spare coordinates for each sampling team (30% of the total number of sampling site per team) has beer additionally generated to cater for the possibility of not reaching a specific sampling site.

Structure of the survey for Bay, Bakool & Gedo Regions

All field activities will be coordinate and supervised from the logistic base of Afmadow. In eacl sampling site, previously selected and geo-referenced (see Maps and List of Coordinates), at least 1: serum samples must be collected using plain vacutainers (10 ml.) from resident unvaccinated cattle age between 1 and 3 years. The blood samples effectively collected should not be less than 16 to 17 in eacl sampling site in order to cater for poor clotting samples. One vacutainer and one sterile needle will b utilised for each bled animal. Specific serology forms will be filled to record specific data on sample animals (see **Annex III.I**) and serum samples must be collected, processed, packed and dispatche according to the standard procedure discussed during the initial training. Each serum sample must b split into two aliquots (see **Annex III.II**).

Each sampling site will be reached with the use of maps and GPS tools. The actual sampling site wi become the town, village, watering point, market or grazing settlement closest to the selected poir where animals can be found. The actual sampling site will be geo-referenced. If one sampling sit cannot be reached (e.g. because of presence of land mines, geographical inaccessibility of the area conflict, etc.) or animals cannot be found within a certain distance (e.g. 10 Km. radius from the targe site), the sampling site must be replaced by one of the spare sampling sited allocated to each tean Procedures on how to use GPS tools are given in **Annex III.III**.

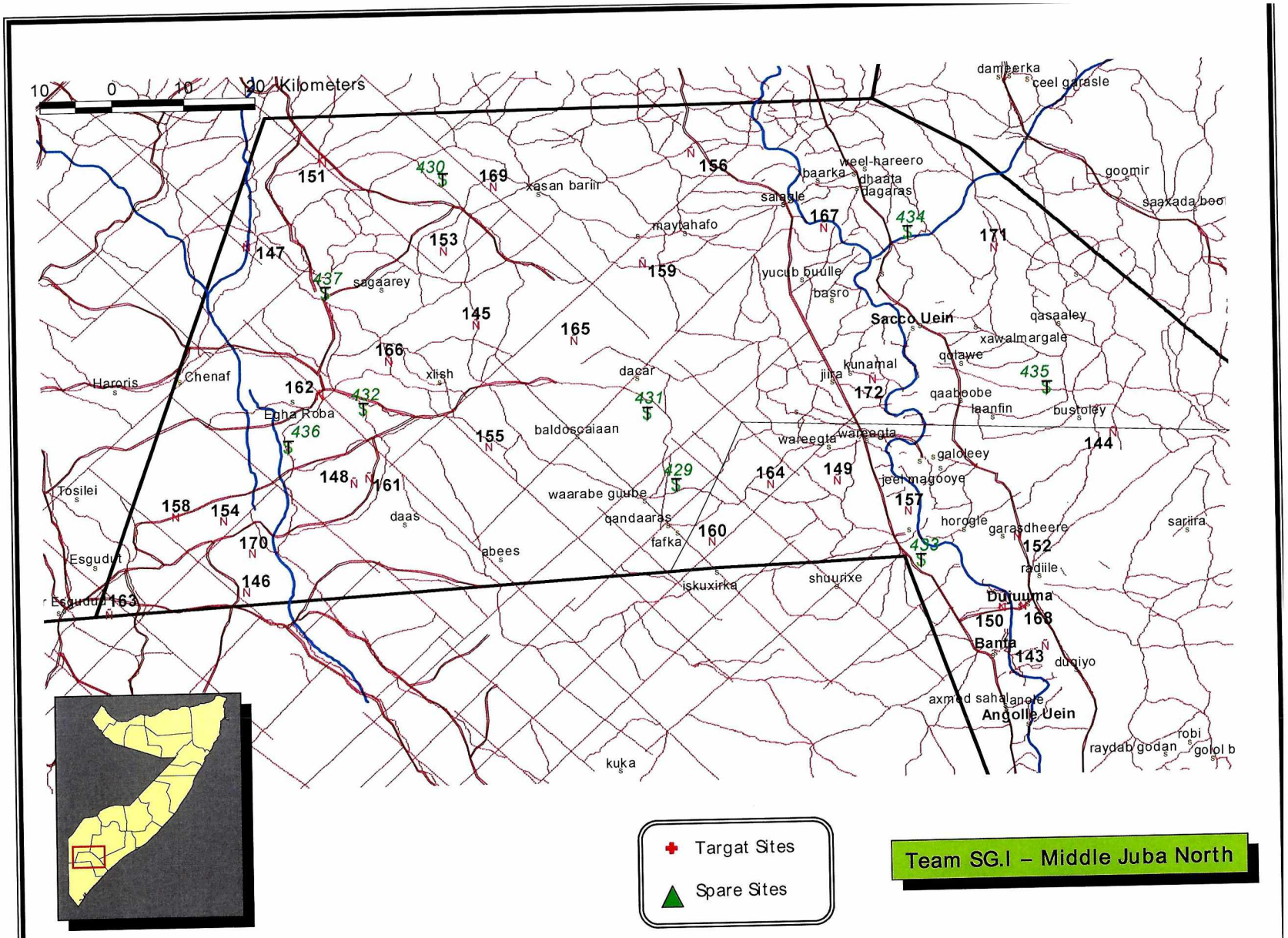
In each sampling site 2 to 4 specifically designed questionnaire (see **Annex III.IV**) will be administered to livestock owner (key informants). Information will be collected on (1) herd / flock size, composition, dynamic and seasona movements; (2) present and past situation of "enteritis/stomatitis syndrome" in the area in cattle and wildlife; (3) last Rinderpest vaccination and Rinderpest epidemic history; (4) wildlife species present in the area and wildlife involvement in transmission of "enteritis/stomatitis syndrome".

All rumours or suspicion of RP outbreaks will be clinically investigated and reported to the Zona coordination office of the Somali PACE Project. Samples will be collected for laboratory diagnosis by independent teams. **Annex III.V** gives the RP Outbreaks / Rumours Recording Form. During the survey important market, watering points, villages and grazing settlement will be geo-referenced in order to provide the baseline information for future surveys and eradication strategies (See **Annex III.VI**). Four teams will implement the survey activities in Lower & Middle Juba as follows:

Team ID	Sampling Area	Total Num. of Sampling Sites (15 samples per site)	Total Number of Samples
SG.I	Middle Juba (North)	30	450
SH.I	Middle Juba (South)	30	450
SI.I	Lower Juba (North)	35	525
SL.I	Lower Juba (South)	35	525
TOTAL		**130**	**1950**

The tentative time frame required to carry out the activities in the selected sampling areas must be set up before the beginning of the activities using a specific Sampling Frame – Record Sheet (See **Annex III.VII**).

The following set of Maps and List of Actual and Spare Sampling Sites will be utilised by the sampling teams to reach the target sampling sites.


10 0 10 20 Kilometers
damberka
ceel garasle
weel-hareero
baarka
dhaata
dagaras
goomir
saaxada boo
sangle
maytahafo
yucub buulle
basro
Sacco Uein
qasaaley
xawalmargale
golawe
jiira
kunamal
qaaboobe
laanfin
bustoley
wareegta
galoleey
jeelmagooye
horggle
garasdheere
sariira
radiile
Duiuuma
Banta
duqiyo
axmed sahalanole
Angolle Uein
raydab godan
robi
golol b
kuka
iskuxirka
shuurixe
abees
daas
waarabe guube
qandaaras
fafka
baldoscaiaan
dacar
xlish
xasan bariir
sagaarey
Haroris
Chenaf
Egha Roba
Tosilei
Esgudud
Esgudud
151
147
169
153
145
165
166
162
155
148
161
158
154
170
146
163
156
159
167
171
172
164
149
157
160
152
168
150
143
144
430
437
432
436
431
429
434
435
433
Targat Sites
Spare Sites
Team SG.I – Middle Juba North

List of Coordinates for TEAM SG.I

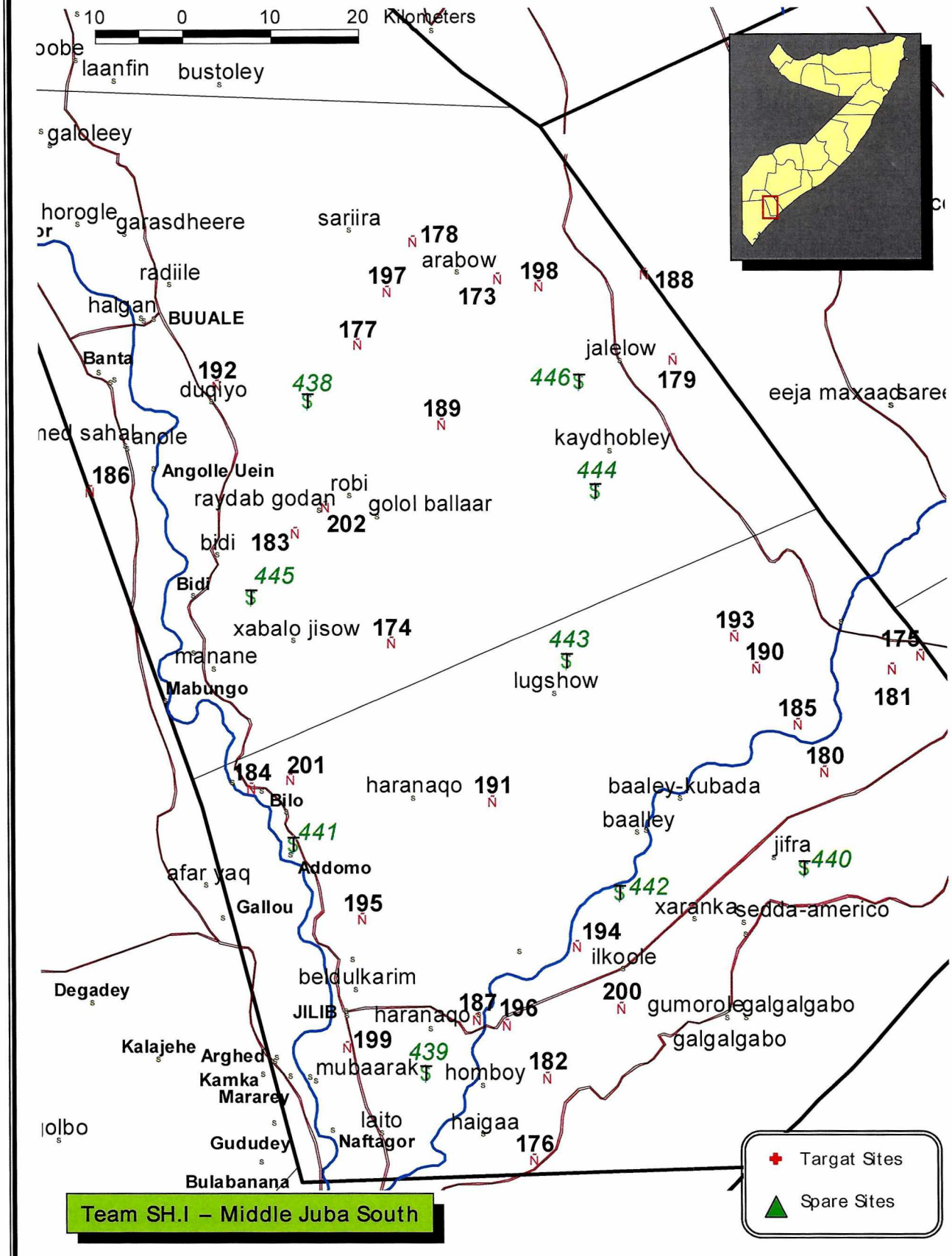
ID	Latitute	Longitude	AREA
143	1.19449	42.60575	Middle Juba - North
144	1.48569	42.69437	Middle Juba - North
145	1.65150	41.90220	Middle Juba - North
146	1.29010	41.60994	Middle Juba - North
147	1.76440	41.61711	Middle Juba - North
148	1.43659	41.74537	Middle Juba - North
149	1.42759	42.34918	Middle Juba - North
150	1.24864	42.55281	Middle Juba - North
151	1.87690	41.71182	Middle Juba - North
152	1.34474	42.57318	Middle Juba - North
153	1.75346	41.86250	Middle Juba - North
154	1.38742	41.58347	Middle Juba - North
155	1.48328	41.91644	Middle Juba - North
156	1.88115	42.17307	Middle Juba - North
157	1.38288	42.43674	Middle Juba - North
158	1.39475	41.52340	Middle Juba - North
159	1.73132	42.11095	Middle Juba - North
160	1.34590	42.19135	Middle Juba - North
161	1.44330	41.76370	Middle Juba - North
162	1.55855	41.70466	Middle Juba - North
163	1.26268	41.43785	Middle Juba - North
164	1.42385	42.26569	Middle Juba - North
165	1.62749	42.02439	Middle Juba - North
166	1.60441	41.79121	Middle Juba - North
167	1.77500	42.33802	Middle Juba - North
168	1.24891	42.57826	Middle Juba - North
169	1.83981	41.92666	Middle Juba - North
170	1.34281	41.61809	Middle Juba - North
171	1.74373	42.54879	Middle Juba - North
172	1.56630	42.39502	Middle Juba - North

TOTAL: 30 Sampling Sites

List of Spare Coordinates for TEAM SG.I

ID	Laditude	Longitude	AREA
429	1.42556	42.14961	Middle Juba - North
430	1.85043	41.86557	Middle Juba - North
431	1.52614	42.11500	Middle Juba - North
432	1.53920	41.76066	Middle Juba - North
433	1.31552	42.45405	Middle Juba - North
434	1.76611	42.44391	Middle Juba - North
435	1.55079	42.61495	Middle Juba - North
436	1.48917	41.66698	Middle Juba - North
437	1.69867	41.71587	Middle Juba - North

TOTAL: 9 Spare Sampling Sites


10 0 10 20 Kilometers
laanfin
bustoley
galoleey
horogle
garasdheere
sariira
178
arabow
198
197
173
188
radiile
halgan
BUUALE
177
jalelow
179
Banta
192
duqiyo
438
446
eeja maxaad
189
kaydhobley
444
Angolle Uein
186
robi
raydab godan
golol ballaar
202
bidi
183
445
Bidi
xabalo jisow
174
443
193
190
175
181
manane
Mabungo
lugshow
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201
haranaqo
191
baaley-kubada
Bilo
baalley
441
jifra
440
afar yaq
Addomo
442
Gallou
195
xaranka
sedda-americo
194
ilkoole
beledulkarim
Degadey
200
gumorole
galgalgabo
JILIB
haranaqo
187
196
199
439
Kalajehe
Arghed
mubaarak
homboy
182
Kamka
Mararey
laito
haigaa
Gududey
Naftagor
176
Bulabanana
Targat Sites
Spare Sites
Team SH.I – Middle Juba South

List of Coordinates for TEAM SH.I

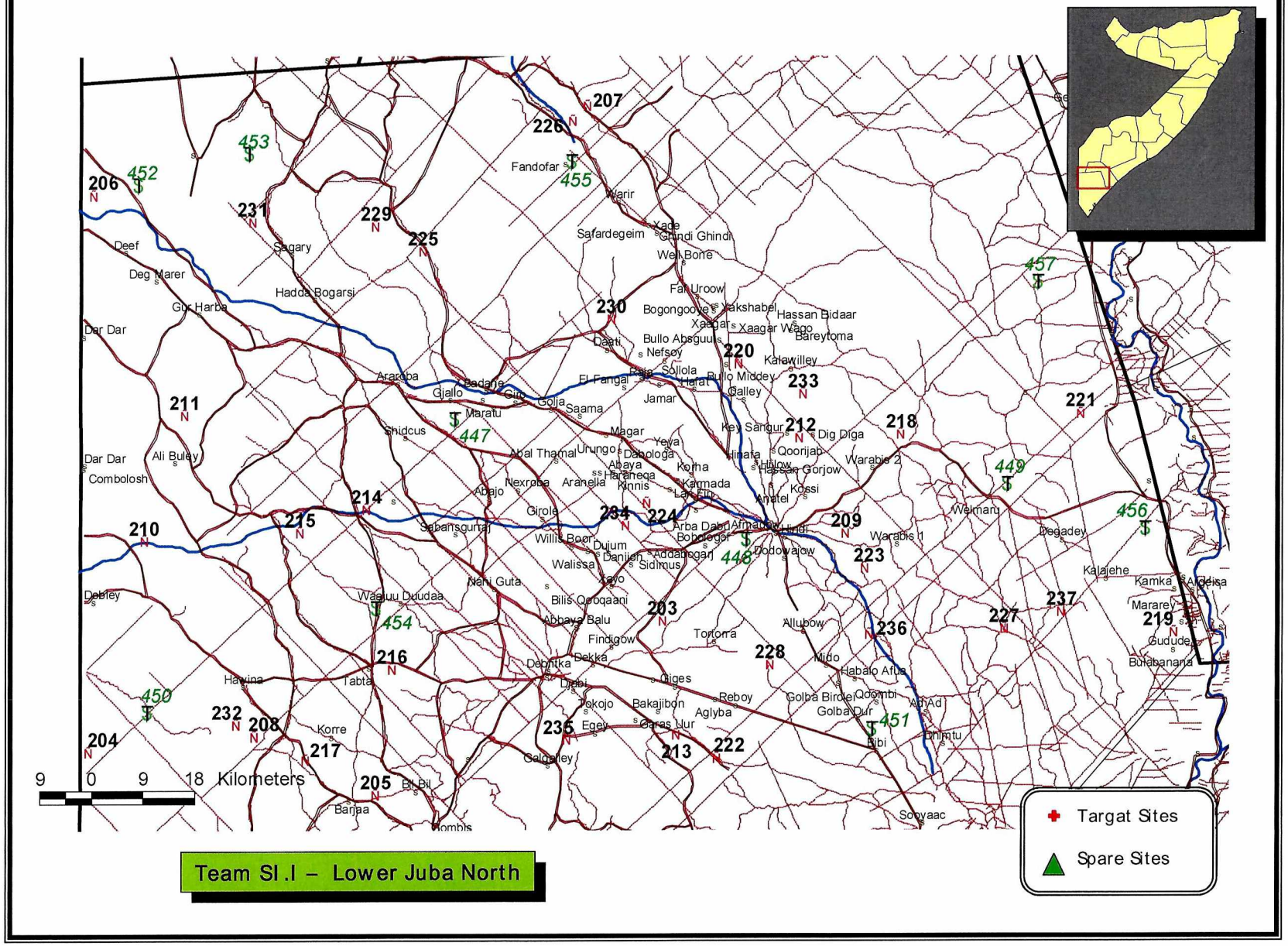
ID	Latitute	Longitude	AREA
173	1.29452	42.93668	Middle Juba - South
174	0.89810	42.82464	Middle Juba - South
175	0.88413	43.36633	Middle Juba - South
176	0.33516	42.97019	Middle Juba - South
177	1.22266	42.79209	Middle Juba - South
178	1.33642	42.84912	Middle Juba - South
179	1.20603	43.11588	Middle Juba - South
180	0.75741	43.26755	Middle Juba - South
181	0.86903	43.33782	Middle Juba - South
182	0.42500	42.98343	Middle Juba - South
183	1.01777	42.72690	Middle Juba - South
184	0.73953	42.68105	Middle Juba - South
185	0.80980	43.24007	Middle Juba - South
186	1.06366	42.51715	Middle Juba - South
187	0.48788	42.91217	Middle Juba - South
188	1.30006	43.08636	Middle Juba - South
189	1.13548	42.87761	Middle Juba - South
190	0.87024	43.19833	Middle Juba - South
191	0.72567	42.92848	Middle Juba - South
192	1.17784	42.64851	Middle Juba - South
193	0.90543	43.17695	Middle Juba - South
194	0.56709	43.01501	Middle Juba - South
195	0.59701	42.79406	Middle Juba - South
196	0.48151	42.94271	Middle Juba - South
197	1.28105	42.82162	Middle Juba - South
198	1.28653	42.97843	Middle Juba - South
199	0.45821	42.77776	Middle Juba - South
200	0.49974	43.05981	Middle Juba - South
201	0.74971	42.72077	Middle Juba - South
202	1.04626	42.75847	Middle Juba - South

TOTAL: 30 Sampling Sites

List of Spare Coordinates for TEAM SH.I

ID	Laditude	Longitude	AREA
438	1.16174	42.74219	Middle Juba - South
439	0.42980	42.86023	Middle Juba - South
440	0.65318	43.24718	Middle Juba - South
441	0.67901	42.72483	Middle Juba - South
442	0.62602	43.05982	Middle Juba - South
443	0.87917	43.00690	Middle Juba - South
444	1.06337	43.03645	Middle Juba - South
445	0.94874	42.68311	Middle Juba - South
446	1.18289	43.02119	Middle Juba - South

TOTAL: 9 Spare Sampling Sites


Team SI.I – Lower Juba North
Targat Sites
Spare Sites
9 0 9 18 Kilometers
Fandofar
Warir
Safardegeim
Xade Ghindi Ghindi
Wel Bore
Far Uroow
Bogongoove
Yakshabel
Hassan Bidaar
Xaagar
Xaagar Wago
Bareytoma
Daati
Bullo Absguud
Nefsey
Kalawilley
Bullo Middey
Galley
Jamar
Key Sangur
Dig Diga
Qoorijab
Warabio 2
Hilow
Gorjow
Kossi
Anatel
Magar
Yeya
Danologa
Abaya
Korna
Karmada
Kinnis
Urungo
Abal Thamal
Araneila
Nexraba
Abajo
Girole
Sabansgurtaj
Willis Boor
Dujum
Danjen
Addanogan
Sidimus
Walissa
Kayo
Nari Guta
Bilis Qoqaani
Abbaya Balu
Findigow
Dekka
Debntka
Diges
Dabi
Tokojo
Bakajibon
Egey
Garas Uur
Galgadley
Aglyba
Reboy
Golba Birdlei
Golba Dur
Qoombi
Ad Ad
Dhimtu
Bibi
Allubow
Tortorra
Mido
Habalo Afus
Dodovaiow
Armadhey
Bobdiogor
Arba Dabu
Hinari
Welmaru
Degadey
Warabio 1
Kalajehe
Kamka
Mararey
Gududey
Bulabanana
Sodyaac
Deef
Sagary
Deg Marer
Hadda Bogarsi
Gof Harba
Dar Dar
Ali Buley
Combolosh
Araroba
Badana
Gjallo
Gilo
Golja
Saama
Maratu
Shidcus
Debley
Waaluu Duudaa
Hanina
Tabta
Korre
Barjaa
Bil Bil
Gombis
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List of Coordinates for TEAM SI.I

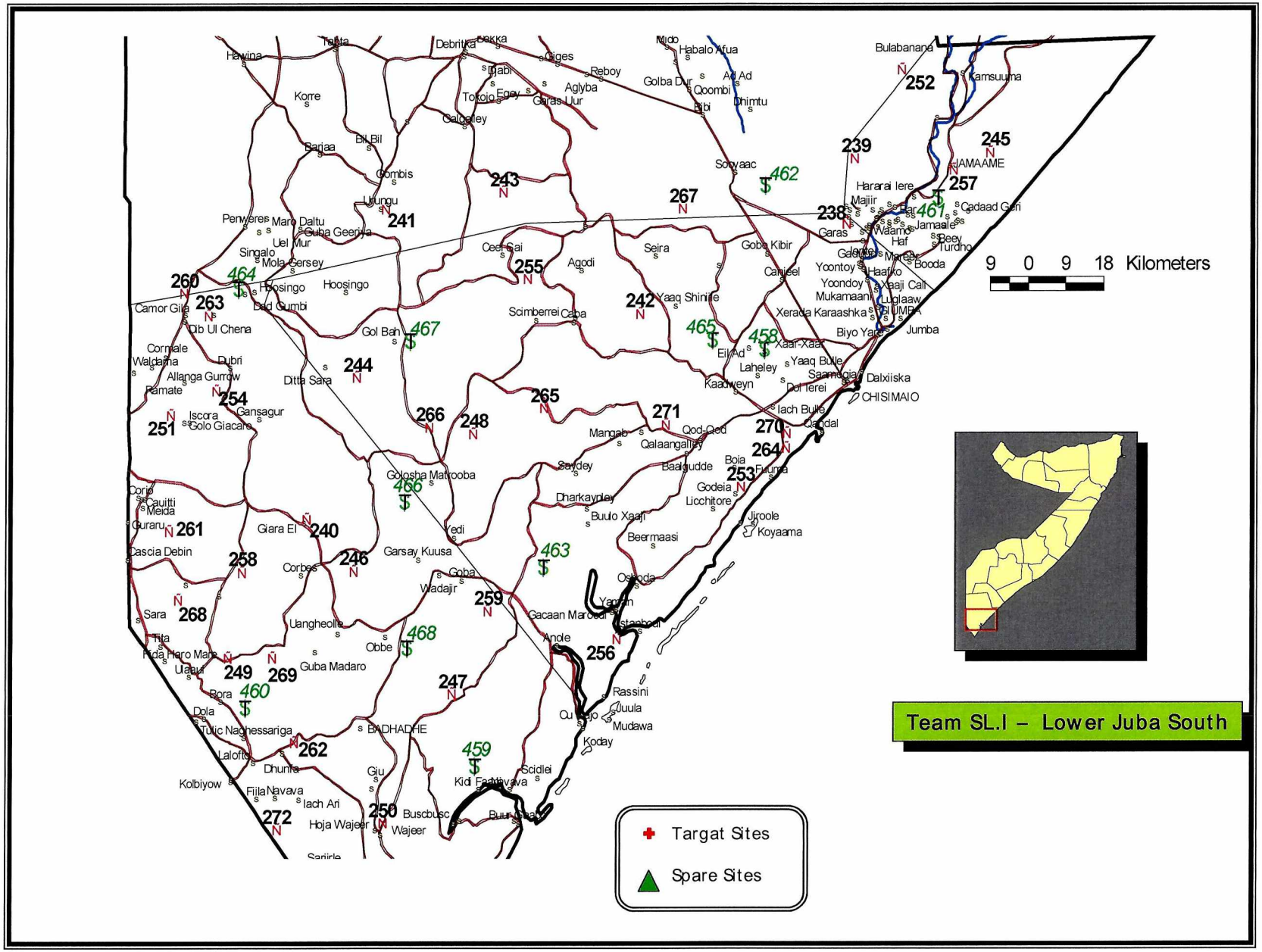
ID	Latitute	Longitude	AREA
203	0.37907	41.89596	Lower Juba - North
204	0.17297	41.00194	Lower Juba - North
205	0.10502	41.44995	Lower Juba - North
206	1.05227	41.01119	Lower Juba - North
207	1.19369	41.77793	Lower Juba - North
208	0.19679	41.26261	Lower Juba - North
209	0.51614	42.18006	Lower Juba - North
210	0.50452	41.09158	Lower Juba - North
211	0.70537	41.15371	Lower Juba - North
212	0.66897	42.10982	Lower Juba - North
213	0.19956	41.91733	Lower Juba - North
214	0.55384	41.43574	Lower Juba - North
215	0.51824	41.33290	Lower Juba - North
216	0.30193	41.47543	Lower Juba - North
217	0.16065	41.34101	Lower Juba - North
218	0.67348	42.26459	Lower Juba - North
219	0.36025	42.69120	Lower Juba - North
220	0.78701	42.01412	Lower Juba - North
221	0.70715	42.54563	Lower Juba - North
222	0.16315	41.98147	Lower Juba - North
223	0.46089	42.20857	Lower Juba - North
224	0.56374	41.87155	Lower Juba - North
225	0.96432	41.52335	Lower Juba - North
226	1.17018	41.75553	Lower Juba - North
227	0.36542	42.42544	Lower Juba - North
228	0.31005	42.06396	Lower Juba - North
229	1.00342	41.45004	Lower Juba - North
230	0.85748	41.81557	Lower Juba - North
231	1.01078	41.25964	Lower Juba - North
232	0.21441	41.23512	Lower Juba - North
233	0.73945	42.11492	Lower Juba - North
234	0.52971	41.83896	Lower Juba - North
235	0.19276	41.74728	Lower Juba - North
236	0.35712	42.21569	Lower Juba - North
237	0.39301	42.51505	Lower Juba - North

TOTAL: 35 Sampling Sites

List of Spare Coordinates for TEAM SI.I

ID	Laditude	Longitude	AREA
447	0.69886	41.57627	Lower Juba - North
449	0.59486	42.43361	Lower Juba - North
450	0.23538	41.09868	Lower Juba - North
452	1.06972	41.08451	Lower Juba - North
453	1.11786	41.25761	Lower Juba - North
454	0.39951	41.45304	Lower Juba - North
455	1.10634	41.75756	Lower Juba - North
456	0.52398	42.64845	Lower Juba - North
457	0.91550	42.48048	Lower Juba - North
448	0.50723	42.02942	Lower Juba - North
451	0.20912	42.22313	Lower Juba - North

TOTAL: 11 Spare Sampling Sites


Hawina
Tabta
Debritka
Bokka
Giges
Reboy
Aglyba
Golba Dur
Habalo Afua
Ad Ad
Qoombi
Dhimtu
Bibi
Bulabanana
Kamsuuma
252
Korre
Tabi
Egey
Garas Uur
Galgaley
Barjaa
Bil Bil
Sonyaac
462
239
245
JAMAAME
257
Hararai Iere
Majiir
Cadaad Geri
461
Jamaale
Waamo
Haf
Beey
Turdho
Garas
Gobo Kibir
Canjeel
Yoontoy
Haafko
Booda
Yoondoy
Xaaji Cali
Mukamaani
Luglaaw
Xerada Karaashka
JUMBA
Biyo Yare
Jumba
Combis
243
267
Ujungu
241
238
Penwereen
Maro Daltu
Guba Geeniya
Uel Mur
Singalo
Mola Gersey
Ceel Sai
255
Agodi
Seira
464
260
Hoosingo
Hoosingo
263
Camor Gire
Bad Gumbi
Db Ul Chena
Scimberrei Caba
242
Yaaq Shinile
465
458
Xaar-Xaar
Eil Ad
Laheley
Yaaq Bule
Saamoja
Dalxiiska
Kaadweyn
Dol Terei
CHISIMAIO
Gol Bah
467
Cornale
Waldaana
Dubri
Allanga Gurrow
Ramate
254
Ditta Sara
244
265
Iscora
Gansagur
Golo Giacano
251
266
248
271
Iach Bulle
Qandal
270
264
Mangab
Qod Qod
Qalaangaliley
Saydey
Baalgudde
Boia
Fiiuma
253
Golosha Mahrooba
466
Godeia
Licchitore
Dharkaynley
Buulo Xaaji
Jiroole
Koyaama
Corio
Cauitti
Meida
Guraru
261
Giara El
240
Beermaasi
Cascia Debin
258
Garsay Kuusa
246
Corbes
463
Yedi
Goba
Wadajir
Osioda
Yaqshiid
Istanbul
259
Gacaan Marodi
Sara
268
Tita
Uangheolle
Obbe
468
Ande
256
Fida Haro Maje
Uraau
249
269
Guba Madaro
Bora
460
247
Rassini
Dola
Tulic Nagnessariga
BADHADHE
Uuula
Mudawa
Qu
Koday
Lalofto
262
459
Dhunfa
Giu
Scidlei
Kolbiyow
Fijla Navava
Iach Ari
272
250
Buscbusc
Hoja Wajeer
Wajeer
Sarirle
9 0 9 18 Kilometers
Team SL.I – Lower Juba South
Targat Sites
Spare Sites

List of Coordinates for TEAM SL.I

ID	Latitute	Longitude	AREA
238	-0.04027	42.53740	Lower Juba - South
239	0.08801	42.55473	Lower Juba - South
240	-0.62427	41.38268	Lower Juba - South
241	-0.01170	41.54973	Lower Juba - South
242	-0.21686	42.09344	Lower Juba - South
243	0.02091	41.80123	Lower Juba - South
244	-0.34293	41.48860	Lower Juba - South
245	0.09996	42.84085	Lower Juba - South
246	-0.72541	41.48245	Lower Juba - South
247	-0.96673	41.69320	Lower Juba - South
248	-0.45378	41.73805	Lower Juba - South
249	-0.89493	41.21464	Lower Juba - South
250	-1.21860	41.54553	Lower Juba - South
251	-0.41677	41.08843	Lower Juba - South
252	0.26368	42.65249	Lower Juba - South
253	-0.55829	42.31131	Lower Juba - South
254	-0.36816	41.18720	Lower Juba - South
255	-0.14900	41.85416	Lower Juba - South
256	-0.85765	42.04450	Lower Juba - South
257	0.06674	42.76244	Lower Juba - South
258	-0.72698	41.24419	Lower Juba - South
259	-0.80393	41.76958	Lower Juba - South
260	-0.17669	41.11798	Lower Juba - South
261	-0.64776	41.08637	Lower Juba - South
262	-1.06071	41.35514	Lower Juba - South
263	-0.22001	41.17194	Lower Juba - South
264	-0.48160	42.40906	Lower Juba - South
265	-0.40203	41.88876	Lower Juba - South
266	-0.44035	41.64438	Lower Juba - South
267	-0.01061	42.18510	Lower Juba - South
268	-0.78244	41.10570	Lower Juba - South
269	-0.89472	41.30832	Lower Juba - South
270	-0.45295	42.41008	Lower Juba - South
271	-0.43485	42.15044	Lower Juba - South
272	-1.23099	41.31948	Lower Juba - South

TOTAL: 35 Sampling Sites

List of Spare Coordinates for TEAM SL.I

ID	Laditude	Longitude	AREA
458	-0.28677	42.36326	Lower Juba - South
459	-1.10676	41.74512	Lower Juba - South
460	-0.99330	41.25536	Lower Juba - South
461	0.01151	42.73291	Lower Juba - South
462	0.03508	42.36635	Lower Juba - South
463	-0.71665	41.89280	Lower Juba - South
464	-0.16845	41.23813	Lower Juba - South
465	-0.26849	42.25228	Lower Juba - South
466	-0.58925	41.59549	Lower Juba - South
467	-0.27010	41.60570	Lower Juba - South
468	-0.87636	41.59953	Lower Juba - South

TOTAL: 11 Spare Sampling Sites

Annex III.I

(Serology form)

Date: ..... Sampling Site N°: ..... Region: .....

District: ..... LOCATION: ..... GPS Coordinates: .....N / S; ..... E

I°	Owner's Name	Species	Sex	Age	Blood N°	Serum N°	Team ID	Dupl.	Remarks / Clinical Findings
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									

eam ID: Team's Identification Letter (e.g. For Team A, fill in A)

Somali PACE Project

Annex III.II

(Flowcharts for sera processing and dispatching)

Filling in the sampling form

As you start your blood samples collection you should at the same time record all the required information in the sampling form. Do not wait as you may forget information that you can not get later on

For each location where you carry out sampling fill in:
Date,
Region,
District,
Location,
GPS co-ordinates (e.g. North & East)
As you can see only one location with the related GPS co-ordinates can be recorded in one form

For each animal sampled the **owner's name**, **species**, **sex**, and **age of animal** must be recorded in the proper columns.

The full name of the owner must be recorded, do not use abbreviations.

Sex should only be recorded as **F** for female and as **M** for male.

Age should be recorded as follows:
Y for years.
Above one year of age the number of years will be followed by Y, referred to whole of half year e.g. **1Y**; **1.5Y**; **2Y**.

Blood sample must be numbered sequentially from n°1, for the first collected in the session, to the last blood sample of the session.
The numbers are filled in the proper column of the form.

↓

Numbers of serum samples must be followed by the letter identifying the Team (e.g. Team A; fill in "A").

Serum samples must be numbered sequentially.

The first serial number must be allocated according to the last serial number of the former session and recorded in the proper form (last serum sample n° record sheet).

Starting from the blood samples of one species their serial numbers are matched with the newly allocated serial numbers for the serum samples.
The serial numbers for the sera are filled in the proper column of the form. This column is located next to the column for the blood serial numbers so that checks may be carried out easily.

The process is repeated for all the blood samples to the last sample collected.

If the process is carried out properly you must end up with serum samples numbers sequentially arranged for the whole session.

In case of discarded blood samples jump their numbers in the form and allocate the serum sample numbers to the following blood samples.

↓

Fill in the column labelled "duplicates" the exact number of duplicates obtained for each serum sample

↓

Keep the sampling forms properly and dispatch them along with the samples to the

Waiting for the collected blood samples to clot properly

After collecting and recording, put blood samples in the rack

↓

If the samples have to be moved around, especially by car, take care during the transport and avoid shaking them as much as you can, since it may cause haemolysis

↓

Avoid keeping blood samples under direct sunlight since it may destroy the antibodies

↓

Allow blood samples to clot, without touching them for a period of at least 24 hours

↓

During this time you may want to check how clots are forming. If you see samples that develop clots that stick adherent to the glass, open the tube and with a toothpick/little stick gently loosen the clot from the tube. Then close the tube properly

↓

After 24 hours the samples that have not clotted properly and have not even produced a small amount of serum must be thrown away

↓

Serum obtained from the blood samples should be as clear as possible, as traces of blood may interfere with some diagnostic tests

↓

At this stage you can start processing the collected blood

Serum samples preparation

While the blood in the tubes is clotting, start preparing the material for the serum samples

Do you have to prepare **duplicates** of your serum samples?

Yes

Place in the rack the same number of cryovials as the number of duplicates you need.

No

Sort the blood samples per species, and arrange them in the rack. Place the cryovials in front of each line of blood tubes in the rack. The number of cryovials must be the same as the number of blood tubes

Check if all the blood samples have clotted properly and note any faulty blood samples

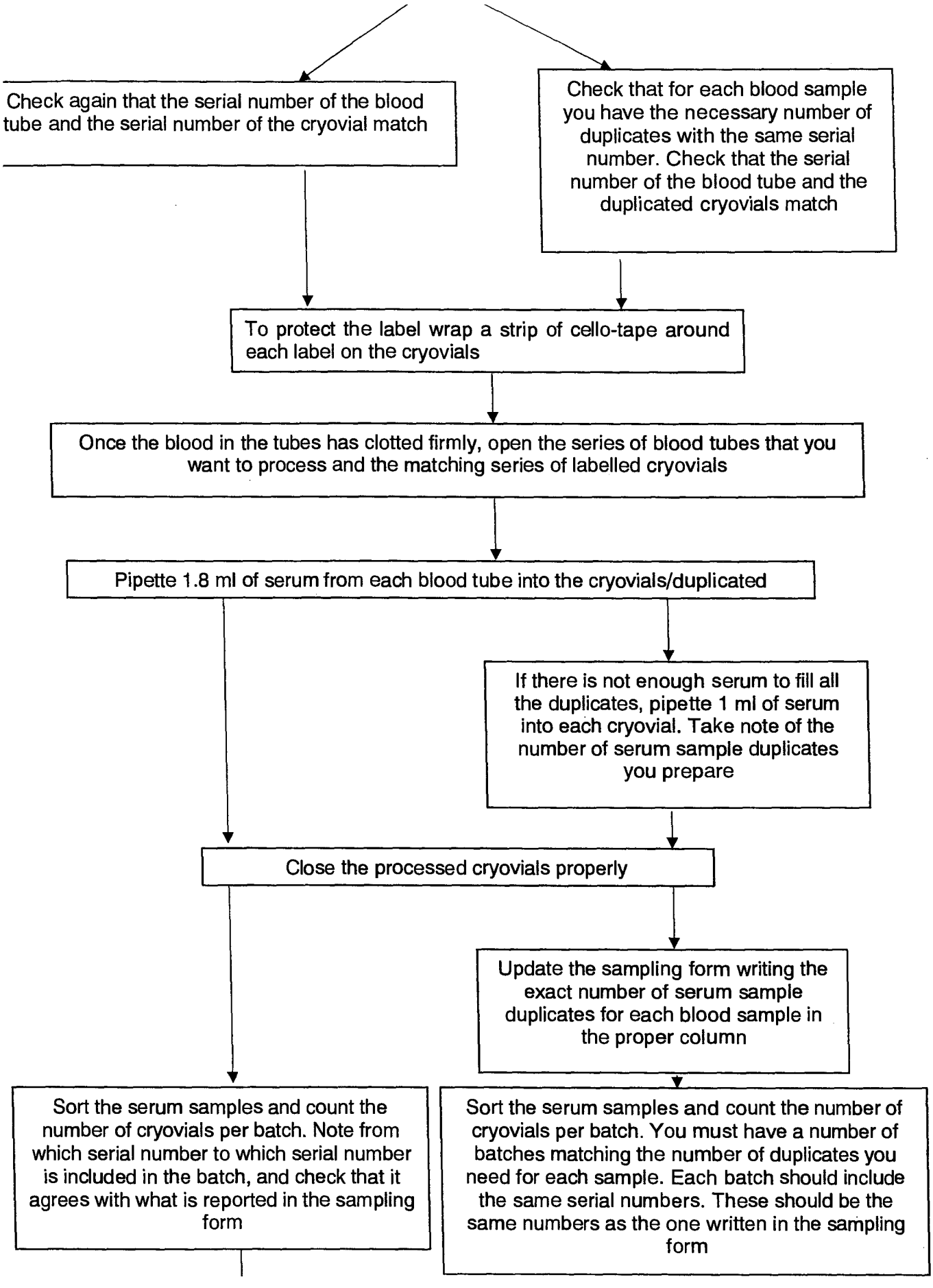
Give a serial number to each cryovial in the sampling form, starting from the last serum sample number collected in the previous session

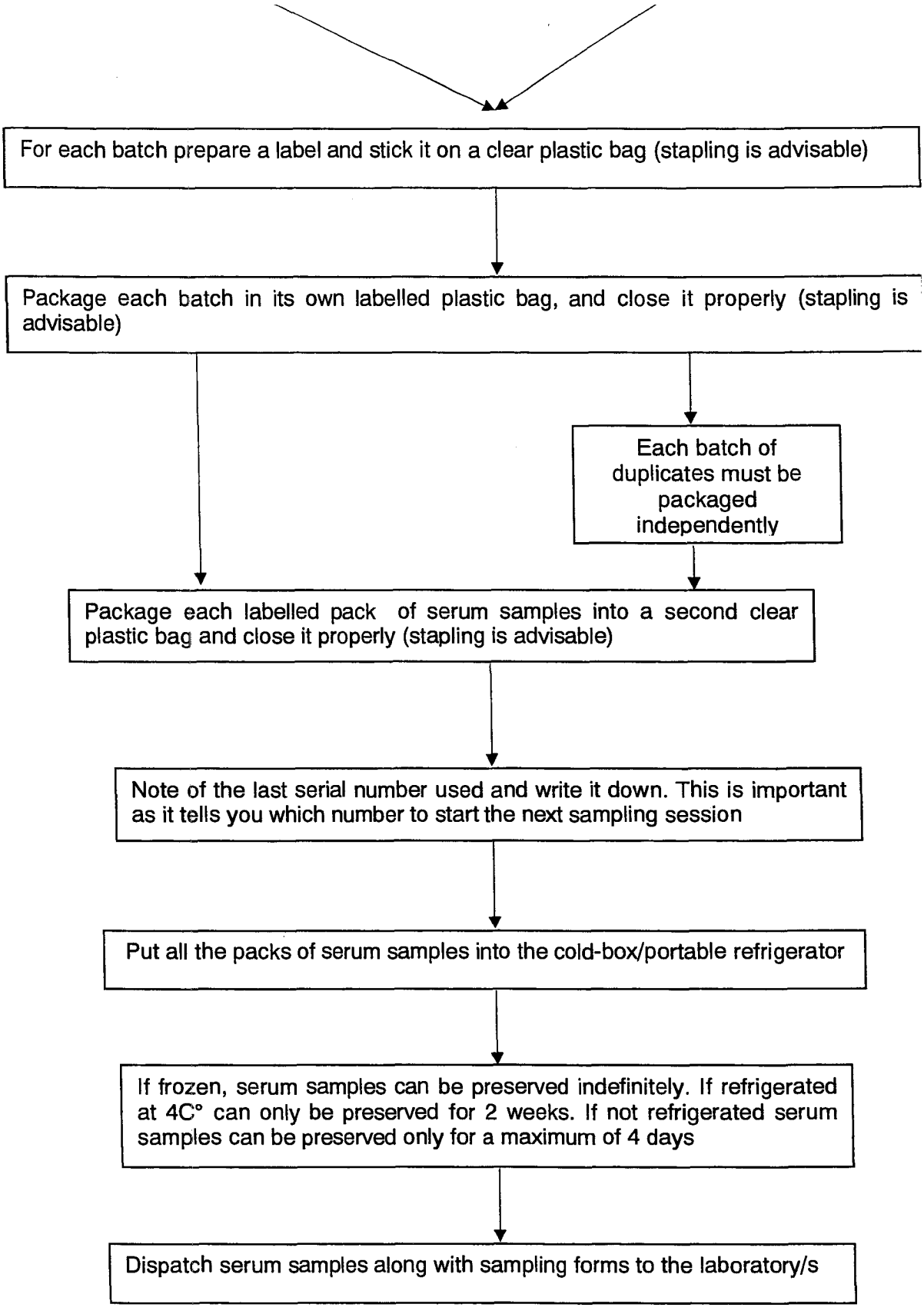
The same serial number must be given to every serum sample duplicate

Unclotted blood sample/s must be thrown away, and their serial number/s for the cryovial passes on to the next blood sample.
Check that the serial number of each serum sample matches with the serial number of each blood sample reported on the sampling form

Write down on sticky adhesive labels the serial number for each cryovial, using a permanent marker

Stick one label with the serial number on each cryovial


Check again that the serial number of the blood tube and the serial number of the cryovial match
Check that for each blood sample you have the necessary number of duplicates with the same serial number. Check that the serial number of the blood tube and the duplicated cryovials match
To protect the label wrap a strip of cello-tape around each label on the cryovials
Once the blood in the tubes has clotted firmly, open the series of blood tubes that you want to process and the matching series of labelled cryovials
Pipette 1.8 ml of serum from each blood tube into the cryovials/duplicated
If there is not enough serum to fill all the duplicates, pipette 1 ml of serum into each cryovial. Take note of the number of serum sample duplicates you prepare
Close the processed cryovials properly
Update the sampling form writing the exact number of serum sample duplicates for each blood sample in the proper column
Sort the serum samples and count the number of cryovials per batch. Note from which serial number to which serial number is included in the batch, and check that it agrees with what is reported in the sampling form
Sort the serum samples and count the number of cryovials per batch. You must have a number of batches matching the number of duplicates you need for each sample. Each batch should include the same serial numbers. These should be the same numbers as the one written in the sampling form


For each batch prepare a label and stick it on a clear plastic bag (stapling is advisable)
Package each batch in its own labelled plastic bag, and close it properly (stapling is advisable)
Each batch of duplicates must be packaged independently
Package each labelled pack of serum samples into a second clear plastic bag and close it properly (stapling is advisable)
Note of the last serial number used and write it down. This is important as it tells you which number to start the next sampling session
Put all the packs of serum samples into the cold-box/portable refrigerator
If frozen, serum samples can be preserved indefinitely. If refrigerated at 4C° can only be preserved for 2 weeks. If not refrigerated serum samples can be preserved only for a maximum of 4 days
Dispatch serum samples along with sampling forms to the laboratory/s

Annex III.III

(Procedures for the use of GPS tools)

Procedures for the Use of GPS Tools

The coordinate system that will be used to geo-reference the sampling sites will be in Decimal Degrees (DD). The digits before the dot represent the degrees of latitude or longitude. The last five digits after the dot represent a decimal fraction of one degree. Thus the coordinates will be displayed in the screen of the GPS as follow:

- 06.09876 N
- 045.87692 E

The Latitude is always displayed before the Longitude. Latitude North from the Equator will be indicated by "N", while Latitude South by "S". Longitude East from the Greenwich Meridian will be indicated by "E", while Longitude West by "W". Somalia is all East from the Greenwich Meridian and most of it in the North Hemisphere. Only an area South from Afmadow (Lower Juba Region) is South from the equator.

1. How to switch on and initialize the GPS

1.1. Press the red (bulb-like) button

1.2. **Garmin GPS III Plus** does not require input such as country or altitude for its initialization. However information such as date, time might need to be adjusted from *the menu and system setup*.

2. How to geo-reference your current position

2.1. When the GPS is on, it displays after a short while the coordinates of the *position* where you're currently in.

2.2. Record the coordinates in the "GPS textbox" of the "Location's Description Form", "Serology Form" and "Livestock Health Problem Questionnaires"

2.3. The coordinates must be recorded as displayed on the screen of the GPS (e.g. Latitude: 06.76543 (N for North or S for South); Longitude: 045.76834 (E for East)

3. How to enter a point (or a list of points)

3.1. Press the "PAGE" button till the *"Main Menu"* window is displayed. Then select the *"waypoint"* option by pressing the "ENTER" button; it displays empty space for the name of the site, the

3.2. Enter the *"Sampling Site ID"* (Identification Number) and the coordinate in the corresponding space.

3.3. If points have already been entered, selecting *"waypoint"*, it will display the characteristic of the first position on the list of positions. In that case, select *"new"*. The screen will display empty space for the characteristics of the position you wish to record (name, coordinates)

3.4. Display *"waypoint list"* option to check if the position you've added is properly recorder

4. How to retrieve (to display) a point

4.1. Go to the *"Main Menu"* window and select the *"waypoint list"*. Then select the site you want to visualize.

4.2. Press the "ENTER" button: the site will appear with it's *name* on top, *the coordinates and is distance from your current position.*

4.3. Other functions such as *rename, delete, new* are also displayed to allow you to change the characteristic of the site.

4.4. To go back, always press the "QUIT" button.

5. How to navigate and reach a selected point

5.1. Press the "GO TO" button: the list of recorded positions will be displayed on the screen.

5.2. Select the *position* you want to reach and press *enter:* the navigating screen will display the *direction* (arrow), *the tracking, the distance* from your position to the selected point and *the speed* at which you are moving.

5.3. To indicate the right direction, the GPS must be kept well oriented even while moving.

6. How to switch off

Press the red button and hold it for 3 seconds: a count down will show (2,1) and the GPS will go off.

Annex III.IV

(Livestock health problems - questionnaire)

RP

Questionnaire N°: .....

Base ID: .....

(To be filled by the Zonal Vet Coordinator)

OAU/IBAR/PACE

LIVESTOCK HEALTH PROBLEMS

QUESTIONNAIRE

PACE-Somalia Project

LIVESTOCK HEALTH PROBLEMS QUESTIONNAIRE

The following information is collected to better understand the animal health problems affecting your livestock, with particular emphasis on the main diseases that are affecting or potentially could affect the export of Somali livestock.

This information will be used to identify possible activities to improve the quality of veterinary services so as to assist the livestock sector in Somalia, both at production and trade levels.

SECTION I GENERAL DATA

Name of the interviewer
(Team ID:)

Date	Region	District

Name of location	GPS Coordinates
(Site N°:)	..... N / S ; ..... E

Name of the respondent	Sex	Age

Clan	Sub-clan	Family

SECTION II – HERD/FLOCK COMPOSITION AND DYNAMIC

Q1. What species of animals do you have now? *(tick the box or boxes indicating the species)*

CATTLE	SHEEP	GOATS	CAMELS

Ask each of the following questions according to the species given

e.g. if the answer to question 1 was cattle + goats, ask question 2 as follow:
- How many new calves were born in your herd during the last one-year?

Q2. How many calves / lambs / kids / calves (camels) were born in your herd / flock during the last one-year? *(write the number in the box below the given species)*

CALVES	LAMBS	KIDS	CALVES (CA)

Q3. How many cattle / sheep / goats / camels did you lose during the last one-year? *(write the number in the box below the given species)*

CATTLE	SHEEP	GOATS	CAMELS

Q4. How many cattle / sheep / goats / camels have remained in your herd / flock now? *(write the number in the box below the given species)*

CATTLE	SHEEP	GOATS	CAMELS

Q5. Where your herd / flock of cattle / sheep / goats / camels has been during the last Jiilaal, Gu', Xagaa and Dayr seasons (one year)? *(write the name of the locations in the boxes below the given species)*

Season	CATTLE	SHEEP	GOATS	CAMELS
Jiilaal				
Gu'				
Xagaa				
Dayr				

Q6. Do you remember where your herd / flock of cattle / sheep / goats / camels has been during the previous Jiilal, Gu', Xagaa and Dayr seasons (2 years ago)? *(tick the box)*

YES ☐ NO ☐ *(if YES write the name of the locations in the boxes below the given species; if NO, go to question 11)*

Season	CATTLE	SHEEP	GOATS	CAMELS
Jiilaal				
Gu'				
Xagaa				
Dayr				

Q7. How many cattle / sheep /goats / camels have you sold during the last one-year? *(write the numbers in the boxes below the given species)*

CATTLE	SHEEP	GOATS	CAMELS

Q8. Where do you normally sell your cattle / sheep / goats /camels? *(write the name of the main market/s reported by the respondent)*

	CATTLE	SHEEP	GOATS	CAMELS
Market 1				
Market 2				
Market 3				

SECTION III – WILDLIFE

Q9 Which wildlife species are present in this area? *(write the name of the wildlife species reported by the respondent)*

	Name/s of the reported wildlife species
Specie 1	
Specie 2	
Specie 3	
Specie 4	
Specie 5	
Specie 6	
Specie 7	
Specie 8	
Specie 9	
Specie 10	

SECTION IV – STOMATITIS / ENTERITIS SYNDROME IN CATTLE

Q10. When did your herd receive the last vaccination for Rinderpest, and by whom? *(write year and implementer of the last vaccination in the boxes, if NEVER tick the box)*

Year of last vaccination ☐ Implementer of the last vaccination ☐

Never ☐

Q11. When did you see Rinderpest personally last time? *(Write the year or tick the box)*

Year of last observation of Rinderpest ☐ Never ☐ *(if NEVER, skip all remaining questions)*

Q12. Which symptoms did you observed at that time? *(tick the box if the reported symptoms correspond to some/all the ones listed below, otherwise write them under "Other symptoms (specify)")*

FEVER ☐ LACHRYMATION ☐ NASAL DISCHARGE ☐

SALIVATION ☐ MOUTH LESIONS ☐ DIARRHOEA ☐

Other symptoms (specify): .....

.....

.....

Q13. How many animals were affected in your herd? *(write the number in the box)*

Number of affected animals ☐

Q14. Out of the affected animals, how many died? *(write the number in the box)*

Number of dead animals ☐ None ☐ *(if the answer is NONE, end the interview)*

Q15. How many animals survived? *(write the number in the box)*

Number of survived animals ☐

Q16. Do you remember where was your cattle at that time *(tick the box)*

YES ☐ NO ☐ *(if YES, where; if NO, end the interview)*

Name of location ☐ District ☐

Q17. Have you noticed the same or similar symptoms in wildlife at that time? *(tick the box)*

YES ☐ NO ☐ *(if YES go to question 18; if NO, end the interview)*

Q18. Which wildlife species were affected? *(write the name of the wildlife species affected, as reported by the respondent)*

	Name of the affected wildlife species
Specie 1	
Specie 2	
Specie 3	
Specie 4	

SECTION V – REMARKS

In case of an outbreak of Rinderpest is reported / suspected and investigated add all remarks that could help to understand origin and potential for spread of the Rinderpest virus.

Clinical founding must also be detailed!

REMARKS: ……

Annex III.V

(RP outbreak / rumours recording form)

Somali PACE Project

RP OUTBREAK / RUMOURS RECORDING FORM

FORM N°: _____

Base ID *	Date	Region	District

Name of location	GPS Coordinates
	N / S; E

Outbreak personally investigated (clinically) ☐ ***Reported outbreak*** ☐

Main clinical signs observed in the affected herd (tick the box or specify them in "Other (Specify)")

Fever	Lachrymation	Salivation	Mouth Lesions	Nasal Discharge	Diarrhoea	Dermatitis

Other (specify):

.....
.....
.....
.....

N° of affected animals in the herd	N° of dead animals in the herd	N° of survived animals in the herd

Beginning of the outbreak (N° of days ago)	Location in which the outbreak started	District in which the outbreak started

mber of affected herds in the area

dlife affected in the area: YES NO

Tentative Diagnosis	Local Name of the Health Problem

MARKS:

.....

.....

.....

.....

.....

.....

.....

.....

.....

me of the investigator: ..... Signature: .....

Annex III.VI

(Location's description form)

Name of location	GPS Coordinates
	N / S; E

Type of settlement (tick the box for the corresponding type of settlement; if in the village or town a livestock market is present, tick the "Market" box)

'azing settlement ☐ Village ☐ Market ☐ Town ☐ Market ☐

'azing settlement: a temporary accommodation consisting of huts for nomads
llage: a rural settlement smaller than a town
)wn: a urban densely populated area larger than a village

Watering point description *(tick the boxes for the types of water sources available in this location or specify them in "other (specify)")*

Available water sources		Number	Permanent	Seasonal				Condition			Consumption	
				Jillaal	Gu'	Xagaa	Dayr	Good	Fair	Poor	Human	Animal
ver												
vamp												
ater catchments												
m												
re-hole												
re-hole with motor pomp												
nd dug well												
hers 1	(specify)											
hers 2	(specify)											
hers 3	(specify)											

3. Number of cattle / sheep / goats / camels drinking daily in this location *(write approximately the number according to species and seasons)*

Season	CATTLE	SHEEP	GOATS	CAMELS
Jiilaal				
Gu'				
Xagaa				
Dayr				

Fill this section only if a *"LIVESTOCK MARKET"* is present in the village or town

4. Number of cattle / sheep / goats / camels sold weekly in this local market *(write approximately the number according to species and seasons)*

Season	CATTLE	SHEEP	GOATS	CAMELS
Jiilaal				
Gu'				
Xagaa				
Dayr				

Enter "AF" for "Afmadow" or "BA" for "Baidoba" or "BE" for "Beledweyne" or "HA" for "Hargesa" or "BO" for "Bosaso".

Annex III.VII

(Sampling frame – Record sheet)

SAMPLING FRAME RECORD SHEET

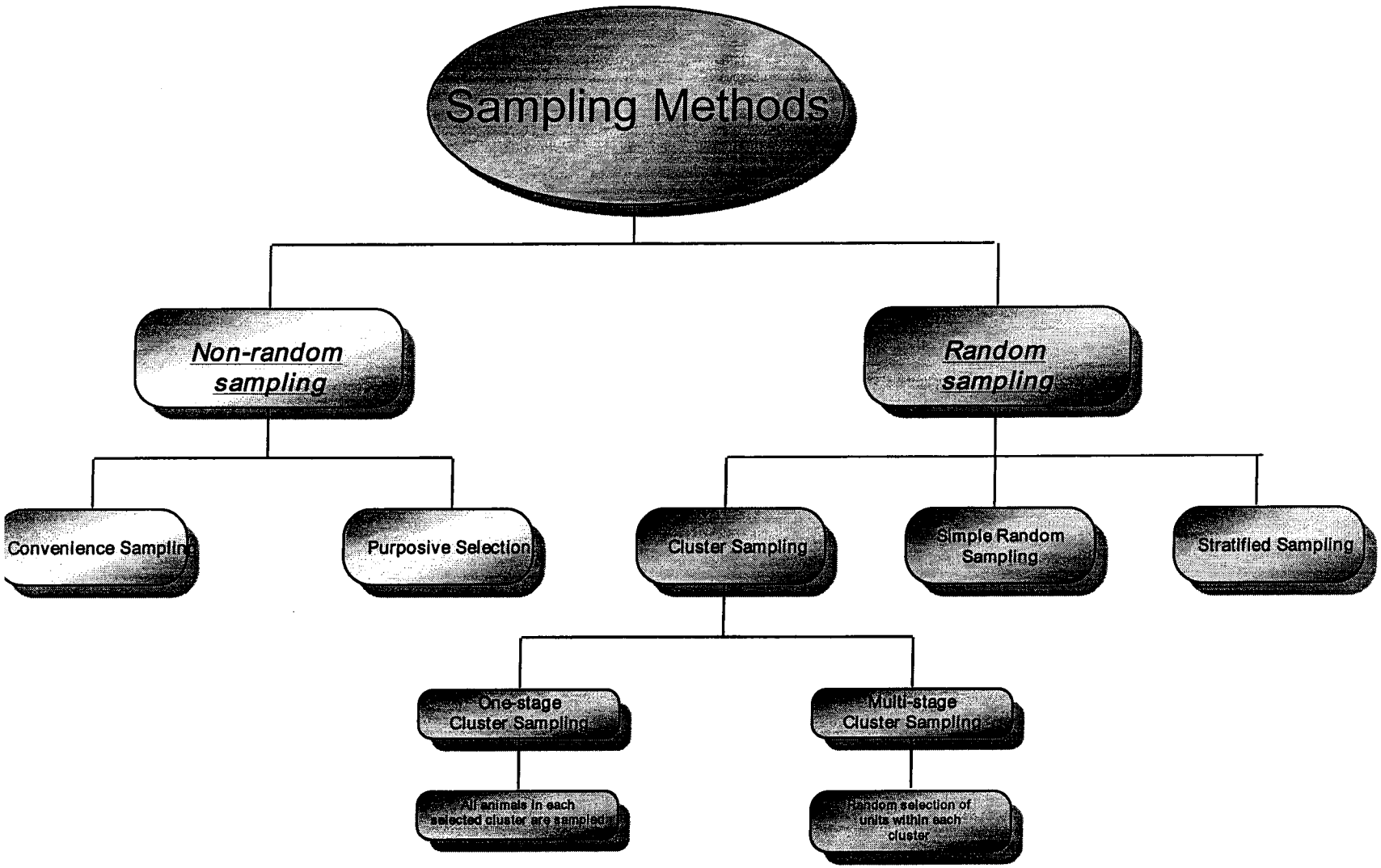
N°	Sampling Site N°	Sampling Site Coordinates				Sampling Date	Meeting Point	
		Latitude		Longitude			Location	Date
1			N/S		E			
2			N/S		E			
3			N/S		E			
4			N/S		E			
5			N/S		E			
6			N/S		E			
7			N/S		E			
8			N/S		E			
9			N/S		E			
10			N/S		E			
11			N/S		E			
12			N/S		E			
13			N/S		E			
14			N/S		E			
15			N/S		E			
16			N/S		E			
17			N/S		E			
18			N/S		E			
19			N/S		E			
20			N/S		E			

Somali PACE Project

Annex IV

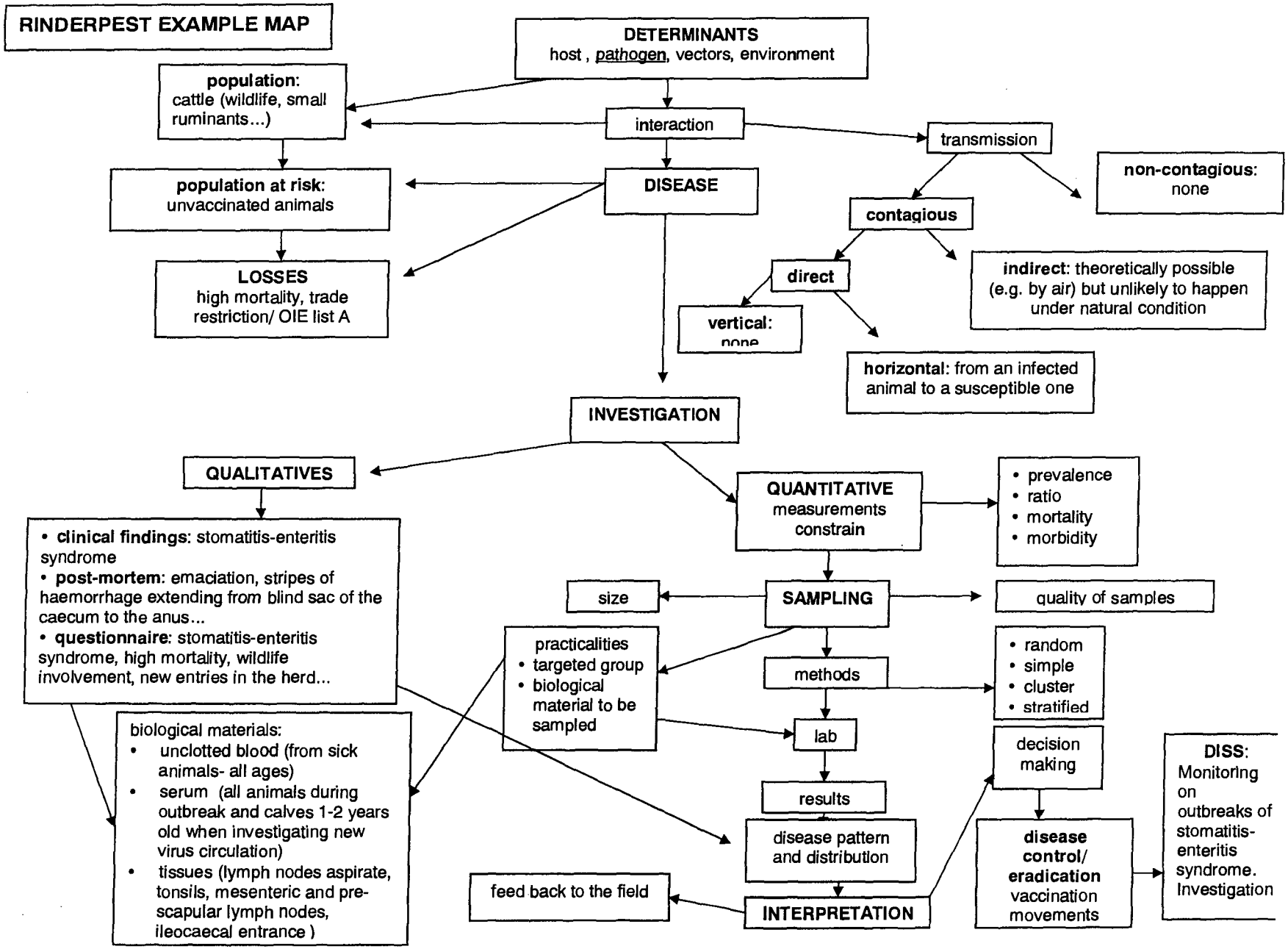
(Sampling methods for survey)

Sampling Methods for Surveys



Annex V

(Rinderpest investigation process)


RINDERPEST EXAMPLE MAP
DETERMINANTS
host , pathogen, vectors, environment
population:
cattle (wildlife, small ruminants...)
interaction
transmission
population at risk:
unvaccinated animals
DISEASE
non-contagious:
none
contagious
LOSSES
high mortality, trade restriction/ OIE list A
direct
indirect: theoretically possible (e.g. by air) but unlikely to happen under natural condition
vertical:
none
horizontal: from an infected animal to a susceptible one
INVESTIGATION
QUALITATIVES
QUANTITATIVE
measurements
constrain
• prevalence
• ratio
• mortality
• morbidity
• clinical findings: stomatitis-enteritis syndrome
• post-mortem: emaciation, stripes of haemorrhage extending from blind sac of the caecum to the anus...
• questionnaire: stomatitis-enteritis syndrome, high mortality, wildlife involvement, new entries in the herd...
size
SAMPLING
quality of samples
practicalities
• targeted group
• biological material to be sampled
methods
• random
• simple
• cluster
• stratified
biological materials:
• unclotted blood (from sick animals- all ages)
• serum (all animals during outbreak and calves 1-2 years old when investigating new virus circulation)
• tissues (lymph nodes aspirate, tonsils, mesenteric and pre-scapular lymph nodes, ileocaecal entrance)
lab
decision making
results
DISS:
Monitoring on outbreaks of stomatitis-enteritis syndrome.
Investigation
disease pattern and distribution
disease control/ eradication
vaccination
movements
feed back to the field
INTERPRETATION

Annex VI

(Glossary on epidemiological terms)

GLOSSARY ON EPIDEMIOLOGICAL TERMS

Carrier: is any animal that can have a pathogen (infectious agent) without demonstrating clinical signs.

Case: is an animal in a population or study group identified as having a particular disease or other health-related problem that is being investigated.

Case fatality: is the tendency for a condition to cause the death of affected animals in a specified time. It is the proportion of diseased animals that die.

Contagious disease: is a disease transmitted by the direct transfer of an infectious agent from one infected host to another. It may be by direct or indirect contact (see below).

Determinant: is a factor that defines (determines) the health condition of the population.

Direct transmission of infections: occurs when a susceptible host contracts an infection with by physical contact with an infected host or by contact with the latter's discharges (e.g. the transmission of foot and mouth disease in infected saliva).

Disease: is a disorder with a specific cause and recognisable signs and symptoms. It may be any bodily abnormality or failure to function properly, with the exception of that resulting directly from physical injury. Physical injuries may open the way for disease, for example by allowing infectious agents to enter the body.

Endemic: is when the speed of transmission of a disease remains the same over time; or is when there is a usual presence of disease, infection, antibodies, etc.

Environment: are conditions and elements that make up the surroundings and influence the development of the animal such as location, climate and husbandry.

Epidemic: is when the incidence of a disease suddenly increases. The occurrence of the disease is greater than its expected frequency.

Exposure: is the initial (first) act of contacting an agent, or the entrance of the agent into or on an individual.

Horizontal (lateral) transmission: is when an agent is passed onto a healthy individual. For example, it may occur by 1) muzzle to muzzle; 2) cutaneous or mucosal contact; 3) offspring suckling breast milk; 4) venereal

contact; 5) contact with animal carcasses (due to feeding for animals, or due to work factors (occupational hazards) for humans).

Host: is an animal that is capable of being infected with, and therefore giving sustenance to, an infectious agent. The infectious agent can multiply or develop within the host.

Incidence: is the number of new cases that occur over a specified period of time. It is usually expressed in relation to the population at risk and the time during which the population is being observed.

Indirect transmission of infections: involves an intermediate vehicle, living or inanimate, that transmits infection between infected and susceptible hosts. Living carriers are usually called vectors (e.g. flies, ticks).

Infection: is the invasion of micro-organisms, which reproduce themselves in susceptible individuals.

Interaction: is the coming together of 2 or more beings. It may be 1) biological, where the inter-dependant meeting of 2 or more causes produce an effect; or 2) statistical (correlation). In epidemiology, a quantitative inter-dependence is when the combined effects of 2 or more factors (such as the frequency of disease) either represent more than what is expected (positive correlation) or less than what is expected (negative correlation).

Morbidity: is the number of affected animals (sick) over a period of time.

Mortality: is a measure of the number of deaths in a population.

Non-contagious disease: is a disease that is not transmitted by physical contact between an infected and a susceptible host, or by contact with the infected host's discharges. Vector borne diseases are an example of non-contagious diseases (e.g. trypanosomiasis in cattle).

Non-random or not probabilistic sampling: also known as 'informal sampling', refers to any procedure that does not give specific values to the selection probabilities. In these cases, probabilities of some members of the target population are unknown or may be zero.

Outbreak of disease: an identified occurrence of disease involving one or more animals. The term generally implies that several animals are affected.

Pandemic: is an epidemic disease that spreads over a wide geographical area.

Parameter: is a quantity (amount of something) that can differ in different circumstances, but it remains constant in the case that is being considered.

Pathogen: is an organism that produces disease.

Pathogenicity: is the ability of an infectious agent to cause disease.

Population: is a group of individuals that have certain distinguishing characteristics (e.g. live in the same geographical area, belong to the same species, etc).

Population at risk: is the population that is naturally susceptible to a disease.

Prevalence: is the number of occurrences of disease, infection, antibody presence, and so on in a population. It usually is related to a particular point of time, and is commonly expressed as a proportion of the population at risk.

Proportion: is a ratio in which the numerator is part of the denominator. It is the extent to which a piece of something is part of the whole.

Random or probabilistic sampling: also known as 'formal sampling', is based on the assumption that every member of the sample has a known, equal and non-zero probability of selection (although this is the case only in simple random sampling).

Rate: a ratio that indicates the change in one quantity with respect to another over time. Thus, incidence rate is the number of new cases of disease occurring in a population observed for a defined period of time.

Ratio: is a value obtained by dividing one quantity (the numerator) by another (the denominator). For example, the number of males borne per female births. Both proportions and rates are ratios.

Receptivity: (to a pathogen) is the potential or ability of an individual to live with (harbour) a pathogen, and allowing its development or multiplication.

Reservoir: is an animate (human, animal, insects, etc) or inanimate (plant, soil, faeces, etc.) object or any combination of these that provide a living environment for an infectious agent, which reproduces itself in such a way that it is transmitted to a susceptible host. It is the 'container' or environment in which an infectious agent lives and passes on to a host that is ready to accept it.

Resistance: is the ability of the pathogen to survive in the environment (the definition in epidemiological terms is different to the one used in pharmacology).

Sampling Frame: list of the members of the study population.

Sampling Unit: each member of the sampling frame.

Sensitivity: in terms of a pathogen - is the potential or ability of an individual to show clinical signs of the activity or presence of a pathogen; in terms of a test – is the proportion of affected animals that are detected by a test. A test is said to be sensitive when it is able to detect the presence of even small amounts of antibodies, antigen, enzyme, nucleic acid, etc.

Sporadic: is defined when the incidence is low and haphazard, and cases (or outbreaks) are separated by periods of time during which there are no new cases (incidence is nil).

Study population: is the population from which a sample is drawn (it should be representative of the target population).

Surveillance: is a continuous / on-going form of monitoring designed so that action can be taken to improve the health status of a herd or population. It is frequently used in disease control campaigns. The control measures are decided after the surveillance has been carried out.

Susceptibility: in terms of a pathogen – determines the ability to transmit infection.

Target population: is the total population about which information is required (ideally the population at risk).

Tropism: is the affinity of an organism (pathogen) for a special material or entity (tissue). In other words, it indicates the ease with which a pathogen can survive or thrive in a tissue.

Variable: is an observable event that can change or vary. Variables can be either continuous or discrete. A continuous variable could be the weight of an animal; a discrete variable could be the number of cases of a disease.

Vector: broadly speaking, it is anything that allows the transmission of a causal agent. More strictly defined, it is a living creature, usually an invertebrate that, due to its ecological relationship to others, acquires an infectious agent from one living host and transmits it to another.

Vertical transmission: is the transmission of an infection from one individual to its offspring.

SECTION D: EMERGENCY PREPAREDNESS AND RESPONSE SYSTEM

(1st November 2004 – 31st March 2005)

SECTION D:

Result 4: Emergency Preparedness and response system in place, initially to Rinderpest

1. Overview and background

This component aims to build the capacity of Somali stakeholders and institutions to develop and implement mechanisms for emergency preparedness and response to major epizootic disease of livestock.

During the reporting period two main livestock mortality events were reported in Puntland in October 2004 and in the Marerey. area in Lower Juba Region in March 2005. In both cases mortalities in livestock were reported after the onset of heavy rains in Puntland in October 2004 and in Lower Juba in March 2005. During the field investigations information was collected using semi-structured interviews in attempts to ascertain the causes of death. No samples for laboratory investigations were collected in Puntland as the deaths were attributed to hypothermia as a result of drastic changes in ambient temperatures following heavy rains with hailstorms. A total of 204 samples collected from sick cattle in Marerey were all negative when tested for evidence of Rinderpest and Rift Valley Fever virus infections. The investigations showed that the livestock mortalities were not due to outbreaks of major transboundary diseases as was initially suspected. The results of the investigations were shared with other stakeholders during SACB Livestock Working Group meetings.

These livestock mortality events highlighted the need for the establishment of functional emergency preparedness and response systems in different Zones of Somalia. Clear mechanisms for disease reporting and follow up investigations coupled with modalities for coordination between different local and international stakeholder groups should be well defined in emergency response strategies. This will assure Somali stakeholders that major livestock intervention Projects are responsive to their needs particularly in times of major disasters. Establishment of emergency response systems will be a priority focus for the Somali Animal Health Services Project (Somali PACE Consolidation).

2. Activities implemented during the Reporting Period

2.1 Coordinate emergency actions for the control/eradication of confirmed Rinderpest or other epidemics

2.1.1 Finalize draft proposal for the eradication of mild Rinderpest in Somalia.

Following agreement to establish the AU/IBAR/PACE Somali Ecosystem Rinderpest Eradication Coordination Unit (SERECU), the strategy and proposal for the final eradication of Rinderpest was to be jointly prepared under the overall coordination and guidance of SERECU. Somali PACE staff contributed to the preparation of the document for the establishment of SERECU and its activities. In addition, two members of Somali PACE staff (Stefano Tempia and Felix Njeumi) participated in an ad-hoc committee that was established to prepare a harmonized plan for a joint serological survey in the entire Somali ecosystem. The committee mandated the Somali PACE staff to prepare a design of the survey (see annex D1).

2.1.2 Livestock mortality surveys in Puntland and Southern Somalia

The prompt investigation of reported livestock disease outbreaks is an important component of any national epidemio-surveillance system. During the quarter two main livestock mortality events were reported and investigated by the Somali PACE Project. In both cases mortality in livestock was reported after the onset of heavy rains in Puntland in October 2004 and in Lower Juba in March 2005. The reported livestock mortalities following heavy rains initially raised concerns of a possible outbreak of Rift Valley fever (RVF). During the field investigations samples for laboratory diagnosis were collected and semi-structured interviews were conducted in order to rule out the presence of Rift valley Fever and to determine the causes of death.

a) Puntland
Following the recommendations of the SACB livestock working group an *ad hoc* meeting held at the FAO Emergency office in Nairobi mandated the Somali PACE Project in collaboration with VSF-Suisse and COOPI to investigate the cause of the heavy mortalities and to provide guidance on the actions to be taken. Somali PACE staff including the Project Epidemiologist, the Zonal Advisors responsible for the Puntland and Southern Somalia zones and the Puntland Zonal Coordinator carried out a field mission to investigate the causes of massive livestock mortalities that occurred in Puntland in October 2004. The Somali PACE team carried out a four day survey in the Bari and Nugal Regions from 16th to 19th November 2005 in collaboration with COOPI and VSF-Suisse.

The mission confirmed the reported massive deaths of livestock in four districts in Puntland namely Beyla and Dangarayo in the Bari region and Eyl and Garowe in the Nugal region. The team visited a total of 24 settlements and recorded a mean mortality of 74% of the sheep and goat populations and 77% of the camels. Records of human deaths were also obtained during the mission. The livestock mortalities were attributed to a sudden change in weather conditions with heavy rains with hailstorms and flooding that resulted in drastic temperature changes during the night. This resulted in massive deaths due to hypothermia. A technical report prepared by Somali PACE staff was widely distributed through the SACB to other partners working in Somalia. The detailed report is contained in annex D 2.

b) Southern Somalia
Livestock mortality was reported along the Juba River in Marerey area (Lower Juba Region) in March 2005. The mortality occurred in areas that were flooded following heavy rains. Suspicion of an outbreak of RVF was initially considered. This suspicion was further reinforced by reports of a human case of hemorrhagic syndrome by a team from MSF-Holland operating in the area. Several locations in the affected area were investigated and several samples were collected for RVF laboratory confirmation. Since during field operations symptoms compatible with mild Rinderpest were also detected in cattle and samples for the laboratory confirmation of Rinderpest were also collected as follows: 98 serum samples, 8 samples of whole blood in EDTA, 97 eye swabs preserved in Trizol® and 74 lymph node aspirates in Trizol®. The serum and EDTA Blood samples were sent to the KARI Biotechnology Centre for the detection of RVF virus, while eye swabs and lymph nodes aspirates were submitted to the KARI NVRC Muguga laboratory for the detection of Rinderpest virus.

The sera were inoculated into vero cell cultures while the EDTA blood was tested both in cell cultures and in laboratory mice. These tests did detect RVF virus in any of the samples tested. The samples collected from the human case of hemorrhagic syndrome were tested by MSF-Holland for the presence of several agents that could induce hemorrhagic syndromes in humans. All the tests failed to detect any of the potential causal agents. The affected person recovered after receiving symptomatic treatment and it was suspected that the observed human hemorrhagic syndrome was caused by an unidentified poisonous agent.

Polymerase chain reaction (PCR) tests carried out at the KARI NVRC Muguga laboratory ruled out the presence of Rinderpest virus as the cause of the mortalities. During field investigation several cases of anthrax were reported by pastoralists and this could have been the cause of the observed mortalities in livestock.

2.1.3 Attend AU/IBAR/PACE meetings

A meeting was convened by AU/IBAR/PACE on 7th-8th October 2005 to discuss the establishment of the AU/IBAR/PACE Rinderpest Eradication Coordination Unit (SERECU). Following inputs from the Somali PACE Project, PACE Kenya and PACE Ethiopia, AU/IBAR/PACE prepared a framework for the formation of SERECU. This was endorsed at the 10th PACE Advisory Committee meeting in Bamako, Mali from 29th to 31st March 2005.

2.1.4 Emergency response to Rinderpest outbreaks on a need basis

No responses were initiated since no outbreaks of Rinderpest were confirmed.

List of annexes:

Annex D1: Somali Ecosystem Rinderpest eradication coordination Unit (SERECU) Rinderpest sero-survey design

Annex D2: Mission Report: Puntland Livestock Mortality Investigations.

ANNEX D1: SOMALI ECOSYSTEM RINDERPEST ERADICATION COORDINATION UNIT (SERECU) RINDERPEST SERO-SURVEY DESIGN

(1ST NOVEMBER 2004 – 31ST MARCH 2005)

DRAFT DOCUMENT FOR COMMENT

DESIGN OF A JOINT RINDERPEST SERO-SURVEY IN THE SOMALI ECO-SYSTEM

(Drafted by Dr. Felix NJEUMI & Stefano TEMPIA – Somali PACE Project)

This documents includes discussions and suggestions from the AU/IBAR/PACE Epidemiology Unit / SERECU (Somali Ecosystem Rinderpest Eradication Coordination Unit of IBAR) as well as consideration and contributions from the Somali PACE Project

1. Background

Three important workshops on the eradication of rinderpest from the Somali Eco-System (SES) were held during the implementation of the PACE programme.

The first one held at Mbagathi in June 2002 adopted the "seek, confirm and eliminate" strategy for Rinderpest.

A follow-up workshop on the eradication of mild rinderpest from the Somali ecosystem (SES) was conducted at the Kenya Wildlife Services Headquarter, Langata in February 2004. This workshop did not come up with a classical set of recommendations, nor did it adopt a fully-fledged strategy for the eradication of mild rinderpest from the Somali ecosystem. It was agreed that developing a fully-fledged strategy would require a thorough understanding of the RP situation on the ground. The adopted concept strategy therefore included a number of actions that are required to develop a fully-fledged strategy. It was also stated that *actions* and *tools* are not equivalent to a strategy but form part of the strategy, i.e. mass vaccination is an action not a strategy. The application of these actions and tools had to be managed in a flexible way with realistic timeframes set for agreed actions. Progresses will be reviewed constantly and, when required, the direction amended.

The third meeting was held in order to reach consensus on the coordination body for the eradication of mild RP from the SES. The Somali Ecosystem Coordination Body will flexibly manage the strategy agreed during the "Langata" meeting.

During the coordination meeting held at the AU/IBAR conference room from 7th to 8thOctober 2004, one of the main recommendations was to consider the 3 countries of SES (Ethiopia, Kenya and Somalia) as one stratum. The task to design a joint survey for the SES was assigned to the AU/IBAR/PACE Epidemiologist for Eastern Africa in collaboration with the national epidemiologists.

2. Rinderpest Situation in the Somali Eco-System

2.1. Surveillance activities carried out to date in the Somali Eco-System

KENYA

- PDS in the whole of the declared infected zone and part of the surveillance zone. PDS detected a syndrome compatible with mild rinderpest, but this was not conclusively confirmed in the laboratory. The strain identified from PCR material was RBOK.
- Pre-vaccination sero-surveillance was conducted in Garissa and Ijara district. There is an indication that the sero-prevalence is higher in areas where the syndrome compatible with mild rinderpest was observed. However, no conclusions can be drawn from this survey.
- Wildlife surveillance conducted in Meru and Tsavo, shows that there is no recent virus circulation, i.e. no virus circulation after 2001. Preliminary results (H cELISA) of wildlife surveillance conducted in Garissa and Ijara districts indicate that there was no recent virus circulation in wildlife, i.e. buffalo, warthog and giraffe.
- Kenya is currently conducting a (random sample) sero-survey to prove absence of virus circulation in the "surveillance zone" and the northern part of the "Infected zone". Results are expected before the end of 2004. In addition it is expected that Kenya will collect sera from other 100 purposively selected sites.
- Is conducting simultaneously wildlife surveillance in Mandera, Marsabit and the northern part of Wajir district. Results are also expected before the end of 2004.
- Is currently also conducting a random sample sero-survey in the "free zone".

ETHIOPIA

- Conducted PDS in February 2004 and detected a syndrome compatible with mild rinderpest in Dolobay. It was not confirmed to be rinderpest. Follow-up serology in the same herd (Elquran), one month after observing the clinical syndrome, showed that all 107 samples collected were negative in H cELISA. The differential diagnosis for the mild rinderpest compatible syndrome was not made.
- Conducted the first serological surveillance in the surveillance zone in February 2004, all districts were negative except for Dolo Odo, where 11 sero-positives were observed out of the 140 sera collected, which is 7.8 percent. All positives were along the Dawa river. Dolobay was negative. 0 positive out of the 260 samples collected.
- Resampling and retesting in March 2004 showed that the percentage of sero-positives in Dolo Odo had not increased. 16 sero-positives were observed out of the 527 sera collected, which is 3 percent.
- Continued PDS could not detect a syndrome compatible with mild rinderpest after the one detected in Elquran.

SOMALIA

- Serum samples collected from cattle prior to the beginning of the PACE Project (1998 – 2001) in Lower Juba, Gedo, Bay, Bakool, Hiran and Mudug Regions of Central and Southern Somalia showed the presence of RP antibodies in Lower Juba, Gedo and Hiran.

- Clinical syndromes compatible with mild Rinderpest were identified in Lower Juba in 1998 - 1999, but this was not conclusively confirmed in the laboratory. The strain identified from PCR material was Saudi 81/1.
- RP Sero-Surveys were been conducted in Central and Southern Somalia (10 administrative regions) from September 2002 to October 2003. The surveys were based on a multi-stage cluster sampling based on random map coordinates, the first stratification was based on administrative regions. This had the advantage that if one or more administrative regions would have proven inaccessible (e.g. due to conflict) the rest of the survey could still be carried out without compromising the results of the survey for the other regions. Serological data from previous sero-surveys in Central and Southern Somalia were utilized to calculate the between cluster variance in the area (Vc). The survey highlighted a moderate to high sero-prevalence (about 17%) in Lower Juba, Middle Juba and Gedo, a moderate to low prevalence (from 2,8% to 4.9%) in Lower Shabele and Hiran, and a very low prevalence (less than 1.3% in Bay, Bakool, Middle Shabele, Mudug and Galgadud).
- RP Sero-Surveys has been conducted in the cattle rearing areas of Puntland and Somaliland in 2004. The results are expected by the end of the year.
- PDS carried out in Somalia since February 2003 has highlighted several cases of stomatitis-enteritis syndromes. This occurred in Sakow, Middle Juba (Southern Somalia) in February 2003, in Tabta village in Afmadow district in October 2003, in Dobley in Afmadow district in March 2004, in El Wak in Gedo Region in March 2004 and in Beled Weyne in Central Somalia in August 2004. During the investigation period, blind kudu and deaths in warthogs was reported. Biological materials collected from the suspected animals gave the following results: 7 clear view positives, sero-prevalence of 15% in the suspected herd. Samples collected from animals at the clear view test failed to give positive result when tested in the laboratory (KARI, Muguga). Lymph node aspirates taken from other suspected animals have so far tested gave negative for the presence of Rinderpest virus. A pictorial collection of all clinical symptoms detected to date is available on hard copy.

2.2. Disease Status in the 3 Countries

KENYA

The infected zone and part of the surveillance zone are as declared to the OIE in the "declaration of provisional freedom from rinderpest at a zonal basis" in August 2004.
It was however also stated that the delineation is not rigid. As soon as virus starts moving like it did in 1994-1996 and 2001, the ecosystem might even include parts of Tanzania.

ETHIOPIA

29 districts of the surveillance zone were declared to the OIE as (provisional free from rinderpest at a zonal basis) and as part of the application of freedom from disease at a zonal basis.

SOMALIA

Southern Somalia and probably parts of Central Somalia can be considered as areas of endemic maintenance. Mudug and Galgadud Regions might be considered as surveillance zones, while Somaliland and Puntland are probably free from the disease.

3. Surveillance Strategy proposed by the AU/IBAR/PACE Epidemiology Unit

In order to plan the required surveillance it is important to list what questions must be answered by the surveillance and identify the most appropriate technique to assess the identified problems. The following table highlights questions and proposed investigation methods for the delineation or absence of the epidemiology of RP in the Somali Eco-System:

Identified issues to be addressed by surveillance	**Proposed investigation method to address the question**
1. Establish whether there is rinderpest virus circulation in the SES. If so, confirm and identify what strain?	• Participatory Disease Search • Sero-Survey
2. Delineation of the area of endemic maintenance, i.e. in which part of the Somali Eco-System is the virus endemically maintained?	• Sero-Survey
3. Establish confidence among the countries that are part of the Somali-ecosystem that the results can be trusted.	• Joint Sero-Survey
4. Establish whether there is virus circulation in areas with low sero-prevalence, or whether the sero-positive animals were introduce from endemic areas.	• Participatory Disease Search (?) • Sero-Survey (?)
5. What is the involvement of wildlife in the maintenance of rinderpest virus circulation in the SES.	• Wildlife Sero-Survey • Research Work

In action terms the RP surveillance in the Somali Eco-System will require the following:

1- Design (sampling size, age group, vaccination history, etc) and carry out a random sero-survey in all area of SES to delineate the areas of endemic maintenance of RPV and to establish confidence among countries on the reliability of the data.
2- Trace back positive animals and carry out PDS in order to confirm the strain and the cause of the mild rinderpest compatible syndrome observed in all three countries.
3- Carry out sero-survey in wildlife survey.

4. Objectives of the Sero-Survey

The objective of the sero-survey is to delineate the distribution of locations with RP sero-positive unvaccinated cattle and wildlife foci of RP virus by first estimating RP Seroprevalence in the area of interest. The investigation will focus on the areas of the Somali Ecosystem which are suspected to harbor the last foci of RP.

The purpose of this document is to draft an acceptable design of this survey for the 3 countries in the Somali Ecosystem.

5. Design of the Sero-Survey

5.1. General Considerations

In a survey, the major statistical component is referred to as the sample design and includes both the sampling plan and the estimation procedures.

The ***sampling plan*** is the methodology used for selecting the sample from the population.

The ***estimation procedures*** are the formulas used for obtaining estimates of population values from the sample data and for estimating the reliability of these population estimates.

The data users should specify what variables should be measured, what estimates are required, what levels of reliability and validity are needed for the estimates, and what restrictions are placed on the survey with respect to time-liness and costs.

The **reliability** of an estimated population characteristic refers to how reproducible the estimator is over repetition of the process yielding the estimator. If we assume that there is no measurement error in the survey, then the reliability of the estimator can be stated in terms of its sampling variance or standard error. The smaller the standard error of the estimator, the greater is its reliability (Paul S. Levy and Stanley Lemeshow, *1999).*

The **validity** of an estimated population characteristic refers to how the mean of the estimator over repetition of the process yielding the estimate, differs from the true value of the parameter being estimated. If we assume that there is no measurement error, the validity of an estimator can be evaluated by examining the bias of the estimator. The smaller the bias, the greater is the validity.

The **accuracy** of an estimator refers to how far away a particular value of the estimate is, on average, from the true value of the parameter being measured.

5.1.1 Criteria for a good sample design

There are essentially 2 widely used strategies for choosing among several possible sample designs. The first consists of the four steps shown below:

1. Determine the relative error required for the estimate.
2. For each sample design under consideration, determine the sample size required to obtain, with specified confidence, an estimate that meets the specification listed in step 1.

3. For each sample design, estimate the field costs involved in obtaining the sample size given in Step 2.
4. Choose the sample design that yields the lowest field costs, as calculated in Step3.

The second strategy that is widely used in choosing among alternative sampling designs is to first determine the sample design that produces estimates having the lowest variance at the field costs that have been specified. This is done by first calculating the sample size that can be taken within the specified field cost and then calculating the variance of the estimate for that particular sample size.

Since the accuracy of an estimate involves both its reliability and its validity, and since accuracy is measured by the mean square error, one of our criteria for choosing a sample design will be the size of the mean square errors anticipated for the resulting estimates. In addition to the *mean square error* criterion, the cost involved in conducting a survey according to a specified sample design will be used as a criterion for evaluating the particular sample design. The third criterion will be the feasibility in executing a particular sample design. No matter how cost-efficient a particular design is, it is of no use if it is not feasible to execute the design.

The ***mean square error*** is the mean of the squared differences over all possible samples between the values of the estimate and the true value ***d*** of the unknown parameter.

The ***precision*** is a measurement of how variable the estimates from repeated samples are.

Although we can expect the estimates from different samples to vary, if most of them are very close to each other, we have a precise estimate, and we can be highly confident that (in the absence of bias) estimated values are close to the real value. If however, the spread of repeated estimates is wide, our estimate is imprecise, and we have less confidence that particular estimate is close to the real value.

When investigating a disease, the results coming from the selected samples must be representative of the target population. This is obtained by randomly selecting the individuals within the sample. In this way, all individuals within the target population have the same chance of being selected. Another important parameter to respect during an investigation is the number of units (e.g. animals, herds, locations, etc.) to be sampled **(sample size)**. When measuring a variable (e.g. prevalence) in a population, using a sampling method, the results obtained from the sample must be as close as possible to the true ones in the target population. The precision (or accuracy) of estimating the value of a variable of a target population is directly proportional to the sample size. In other words, the more the units sampled, the more precise the results. However, increasing the sample size does not increase the precision if the sampling units are not selected at random. A balance must be found between the cost of sampling a huge number of animals and an acceptable precision in measuring a variable. In order to know the level of precision obtained from different sample sizes, certain formulas are used. These formulas use three parameters:

1) **Expected prevalence**: this is the prevalence expected to be found in the study area. It is obtained by consulting previous results (e.g. publications, results of previous surveys or surveys carried out in neighboring areas). If this information is not available, a 50% expected prevalence is used as a default. It gives the biggest sample size.
2) **Confidence interval**: this is the trust given to the results from a survey. In epidemiology, a 95% confidence interval is normally used. This means that if a survey is repeated, there is a 95% chance that the results obtained would correspond to the results of first survey within a given time frame.
3) **Desired absolute precision**: this is the precision with which the survey intends to estimate the prevalence in a given population. In epidemiology, a 1 or 5% desired absolute precision is normally used. This means that the observed results will differ 1 or 5% from the value of the target population.
The higher the desired absolute precision (e.g. 1%) and confidence interval (e.g. 99%), the bigger the sample size must be. The conclusions drawn from the results of an investigation can be misleading if the characteristics of a good sample (e.g. representative and precise) are not respected.

5.1.2 Sampling plan

5.1.2.1 Purposive selection

Purposive or judgmental selection is the choice of a sample, the averages of whose quantitative characteristics or distribution are similar to those of the target population.

5.1.2.2. Random sample

Randomization or random allocation is a process that involves random assignment of the subjects. Random allocation offers strong advantages over alternative assignment schemes, and consequently it is the method of choice for subject assignment in the survey.

For objectivity and international recognition of the results of surveillance, it is essential that a proper random sampling procedure be used. While it might seem logical to focus the surveillance on populations considered most likely to be maintaining the disease, judgments as to the location of residual infection could be very unreliable. Due to the dynamic livestock production system in the SES residual endemic foci of rinderpest, which are the target of the surveillance, are unlikely to be found where they are expected: otherwise it would have been found and eliminated through the disease control programmes.

However, it is acceptable to undertake additional surveillance in populations considered at greater risk, or to sample additional herds if suspicion of disease arises during surveillance work. These herds must be in addition to those in the random sample, and not substitutes.

Random samples are typically less evenly spread through the population than is the case with a sample selected to be "representative". Sometimes, having selected a random

sample of herds, it will be apparent that some part of the population considered to be important has been missed or under-represented by chance. In this situation it is not permissible to abandon the sample and select another. It is, however, acceptable to add herds to the random sample. This will increase the probability of detecting the disease below the level achieved by the random sample alone.

In a random sample, every individual in the population must have an equal probability of being selected, and the selection of one individual must not affect the probability of another being selected. The method to be used to select a random sample of herds depends on the information available when the surveillance is being planned. Ideally, random samples should be selected from a sampling frame (a list of all herds in the population). When no sample frame is available, alternative procedures can be used, but these are designed to emulate sample frame selection.

5.2. Sampling design proposed by AU/IBAR/PACE Epidemiology Unit

The area to be covered by the survey should include 8 Regions of Central and Southern Somalia, 29 Districts in the surveillance zone of Ethiopia and the Northeastern Province of Kenya.

Three age groups should be sampled:

- 1 - 2 years
- > 2 – 3 years
- > 3 years

The age of the individual animals should be determined according to the dentition and completed with information from the livestock keeper.

Stratification:
All 3 countries should be considered as one single stratum.

Sample Size:
The sample size for a simple random sampling is approximated by the formula:

$$n = \left(\frac{t * SD}{L}\right)^2 \quad (1)$$

Where:

- n = Sample Size
- t = Student's t-value for the selected Confidence Interval
- SD = Standard Deviation: $\sqrt{p*(1-p)}$; where p = Expected Prevalence. The bigger standard deviation applies for an expected prevalence of 50%, which, when entered into the formula, gives the biggest sample size.
- L = Accepted Absolute Error (or Desired Absolute Precision (e.g. 1 or 5%)

The formula is valid when ***n*** is less than 10% of the total population size.

When the population size (N) is small, the formula above may result in a sample size that is larger than the population size. Therefore, a correction should be made when the sampling fraction (f = *n*/N) is larger than 5% of the total population size. In this case, the correct sample size is then obtained by the following formula:

$$n© = \frac{n}{1+f} (2)$$

Where *n*© is the corrected sample size and *n* is the originally calculated sample size.

The corrected sample size is always smaller than the original one. If n > 0.05*N the population is called "finite", if not, the finite population correction (division by 1+f) is not needed, because deviations will be small and the population can be regarded as finite. Formula 2 is always preferable, it gives the exact sample size under all conditions. For finite population, n/N is close to zero (1-f=1).

Utilizing the Standard Error $\left(SE = \frac{SD*(1-f)*p(1-p)}{n} \right)$ the sample size is given by:

$$n = \frac{(1-f)*p(1-p)}{SE^2}$$

For the calculation of the sample size, a 99% Confidence Interval (constant: 2.57) a 5% Desired Absolute Precision and a 50% Expected Prevalence were chosen. In this case the Standard Error (SE) and Sampling Size (n) are as follows:

$$SE = \frac{5}{2.57} = 1.95$$

$$n = \frac{50*50}{1.95*1.95} = 657$$

The 657 Sampling Units will be proportionally allocated according to the cattle population in the target areas of each country. In each country the Sampling Units will be further proportionally allocated according to the cattle population of the region/province and will be identified by generating random map coordinates. Having identified the Sampling Units and the radius of search (e.g. 10 Km), the final sample size will be obtained by consulting specific tables (A. James). If 15 animals will be sampled in each sampling site a total of 9,855 serum samples will be collected.

5.3. Alternative sampling design

The methodology proposed above refers to a **simple random sampling**. This type of design assumes that each individual in the population has the same risk of exposure to a specific event being investigated and that a complete sampling frame of the individuals composing the target population is available. In reality animals that are sampled in one specific location are more likely to be similar in term of risk of exposure than those that

are far apart. The animals that share a similar risk of exposure are termed clusters. This means that the variance observed within a specific cluster might be smaller than the one observed between different clusters. The between cluster variance should therefore be taken into consideration in the calculation of the samples size so as to obtain a reliable estimate after the completion of the survey.

The formula for sample size determination for simple random sampling cannot be applied to cluster sampling because it does not take into account the **potentially large variation that can occur between clusters.**

The variation expected between clusters can be calculated, using data from previous surveys, as follows:

$$V_c = c\left\{\frac{K_1 cV}{T^2(c-1)} - \frac{K_2 P(1-P)}{T}\right\}$$

Where

- V_c = Between-Cluster Variance
- c = Number of Clusters Collected in the Sample;
- T = Total Number of Animals Sampled;
- K_1 = (C-c)/C,
- C = Number of Clusters in the Population;
- K_2 = (N-T)*N
- N = Total Number of Animals in the Population; and
- $V = P^2\left(\sum n^2\right) - 2P\left(\sum nm\right) + \left(\sum m^2\right)$

  Where
  - P = Sample Estimate of Overall Prevalence
  - n = Number of Animals Sampled in Each Cluster,
  - m = Average Number of Diseased Animals Sampled in Each Cluster.

If the prevalence for the new survey (P_{exp}) is expected to be different from the prevalence observed in the survey from which the V_c was calculated (P), then an adjustment must be made as follows:

$$V_{c,adj} = \frac{Vc * P_{\exp}\left(1 - P_{\exp}\right)}{P(1-P)}$$

Having obtained the $V_{c,adj}$ for the P_{exp} the total sample size for a specific number of clusters can be calculated using the following formula (95% Confidence Interval):

$$T_s = \frac{1.96^2 g P_{\exp}\left(1 - P_{\exp}\right)}{gd^2 - \left(1 - P_{\exp}\right)}$$

Where:

- T_s = Total Number of Animals to be Sampled
- g = Number of Clusters to be Sampled
- P_{exp} = Expected Prevalence
- d = Desired Absolute Precision
- V_c = Between-Cluster Variance (Adjusted for the Expected Prevalence if Different from the Observed One)
- 1.96 = Constant for 95% Confidence Interval

This design takes into consideration the between cluster variance observed in previous surveys, enabling a more appropriate sample size and therefore a better estimate of the prevalence of the disease.

To harmonise with Kenya and Ethiopia, the survey design for the 8 Regions of Central and Southern Somalia, utilizing the above described methodology, is given in Table 1. The sample size has been calculated for each region for a 50% Expected Prevalence, 95% Confidence Interval and 5% Desired Absolute Precision. The Between Cluster Variance observed in each region in the 2002 – 2003 RP Surveys has been adjusted for the 50% Expected Prevalence and used for the final calculation of the sample size by Region.

Region	Obs. Prev. (%)	Obs. VC	Exp. Prev. (%)	Adj. VC	Total Samples	Samples / Site	Num. Sites
Bakool	0.61	0.000115	50	0.004782	510	15	34
Bay	0.74	0.000417	50	0.001427	360	15	24
Gedo	17.83	0.010653	50	0.018178	810	15	54
Hiran	4.28	0.002819	50	0.017226	780	15	52
L. Juba	16.98	0.028193	50	0.036253	1050	15	70
L. Shabele	2.62	0.002255	50	0.022113	900	15	60
M. Juba	15.99	0.024319	50	0.030004	900	15	60
M. Shabele	0.64	0.00078	50	0.003082	450	15	30
Total	-	-	-	-	5760	-	384

Table 1: Two-Stage Cluster Sampling Design for 8 Regions of Central and Southern Somalia.

The sampling sites by region can be identified by generating random map coordinates so as to guarantee, as much as possible, the representativeness of the sample.

It is proposed that animals 1 to 3 years old will be bled. By comparing the estimated Sero-Prevalences by Region of this survey with the previous ones it will be possible to draw conclusions about the epidemic areas and areas of endemic maintenance of RP. In fact, by definition, an endemic area is an area where the number of new cases (Incidence) remains constant over time. Having subsequent estimates of the prevalence over time an estimate of the incidence will be possible. Therefore this information can prove extremely useful in the delineation of the areas of endemic maintenance of RP in the study zones.

6. Discussion and recommendations

Several sampling designs can be chosen according to the availability of baseline data (e.g. sampling frame), the purpose of the survey (e.g. estimating disease prevalence or detecting the presence of disease), the cost of the survey, etc.

It is worth noting that the sampling strategy recommended by the OIE (Guidelines to Epidemio-Surveillance for Rinderpest), which foresee the random selection of 314 Sampling Sites and the collection of 15 samples per site, was designed for detecting the presence of RP antibodies with a 95% detection probability if the disease is present in at least 1% of the herds. This methodology is appropriate for surveillance which aims to prove freedom from RP infection, but it is less appropriate to estimate the prevalence of the disease.

If the purpose of the survey is to estimate the sero-prevalence of Rinderpest the formulas for a Simple Random Sampling or a Cluster Sampling to estimate proportions are preferable. Moreover, if it is foreseen that several animals will be bled in the same sampling site, a Cluster Sampling Design is advisable since it takes into consideration the potentially high variability between "clusters". Similarly, the between cluster variance should be taken into account in the analysis of the survey data for the calculation of the standard error used for the construction of confidence intervals.

Concerning the age stratification two aspects have to be considered. If an age specific prevalence estimate is needed, then the calculated sample size must be multiplied by the number of selected age groups from which a prevalence estimate is desired. In this case an accurate estimate for each age group can be obtained and comparison among age strata is possible, but the number of samples increases considerably.

On the other hand, by calculating a sample size and then allocating a certain number of samples to different age groups a prevalence estimate of the whole population is obtained, but comparison among age groups is not recommendable due to the inaccurate age specific prevalence estimates which are obtained.

In conclusion, if the purpose of the survey is to estimate the disease prevalence so as to delineate areas of RP circulation, then the appropriate formulas to estimate proportions for a Simple Random Sampling or a Cluster Sampling are advisable. The latter is preferable because of the above-mentioned reasons. The representativeness of the sample will be guaranteed by the random selection of the sampling units. In the absence of a sampling frame the generation of random map coordinates for the identification of the sampling sites represents a reasonable method of randomization. In order to identify areas of endemic maintenance a prevalence estimate of different age groups could be foreseen but to achieve this, a very big sample size must be considered. An alternative is to obtain an accurate prevalence estimate of the "most susceptible" age group (e.g. 1 to 3 years) and compare the results with the one of previous surveys for the same age stratum. In fact, from repeated cross-sectional surveys an estimate of the incidence of the disease can be derived and consideration of the endemic stability of the disease can be done. In Somalia this is desirable as we have comprehensive data from past surveys.

ANNEX D2: MISSION REPORT: PUNTLAND LIVESTOCK MORTALITY INVESTIGATIONS

(1ST NOVEMBER 2004 – 31ST MARCH 2005)

Somali PACE Project

Mission Report on the Investigation of the Massive Livestock Deaths that Occurred in the Puntland State of Somalia in October 2004



November 2004

PACE

- Somali Component -

Funded by: - European Development Funds - Swiss Disaster Relief - Italian Cooperation - Department for International Development of the United Kingdom

MISSION REPORT ON THE INVESTIGATION OF THE MASSIVE LIVESTOCK DEATHS THAT OCCURRED IN THE PUNTLAND STATE OF SOMALIA IN OCTOBER 2004

1. Background

Following recent heavy rainfall, which occurred after a prolonged period of drought, huge losses of livestock were reported by the pastoralists to the authorities and some organizations of the Puntland State of Somalia. Both of them initiated the field visit to assess the affected area and compile a report. They collected photographs that were sent to International Organisations and Agencies in Nairobi seeking donor assistance. There was an appeal from the Puntland Authorities for emergency assistance to address this issue. The extent and the cause of the deaths were not immediately confirmed. During the SACB meeting of 08/11/2004 the issue was raised by VSF-Suisse and was discussed extensively. The Somali PACE Project reported to the panel and informed them that it was planning to undertake a field assessment to identify the probable cause of the massive livestock deaths and some human cases. It was agreed that a focused meeting to discuss the composition of the team responsible to carry out the investigation was to be held at the Nairobi FAO Emergency Office at Lion Place, Waiyaki way on 10/11/04. From this latter meeting it was agreed that the Somali PACE Project would lead a team of livestock experts comprising VSF-Suisse and COOPI personnel with the objective of investigating the cause of the heavy losses, try and collect samples for further analysis and final confirmation and to geographically define the affected areas. This is a report on the findings by the investigating team.

2. Objectives of the mission

a) Investigate the cause of the deaths

b) Collect samples for analysis for confirmation of the cause of death
c) Delineate the affected areas
d) Give recommendations for interventions

3. Methodology

Direct observations by the investigating team, physical examination of the surviving animals and examination of the carcases in the affected areas were carried out. Semi-structured interviews were carried out with the affected pastoralists in the field. Geographic coordinates of the visited locations were taken using Geographic Positioning Systems (GPS) tools to assist in delineating the affected areas. Meetings with the local authorities in the afflicted areas were held. A planning meeting was held in Bosasso where information and figures from the Ministry of Local Government and Rural Development (MLGRD) were gathered. A review meeting was held half-way during the exercise in Gardo between the COOPI and Somali PACE Project experts where COOPI was requested to draft and circulate a preliminary report because the PACE team was proceeding with the assessment in other districts.

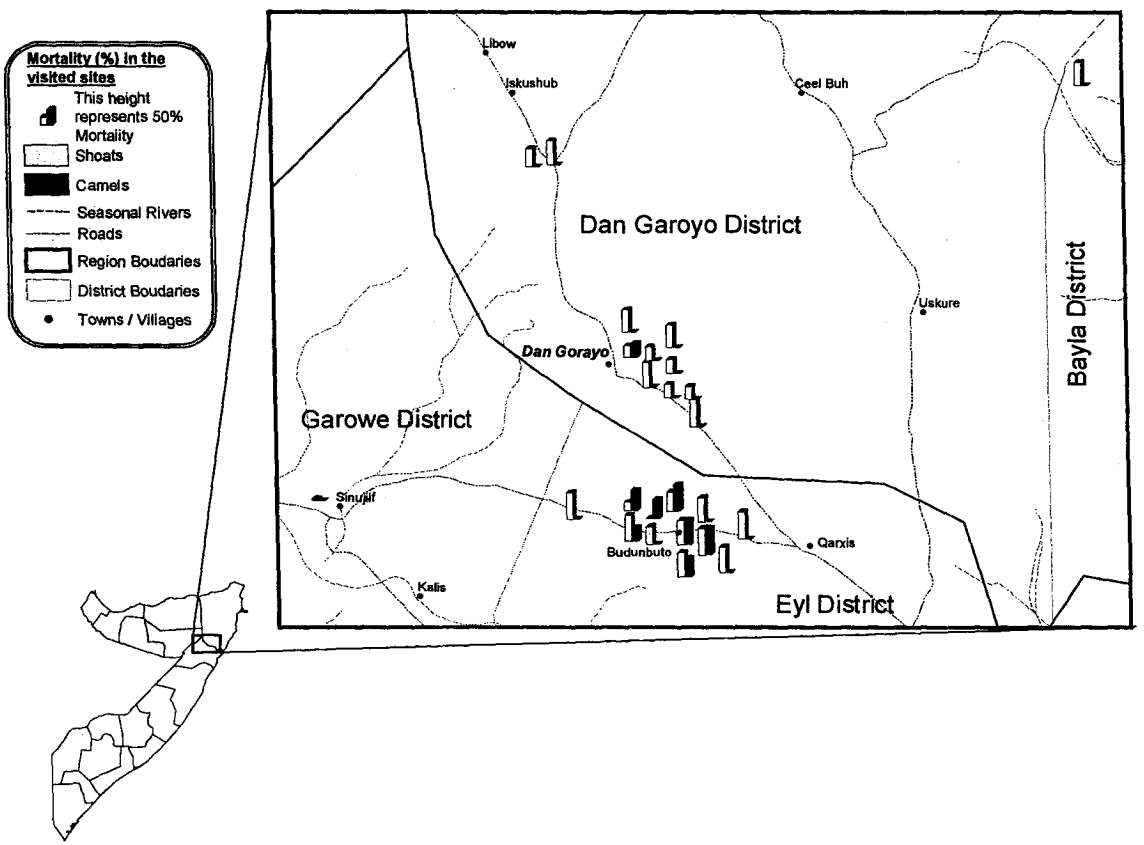
4. Findings

Heavy rainfall for 36 to 48 hours occurred in the afflicted areas between the 29thto 31st October 2004. The heavy rains were accompanied with hailstorms that resulted in a rapid decline in temperatures especially during the nights. Massive deaths of livestock occurred at that time in four Districts of the Puntland State of Somalia namely Beyla & Dangarayo in Bari Region and Eyl & Garowe in Nugal Region. The worst hit district was Dangarayo. East of Dangarayo was one of the areas that received the earliest rains in Puntland and many pastoralists had moved there after the long spell of drought. When the present phenomenon occurred the area had a large population of livestock and most of them died. The

death pattern was such that the weakest animals from the prevailing drought died first.

Four species of animals were affected namely sheep, goats, camels and donkeys. In the Puntland State of Somalia, the cattle population is scanty. The deaths occurred mainly during the night and early morning when the animals were still in their enclosures.

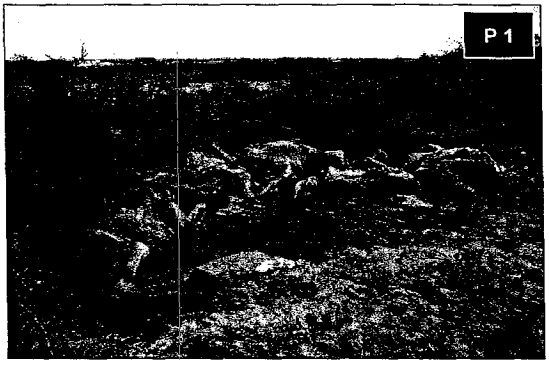
Map 1 shows the visited locations and the observed mortality by species.



MAP 1: Observed Mortality (%) by Species in the Visited Locations

At least each pastoral family that was in the affected areas at that point in time lost animals following the heavy downpour. The most affected species were sheep and goats followed by camels (Pictures 1 to 6). For most of the families

the losses ranged from total loss (100%) to the extent of remaining with less than 15 heads of sheep and goats (20 out of 24 visited settlements). On the other hand a few families managed to save most of their livestock (4 out of 24 visited settlements). The families that suffered huge numbers of losses were those that had least shelter from the adverse conditions. The lack of materials for sheltering the animals was compounded by the fact that the pastoralists had lost their pack camels from the previous drought.

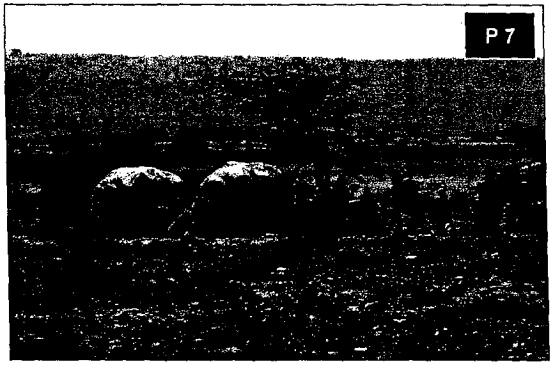






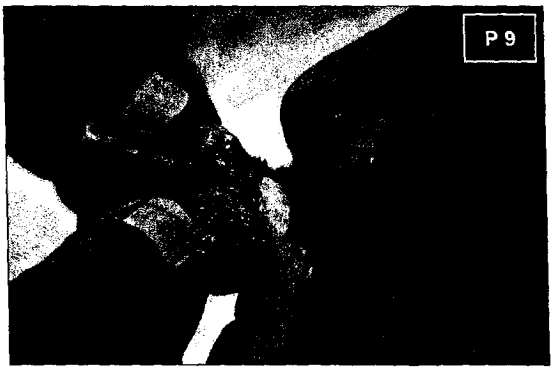


The families that lost all animals moved from the area to nearby trading centres or district headquarters as destitutes where they are presently camped. Similarly, the families that were left with fifteen animals or less gave them to other family members to build a sizable flock and moved from the area to the trading centres (Pictures 7 & 8).





In some places it was reported that the families who lost all their stock have turned to other activities such as farming though they have no tools, seeds nor knowledge of the activity. Disease investigations during the assessment did not reveal any contagious or non-contagious disease or poisoning that would have resulted in the huge and "synchronized" losses. Foot rot and respiratory cases were observed in the surviving animals in nearly all the affected flocks (Pictures 9 & 10). Some animals in the flocks also suffered from burns resulting from the fires that the pastoralists lit during the night to try and increase the temperatures in the pens (Picture 11). Kinked neck was a common feature observed in a few sheep in the surviving flocks (Picture 12).





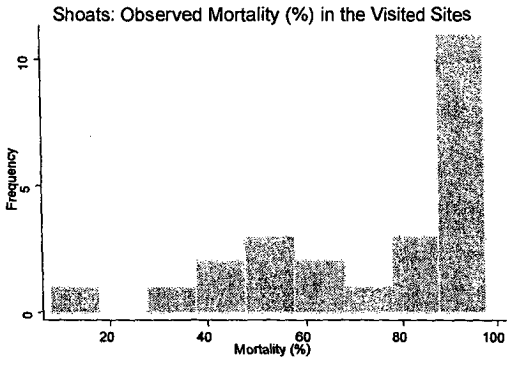




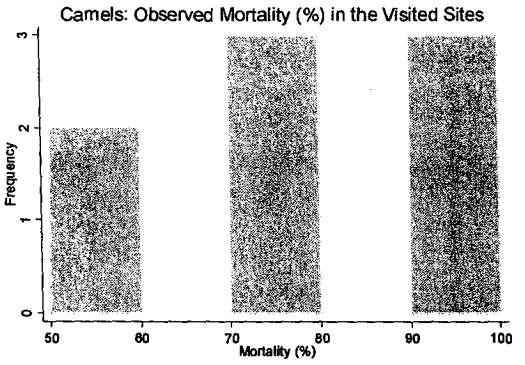
The summary statistics of the findings in the visited sites are given in Table 1, while the frequency distribution of the observed mortality for shoats and camels is shown in Graphs 1 & 2 respectively.

Species		Observations	Mean	Standard Deviation	Min.	Max.
Shoats	Number Dead	24	***212***	107	20	450
	Number Survived	24	***83***	92	0	300
	Mortality (%)	24	***74***	25.4	7.7	100
Camels	Number Dead	8	***26***	25	1	73
	Number Survived	8	***11***	16	0	45
	Mortality (%)	8	***76.9***	20	50	100

TABLE 1: Observed Numbers Dead, Numbers Survived and Mortality for Shoats and Camels in the Visited Sites.



GRAPH 1: Frequency Distribution of the Observed Mortality in Shoats in the Visited Sites.



GRAPH 2: Frequency Distribution of the Observed Mortality in Camels in the Visited Sites.

Human deaths (16) were reported in some villages especially Bunthubuto and Gorey Madhobe. The team did not receive any reports of deaths in wildlife nor did the team notice any carcases of wildlife during the assessment contrary to the report from MLGRD that 3,400 wildlife perished in the catastrophe.

5. Constraints

Heavy rainfall in Beyla at the time of the assessment made it difficult for the investigating team to access the locations in the district that were affected. The team got stuck for about three days and it became impossible to continue with the assessment in the area.

6. Conclusions

From the assessment and investigations carried out by this team, it can be concluded that the deaths were not as a result of disease but due to drastic decrease in temperature that resulted in hypothermia. This is supported further by the report from the pastoralists that the deaths occurred in the early dawn time when the temperatures were at their lowest. No samples were taken for further laboratory investigations.

Local Authorities reported that over 150,000 sheep and goats perished in the four Districts, but the total number of deaths remains uncertain and extremely difficult to estimate. There could have been a spill-over effect to the neighbouring districts such as Jeriban, but this was not confirmed. It will be important to get meteorological reports from those concerned to try and deduce the extent of the spread of the phenomenon because it was not possible to access all the areas affected. This will help in predicting or estimating the total population of the dead animals or affected families.

7. Recommendations

a) Immediate Intervention
   i) Provision of food and water to the destitute families
   ii) Provision of shelter
   iii) Provision of human medicines

b) Long term intervention
   i) Restocking of livestock to the pastoralists especially the small stock and the pack animals
   ii) Establishment of emergency response teams both in Puntland and at the donor community or SACB level is necessary to address such events.

Donors, International Organizations and Local Authorities should all play a role in the implementation of the suggested interventions. Where possible, the active involvement of the Affected Communities is also highly recommended.

The pastoralists attempted to hygienically dispose the carcasses by burning them using fuel provided by the authorities. This was done in limited places with minimal success and in some place the carcasses were partially burnt (Pictures 13 & 14).

At the time of this assessment most of the carcasses were rotting off and no practical intervention can be recommended for disposing the carcases.

SECTION E: NETWORKING

(1st November 2004 – 31st March 2005)

SECTION E: NETWORKING

Result 5: Local Networks for promoting livestock health are functioning

1. Overview and Background

Activities under this result aimed to enhance cooperation among Somali livestock sector stakeholders to enable them to contribute to the control and eradication of major transboundary livestock diseases. During this reporting period, the Somali PACE Project sought support from key livestock sector stakeholders for Rinderpest survey activities planned to commence in Central and Southern Somalia in February 2005 (see report on serological survey activities under Result 3 activities). Another issue of the Somali PACE Bulletin was finalized, printed and widely distributed.

2. Activities Implemented During the Reporting Period

2.1 Publicise objectives, activities, results, mode of operation etc. of the PACE initiative

2.1.1 Awareness for sero-surveys

Three workshops to create awareness among stakeholders prior to the sero-surveys for Rinderpest in Central and Southern Somalia, were convened in Southern Somalia (Afmadow from 20th to 22nd January 2005 and Dinsor from 25th to 27th January 2005) and in Central Somalia (Jowhar from 3rd to 5th February 2005). The workshops aimed to sensitize key livestock sector stakeholders and obtain their support for large-scale Rinderpest serological surveys planned to start in February 2005. Key stakeholders including representatives of livestock producers, livestock traders, local authorities, community elders and Somali veterinary professionals from the six Regions of Southern Somalia (Lower Juba, Middle Juba, Gedo, Lower Shabelle, Bay and Bakool) and two Regions of Central Somalia (Hiran and Middle Shabelle) were invited to participate in the workshops. A total of 123 participants attended the workshops that were convened at Afmadow (for participants from Lower and Middle Juba Regions), Dinsor (for participants from Bay, Bakool, Gedo and Lower Shabelle Regions) and at Jowhar (for participants from Hiran and Middle Shabelle Regions).

The objectives of the workshops were:

- To update local livestock stakeholders on the achievements of the Somali Pace Project, particularly in the Central & Southern Somalia Zones as well as progress made in Puntland & Somaliland.
- To discuss modalities for information sharing and reporting of livestock diseases.
- To agree on mechanisms for reviving private animal health services delivery systems, including initiatives for improving livestock trade.
- To disseminate results from previous Rinderpest serological surveys.
- To justify the continued sampling activities with and highlight the requirements for a regional approach to the eradication of Rinderpest from the entire Somali ecosystem as agreed with AU/IBAR/PACE, PACE Kenya and PACE Ethiopia.

Methodology:

In order to address these objectives (e.g. sensitization for the forthcoming sero-

including demonstration of materials and equipment for serological sampling testing. At the end of each presentation participants were given time for comments and questions. In addition exercises were carried out in groups according to District of origin and stakeholder categories. Each group or category presented their findings in plenary sessions. Following discussions, consensus was reached both during the group and plenary sessions. Recommendations were made and agreed in a final discussion session. Participants were also provided with copies of the latest Somali Pace Bulletin.

Among the key recommendations made by stakeholders for consideration by the Somali PACE Project were:

- Somali PACE should work towards lifting of the ban on livestock exports to Saudi Arabia.
- The Project should establish a physical presence at the district levels rather than only at the Zonal levels.
- The Project should intensify visits to livestock watering points to raise awareness among livestock keepers on need for measures for the eradication of mild Rinderpest.
- Establish a framework for disease reporting & information gathering at regional & district level.
- Establish emergency response team for each region
- Somali PACE should address other list (A) diseases, including diseases of camel, sheep and goats (e.g. Foot and mouth disease, Contagious Bovine Pleuropneumonia, etc.)
- Capacity building training for local SVPs and reinforce the private veterinary sector.
- Establish veterinary checkpoints (clinics) at border crossing areas. For monitoring cross border livestock movement.
- Maintain awareness creation initiatives for local stakeholders in order to eradicate existing livestock diseases. These should include the use of local FM radio stations.
- Contribute to community environmental awareness programmes in order to prevent massive tree felling for charcoal burning as well as massive killing of game animals.
- Provide training for community animal health workers in areas where their inputs are required.

A report of the stakeholders' workshops is contained in annex E1.

2.1.2 Production and dissemination of Project Bulletin

The 6th Somali PACE Bulletin (Volume 2 Issue 2) was printed and 800 copies were widely disseminated to stakeholders within and outside Somalia.

2.2 Strengthen capacity of stakeholders to link and communicate.

2.2.1 Stakeholders' workshop on harmonisation of animal health delivery systems in Southern Somalia

- The CAPE Unit organized a stakeholders' workshop at the IMC conference hall in Huddur from 24th to 25thJanuary 2005. A total of 22 participants representing international NGOs, Local NGOs, CBOs and private veterinary

2.2.2 Study tour for private sector AHWs to northern Kenya

In southern Somalia where conventional animal health delivery is lacking or inadequate Community-based Animal Health Delivery Systems are playing a vital role in providing effective animal health care for pastoral communities. If such systems get the necessary policy and institutional support they have the potential to make significant improvements in animal health and pastoral livelihoods.

CAPE has been supporting the establishment of self-sustaining animal health care systems in southern Somalia through community-based approaches. Whilst recognizing the progress made so far, it is imperative to ensure that all concerted efforts are made to ensure sustainability of these systems through institutional and policy support.

In line with this objective CAPE organized an exchange visit for selected private practitioners from southern Somalia and members of parliament (MPs) from the Transitional Federal Government (TFG) of Somalia to share information and experiences on community-based animal health delivery systems in Mandera and Wajir districts of Kenya. Five MPs and 5 private professionals and para-professionals participated in the tour which took place from the 18th to 28thMarch, 2005. The team visited different models and approaches of CAH delivery systems in Mandera and Wajir Districts of Kenya and held discussions with local authorities, Pastoral drug user associations, private veterinary practitioners and CAHWs.

It is believed that the exchange visit will assist the recently formed Transitional Federal Government (TFG) of Somalia to formulate appropriate policy and institutional frameworks that will support and enhance an enabling environment for private animal health services delivery in Somalia.

3. Adherence to the Workplan

3.1 Activities not implemented

3.1.1 Preparation of extension material

This activity was not planned or reported by CAPE.

3.2 *Regional stakeholder workshops in Somaliland and Puntland.*

These workshops were not convened in Somaliland due to the delayed disbursement of funds In addition; reluctance by the Minister of Livestock in Somaliland to allow discussion of Somali PACE Rift Valley Fever survey results discouraged the organization of workshops. In Puntland, time was spent in briefing the newly appointed Minister of Livestock, Agriculture and Environment (MoLAE) on the achievements of the Somali PACE Project. It was considered inappropriate to hold stakeholder meetings to disseminate the results of Rift Valley and Rinderpest serological surveys concluded in Puntland before the new Minister had a clear understanding of the situation.

ANNEX E1: REPORT OF STAKEHOLDER'S DISSEMINATION & SENSITIZATION WORKSHOP FOR CENTRAL & SOUTHERN SOMALIA - (JANUARY-FEBRUARY 05)

(1ST NOVEMBER 2004 – 31ST MARCH 2005)

Dissemination & Sensitization Workshop
For Central & Southern Somalia
(January-February 05)

Introduction:

Prior to massive Sero Sampling activity in Central & Southern Somalia, Three workshops were held, in order to win the collaboration & support of livestock stakeholders in these areas, as such key stakeholder from eight regions (8), Lower/Middle Juba, Bay, Bakool & Gedo, as well as from Lower/Middle Shabelle and Hiraan, comprising local authority, Livestock producers & traders including Somali Vet. Professionals were invited. One hundred twenty three (123) participants attended. Workshops were held at various locations, at Afmadow for Lower/Middle Juba (24-26/1/05), at Dinsoor for Bay, Bakool, Gedo & Lower Shabelle (29-31/1/05), also at Jowhar for Hiraan & Middle shabelle regions (4-6/2/05).
Community elders, leaders & local authority (district commissioners who were participants), invited for opening ceremony at each location, also briefing these authorities aims of SOMALIA PACE PROJECT holding stakeholder workshop.

Objectives:

1- To update local livestock stakeholders on the achievements of the Somali Pace Project, particularly in Central & Southern zones as well as Puntland & Somaliland in general.
2- To come up with modalities, frame work for information sharing & disease reporting.
3- To work out mechanism for reviving private service delivery systems, including initiatives for improving livestock trade
4- To disseminate previous RP sero- survey results.
5- To give reason behind the continuation of sampling activities with Regard to the outcome of mild Rinderpest workshop held at Langata, Nbi, Kenya.

Methodology:

In order to address the objectives (e.g. sensitization for the fore coming sero-survey & dissemination of previous survey results), relevant topics were presented (oral presentation by using flip charts and marker pens, pictures, posters, leaflets & handouts including demonstration of materials& equipments for sampling & testing. At the end of each presentation participants were given time for comments & questions. In addition relevant exercises carried out in groups according to district of origin and category. Each group or category presented their findings, through general consensus and plenary discussions, group as well as plenary recommendations were generated. Participants are also provided with block note and ballpoint pens for draft writing purposes & copies of the latest Pace bulletin.

AGENDA & TOPICS FOR DISCUSSION:

Date	Activity	Time	Addressed by
Day 1	Opening Ceremony & Registration.	8:00-9:00	Local authority
	Timetable & Rules	9:00- 9:30	Jabra
	Objectives & expected out come	9:30-10: 00	Jabra
	Tea break	10: 00- 10: 30	
	Globalization & disease of PACE.	10:30-1100	Jabra
	Pace Somalia: activities carried out in Central the Southern Somalia.	11: 00-11: 30	Hamud & Jabra
	Why focus on RP: RP history of development in Africa. Attempts & efforts to eradicate RP from Africa	11:30-12:30	Jabra
	Problems of Mild RP in the Somali Ecosystem	4:00-4:20	Jabra
	Description symptoms of RP both classic & Mild form.	4:20-4:40	Hamud
	Group Exercise 1	4:40-5:30	Jabra & Hamud
Day 2	RP in the Somali Ecosystem.	8:00-8:30	Jabra
	Methodology of sero-sampling activity	8:30-9:00	Hamud & Jabra
	Dissemination of sero-survey results. Active & Passive disease search	9:00-10:00	Jabra
	Tea break	10:00-10:30	
	SOWELPA/CERELPA Motive behind ser-sampling activity on February-05.	10:30-11:30	Jabra
	Regional strategies for eradicating RP in the Somali ecosystem	11:30-12:30	Jabra
	DISS	4:00-4:20	Jabra
	Group Exercise 2	4:200-5:30	Osman & Hamud
Day 3	CAHWs, their role in disease reporting	8:00-8:30	Jabra
	Wildlife& RP	830:00-9:00	Jabra
	Group Exercise3	9:00-10:00	Osman & Hamud

	Pace Somalia: way forward	10:30-11:00	Jabra
	Group recommendation	11:00-12:30	Hamud
	Endorsement of recommendations in plenary session	4:00-4:30	Hamud
	Filling evaluation forms	4:30-5:00	Osman & Hamud
	Closing ceremony	5-00-5:30	Local Authority

Group Recommendations:

A-Somali Vet Professionals (SVP):

1- Establish framework for disease reporting & information gathering at regional & district level.
2- Establish emergency response team for each region
3- Rehabilitation of slaughterhouses including training for meat inspectors.
4- Pace should address other list (A) diseases, including FMD, CBPP etc.
5- Lab facility at local level.
6- Capacity building training for local SVP.
7- Reinforcing private veterinary sector.
8- Establish connection between SVP & pharmaceutical companies.
9- Establish functioning office for the Zonal association SOWELPA & CERELPA.
10- Agencies & NGO`s interested in livestock development, should work with Zonal associations.
11- Establish vet checkpoint (clinic) at border crossing areas. For monitoring cross border livestock movement.

B-Livestock Traders & Producers:

1- Pace should work & strive in order to lift the ban.
2- Continuous awareness raising initiatives for local stakeholders, in order to eradicate existing livestock diseases.
3- Pace should establish presence at district & regional level.
4- Contribute community awareness programme, in order to prevent cutting down of trees for charcoal business as well as massive killing of game animals.
5- Provide community animal health training, in areas needed their services.
6- In order to isolate RP virus, Pace should double its efforts by visiting livestock watering points for awareness raising purposes.
7- Pace should also address other endemic diseases, of list (A) rather than RP, including small ruminants & Camel.

C- Authority-Local administration:

1- Pace officials should contact, work with local authority while carrying activities, in their respective areas for better collaboration.
2- Pace should come-up with awareness raising initiatives through local FM radios & Media.
3- From now on wards, Pace should come up with constructive engagement against Transboundary diseases with an effort of lifting the ban on our livestock.
4- As local authority & community elders, we hereby fully support & ready to collaborate with SOMALIA PACE PROJECT.
5- Pace should enlarge its presence, by opening offices at district & regional level.
6- Pace should consider special status for authorities & community elders.
7- Consider establishing model vet pharmacy & clinic at regional level.
8- Assist in rehabilitation of local slaughterhouses, provision of sanitation-hygienic training measures for local staff.
9- Establish emergency response teams at regional/district level.

Plenary Recommendation:

1- Formation of recognized health certificate for exports (livestock).
2- Awareness raising programme, through local media.
3- Continuation up-grading local stakeholders, through workshop & seminars.
4- Extending presence of SOMALIA PACE PROJECT at district level.
5- Establish mobile emergency response teams.
6- Rehabilitation of public service facilities, such as slaughterhouses, dipping bath, holding grounds, vet offices, clinics & labs.
7- Provide capacity building training for local professionals & technicians.
8- Protection & monitoring of wildlife & game animals.
9- Revive & encourage private vet. Service delivery.
10- Establish connection (collaboration) between various stakeholders.
11- Livestock development agencies & NGO`s, should contact & work closely with Zonal professional association.
12- Assist in prevention of deforestation & environmental degradation.
13- Strive for lifting the ban imposed by livestock importing countries.
14- Construction & rehabilitation water catchments (reservoirs) & water wells
15- TseTse fly & Trepanosomoses are major problem in the reverine areas along Shabelle & Juba valley. SOMALIA PACE PROJECT should encourage livestock development agencies interested in dealing with TseTse fly, to work with the Zonal association & local community in an effort of eradicating Tse Tse flies.

Dissemination and Sensitization Workshops
Afmadow, Dinsoor & Jowhar (January-February 05)

List of Participants

Region	No	Name	District	Profession
Lower Juba	1.	A/Rashid Suber Ahmed	Kismayo	Producer
	2.	Hassan Mahamed Farah	Kismayo	SVP
	3.	A/lahi Mahamed Jam'a	Kismayo	Trader
	4.	Omar Ismail Adani	Jamame	SVP
	5.	Mohamed Nur Moumin	Jamame	Trader
	6.	Abukar Hagi Hussein	Jamame	Authority
	7.	Aden Hassan Aden	Badade	SVP
	8.	Abshir Qorane Osman	Badade	Trader
	9.	Abdi Nur Mohamed	Badade	Authority
	10.	Hassan Moalim Ahmed	Afmadow	SVP
	11.	Magan Abdullaahi Yusuf	Afmadow	Authority
	12.	Abdullaahi Hassan Abdi	Dhobley/Afmadow	Trader
	13.	Kassim Abdi Hasan	Afmadow	SVP
Middle Juba	14.	A/rahman Ali Saed	Jilib	Authority
	15.	A/dulle Osman Somow	Jilib	Trader
	16.	A/kadir Ibrahim Boqor	Jilib	SVP
	17.	Hassan Iidow Taray	Buale	Trader
	18.	Shariif Shueb	Buale	Auth
	19.	Burale Mohamed Mahmood	Buale	SVP
	20.	Abbaas H A/llaahi	Saakow	DC
	21.	Omar Hagi Aden	Saakow	Trader
	22.	A/rashiid Sh Ahmed	Saakow	SVP
Bay	23.	Fawzi Abdi nuur	Baidoa	Authority
	24.	Abdow Mohamed Hussein	Baidoa	SVP
	25.	Mohamed Kheyr Ibrahim	Baidoa	Producer
	26.	Mohamed Abdi Hassan	Buurhakaba	DC
	27.	Ali Abdi Mohamed	Buurhakaba	Trader
	28.	Ali Ibrahim Jumaale	Buurhakaba	Producer
	29.	Abdi Hafid Sh Hussein	Dinsoor	DC
	30.	Ali Yarow Saney	Dinsoor	Trader
	31.	Hassan Samaan Hasan	Dinsoor	SVP
	32.	Mohamed Ali Bule	Qansahdhere	Vice DC
	33.	Moalim Ahmed Moumin	Qansahdhere	Trader
	34.	Isaaq Adan Amin	Qansahdhere	Producer
	35.	Hassan Abdullah Adan (Hassan Gaab)	Berdaale	DC
	36.	Faarah Maadey Sheekh	Brdaale	Trader
Bakool	37.	Hussein Ibraahim Addow	Berdaale	Producer
	38.	Sheekh Isaaq Abdi Moalim	Huddur	Vice DC
	39.	Yusuf Ahmed	Huddur	Trader
	40.	Mohamed Omar	Huddur	SVP
	41.	Adan Ali Mursal	Waajid	DC

	44.	Ali Omar Ali	Tieglow	DC
	45.	Mohamed Ali Adan	Tieglow	Producer
	46.	Adan yusuf Abdi rahman	Rabdhure	DC
	47.	Hassan Ali Abdirahman	Rabdhure	Producer
	48.	Ali Hassan Adde	Eel Berde	DC
	49.	Ali Addow Leebdoore	Eel Berde	Producer
Gedo	50.	Abdulkadir Sh Elmi Jaama	Garbahaarey	DC
	51.	Abdi rahman Ali Abdulaahi	Garbahaarey	Trader
	52.	Mohamood Warsame Mire	Garbahaarey	Producer
	53.	Sulub Diiriye Saeed	Luukh	DC
	54.	Abdi Gaboobe Ganey	Luukh	Trader
	55.	Abdirisaaq Mohamed Buraale	Luukh	SVP
	56.	Birima Addow Ali	Eel Waak	SVP
	57.	Abdirisaaq Abuukar Sankuus	Eel Waak	Trader
	58.	Ibraahim Kediye Omar	Eel waak	Producer
	59.	Ahmed Jaama Warsame	Beled Haawo	Authority
	60.	Ali Nuur Bare	Beled Haawo	Trader
	61.	Ahmed Adan Jaama	Beled haawo	SVP
	62.	Osmaan Ali Nuur Jeelle	Baardhere	Vice DC
	63.	Ibraahim Adan Abdi Kariim	Bardhere	Trader
	64.	Mohamood Mohamed Sheekh	Baardhere	SVP
Lower Shabelle	65.	Ahmed Moalim Abdi Ukaash	Merca	Authority
	66.	Muse Ali Wardhere	Merca	SVP
	67.	Abdi Wahaab sagal	Merca	Trader
	68.	Salaad Ali Koofi	Kurtun Waarey	DC
	69.	Salaad Mohamed Guleed	Kurtun Waarey	Trader
	70.	Gadey Gudle Hassan	Kurtun Waarey	Producer
	71.	Abdullaahi Nuh Abdi	Sablaale	DC
	72.	Ali Sheekh Mohammed	Sablaale	Trader
	73.	Hashi Iikar Dhoof	Sablaale	Producer
	74.	Abukar Omar Mohammed	Baraawe	Authority
	75.	Hassan Diiriye Abdi	Baraawe	Trader
	76.	Mahad Hassan Oloow	Baraawe	Producer
	77.	Mohamed Aliyow Nuur	Afgooye	Authority
	78.	Yusuf Hassan Abdi	Afgooye	Trader
	79.	Kaliif Iise Mohamed	Afgooye	Producer
	80.	Muse Osman Mohamed	Awdhegle	DC
	81.	Mohammed Ibraahim Ahmed	Awdhegle	Trader
	82.	Musdhaf Sheekh Hassan	Awdhegle	Producer
	83.	Ahmed Ismail Jumaale	Wanla weyn	Authority
	84.	Mohamed Hassan Farah	Wanla Weyn	Trader
	85.	Idriis Mohammed Araale	Wanla Weyn	Producer
	86.	Hassan Abdi Adan	Qoryooley	DC
	87.	Hashi Osman Mohammed	Qoryooley	SVP

Middle Shabelle	89.	Hassan Mohamed Moallim	Adale	Authority
	90.	Abshir Mohamod Mahamed	Adale	SVP
	91.	Yusuf Hassan Ahmed	Adale	SVP
	92.	Aweys Muhiedin Mohamed	Adale	Producer
	93.	Muhidien Mamood Ali	Adenyabaal	Producer
	94.	Abshir Mohamed Geseey	Adenyabaal	SVP
	95.	Mohamood Haji Hamud	Adenyabaal	Authority
	96.			
	97.	Mohamood Mohamed Qalimow	Balad	SVP
	98.	Hallimo Hassan Omar	Balad	SVP
	99.	Hassan Osman Ceynte	Balad	Authority
	100.	Hassan Mohamed Sheikh	Mahadaay	SVP
	101.	Omar Antob Ali	Mahadaay	DC
	102.	Abdulaahi Mohamed Ahmed	Run-nirgoog	Authority
	103.	Ahmed Ali Warsame	Run-nirgood	Producer
	104.	Hassan Ali Mohamed	Warshiikh	Authority
	105.	Osman Abdirahman Ali	Warshiikh	Trader
	106.	Mohamed Muse Yusuf	Warshiikh	SVP
	107.	Muqtaar Mohamed Sefaale	Jowhar	Authority
	108.	Dau`d Alasow Ahmed	Jowhar	SVP
	109.	Canshuur Ali Nuur	Jowhar	DC
	110.	Mohamed Hassan Yusuf	Jowhar	Trader
	111.	Mohamed Oloow Faarah	Jowhar	Producer
Hiraan	112.	Ali Omar Rooble	Buulo Burte	Authority
	113.	Omar Diiriye Moumin	B/Burte	SVP
	114.	Diiriye Shidow Ibraahim	Belet-weyn	Authority
	115.	Hassan Ahmed Heillow	Belet-weyn	SVP
	116.	Ahmed Abdi Kheyre	Belet-eyn	Producer
	117.	Abdulkdir Abdi Mohamed (Dooli)	Mahaas	SVP
	118.	Hassan Hareed Afrah	Mahaas	Authoity
	119.	Abdulkadir Arif Guureh	Jalalaqsi	DC
	120.	Muse H Ahmed	Jalalaqsi	Trader
	121.	Abdi Warsame Indhacade	Matabaan	Authority
	122.	Ali Warsame Gurdanshe	Matabaan	Trader
	123	SulliemanMahmood Saaleh	Guri-eel	SVP

SECTION F: COORDINATION

(1st November 2004 – 31st March 2005)

ANNEX F: COORDINATION

Result 6: The Programme is effectively coordinated

1. Background and Overview

This result aimed to ensure that project activities were well coordinated and the necessary technical, financial and logistical support for the implementation of field activities was provided in a timely manner by the Somali Coordination and Implementation Unit (SCIU) in Nairobi.

During this reporting period, SCIU supported the implementation of field disease survey activities and facilitated travel arrangements for Project and SLPF personnel to attend regional and international meetings. Project staff also attended meetings convened by AU/IBAR/PACE and thus enhanced linkages for better regional coordination of activities.

2. **Activities implemented during the reporting period**

2.1 Strengthen working relationships with AU/IBAR/PACE and PACE Kenya and Ethiopia.

2.1.1 Support SLPF and Project staff to attend regional meetings.

During this reporting period, project staff attended meetings as follows:

On 27thJanuary 2005, two Project staff (Drs. Stefano Tempia and Felix Njeumi) participated in the AU/IBAR/PACE Somali Ecosystem Rinderpest Eradication Coordination Unit (SERECU) ad-hoc group meeting to discuss and finalize proposals for the design of a Rinderpest serological survey for the entire Somali ecosystem. These proposals were to be considered at a later meeting to discuss the establishment of SERECU and its first year work plan between AU/IBAR/PACE and the Somalia, Kenya and Ethiopia PACE Projects. A common survey approach in the three countries will provide comparable data that can be used to delineate areas of possible Rinderpest virus maintenance across the entire Somali ecosystem. This will facilitate the concentration of resources and strategies for the final eradication of the disease.

The PACE Somalia National Project Coordinator (Dr. Fritz Mahler) and the Project Advisor (Henry Wamwayi) attended the 10th PACE Advisory Committee meeting held in Bamako, Mali from 28th to 31stMarch 2005. The meeting made key recommendations that will impact on the Somali PACE Component in the following areas:

i) The use of the PACE emergency fund administered by the OIE conditional to confirmed outbreaks of Rinderpest and AU/IBAR approval of an emergency preparedness plan

ii) Improving communication to create awareness of member countries and other stakeholders on surveillance methods and the success story of PACE,

iii) Continuation of PACE support to Community Animal Health Workers only in the Somali ecosystem to be determined in agreement with respective countries.

iv) The need for a clearer and more prominent strategy on the economics of surveillance

v) Assessment of the means and incentives for pastoralists and other stakeholders to support the Rinderpest eradication programme and an external audit on the delivery systems should be carried out as soon as possible. In addition, samples collected during Rinderpest surveys in the Somali ecosystem should be sent without delay to the OIE/FAO Reference laboratories at IAH, Pirbright and CIRAD-EMVT, Montpellier, France.

vi) The PACE Advisory Committee endorsed the justifications, organization and activities of the AU/IBAR/PACE SERECU unit and encouraged dialogue and coordination between the Somalia Animal Health Services Project and the Kenya and Ethiopia PACE Programmes to ensure concerted field investigations, integrated epidemiological analyses and dynamic strategy design.

2.2 Prepare and implement quarterly work plans

A five-month work plan for the no-cost extension phase from 1stNovember 2004 to 31stMarch 2005 was prepared and implemented.

2.3 Ensure harmonized activities within the country and linkages within the region

2.3.1 Strengthen the sectoral approach to project implementation.

Zonal Veterinary Advisors devoted more time to technical inputs in sectoral activities than in the managerial and administrative support to Somali Zonal Coordinators in their respective zonal offices. However, the disruption of ECHO flights during the reporting period prevented their effective mobility to implement sectoral activities particularly in Central and Southern Somalia. As a result of this, the Rinderpest survey activities in Central Somalia that were planned to run concurrently with those in Southern Somalia were not carried out. The survey in Central Somalia was postponed to a later date during the next dry season.

2.3.2 Ensure standardized work plans, surveillance techniques and manpower establishments in all zones

The Zonal Veterinary Advisor responsible for private sector inputs, Dr. Massimo Castiello, resigned his position with effect from 28thFebruary 2005 for personal reasons. The position remained vacant until the end of the Somali PACE Project on 31stMarch 2005 due to the short duration of the remaining period of implementation.

Following internal recognition that the Project Zonal Administrators lacked the skills to perform their assigned tasks, the SCIU advertised the positions of Zonal Administrators in Central Somalia, Southern Somalia and Somaliland. A suitable candidate was identified and recruited following interviews of five short-listed candidates for the Central Somalia Zonal office. The position remained vacant in Southern Somalia due to lack of a suitably qualified candidate from amongst 14 who applied for the post.

The initial selection process at the start of the Somali PACE Project did not take into consideration the appropriate qualifications and skills that were required for the position of Zonal Administrator. As a consequence, individuals with unrelated qualifications were recruited in all the zonal offices. Their performance over the past three years has made it difficult for SCIU administrative staff to perform their tasks optimally hence the need to identify better qualified personnel through a transparent process of advertisements, short-listing of suitably qualified applicants, structured written and oral interviews and the selection of the best candidates to fill the vacancies. Various stakeholders in Somalia expressed appreciation for the transparency of the recruitment process and suggested that it should be extended to other vacancies within the Project in future.

The SCIU continued to provide logistical, technical and administrative support for field activities in all zones. Particular attention was given to support for the implementation of Rinderpest survey activities in Southern Somalia where expatriate staff opted to remain in the field from 31stJanuary to 3rdMarch 2005 despite the absence of ECHO flights to evacuate them in the event of an emergency. At the end of the survey, SCIU arranged for their return to Nairobi by hiring private air transport operators.

2.3.3 Maintain/review Somali PACE operational procedures

The Project Advisor visited Somaliland on two occasions from 20th to 23rdDecember 2004 and from 27thJanuary to 1stFebruary 2005, to hold discussions with the Minister for Livestock on the implementation of Somali PACE activities and to attend the ULPA annual general meeting. The mission reports are attached in annex F1.

During this period, one planning meeting was convened between Terra Nuova, UNA, COOPI, VSF Suisse and the CAPE Unit of AU/IBAR/PACE to review progress of the Somali PACE Project. Three subsequent meetings were held between Terra Nuova, UNA and COOPI to agree on modalities for the initiation of the follow-on Somali Animal Health Services Project (SAHSP). The minutes of three meetings and the proposed organogramme of the SAHSP Project are attached in annex F2. One of the meetings was convened for the sole purpose of signing the MoU between Terra Nuova, UNA and COOPI for operations of the SAHSP project and no minutes were recorded for this.

Two financial audits of the Somali PACE Project were carried out during this reporting period. The first audit conducted in November 2004 by Price Waterhouse Coopers covered the period from 1stMay 2004 to

31st August 2004. The second audit was commissioned by the EC and the Somali PACE Project was audited as part of the audit of the Global AU/IBAR/PACE Programme. The audits consisted mainly of a sampling of financial accounting records and documents at the SCIU office in Nairobi.

3. Adherence to the work plan

3.1 Activities not implemented

3.1.1 Review of appropriate modalities for coordinating and steering PACE in Somalia.

3.1.1.1 Project steering committee meetings convened to review progress and way forward

Project steering committee meetings were not convened as planned due to inability to find dates that were convenient to the majority of the members of the Steering Committee.

List of Annexes:

ANNEX F1: PROJECT ADVISOR'S MISSION REPORTS OF VISIT TO SOMALILAND

ANNEX F2: MINUTES OF IMPLEMENTING PARTNERS MEETINGS

ANNEX F1: PROJECT ADVISOR MISSION REPORTS OF VISIT TO SOMALILAND

(1ST NOVEMBER 2004 – 31ST MARCH 2005)

Mission Report of visit to Hargeisa by the Project Advisor

1. Dates of the mission:

Monday 20th December to Thursday 23rdDecember 2004

2. Objectives of the mission:

1. To review progress on implementation of Somali PACE Project activities during the no-cost extension
2. To explore modalities and secure commitments for enhancing implementation of activities with Zonal Staff, MoL and ULPA.
3. To brief project staff on preparations for implementation of the follow-on Project.

3. Itinerary of Mission activities

Monday 20thDecember:

Arrival in Hargeisa – 11.45 am
12.00 pm – 12.30 pm: Briefing meeting with Zonal Coordinator, Networking specialist and Zonal Administrator.
2.00 pm – 5.30 pm: Review of zonal activities for implementation during the no-cost extension phase.

Tuesday 21stDecember

8.00 am to 9.30 am: Review of budget requests for networking workshops with Dr. Abdulahi Rabile Good and Dr. Ahmed Hashi Nur.

10.00 am to 11.15 am: Meeting with ULPA Representatives to discuss Somali PACE support to the ULPA AGM.

11.30 am to 12.15 pm: Courtesy call on Sheikh Technical Veterinary School Staff

2.00 pm to 5.00 pm: Field trip to Garabis (agro-pastoral area).

Wednesday 22ndDecember

8.00 am to 10.45 am: Discussion of final report preparation format with the Zonal Advisor

11.00 am to 11.30 am: Courtesy call to Ministry of Livestock

12.00 am to 12.30 am: Brief introductory meeting with Personnel of the Somali Water and Land Information Management (S.W.A.L.I.M) Project.

12.30 pm to 2.45 am: Brief Meeting with Dr. Ahmed Hashi Farahan of Somali Livestock Boards Project.

Thursday 23rdDecember:

9.00 am to 10.30 am: Finalization of networking workshops budget requests with Dr. Abdulahi Rabile Good.

11.00 am to 12.00 pm Finalization of budget requests for support to the ULPA AGM.

1.30 pm: Departure for Nairobi.

4.1 Progress in implementation of Somali PACE Project activities during the no-cost extension

There has been very slow progress in the implementation of activities planned for the no-cost extension period between 1st November 2004 and 31st March 2005.

i) The Somali PACE Project has made available to MoL a total of 200 copies of the Draft Somaliland veterinary Code in English and Somali. However, no activities have been undertaken by MoL towards enhancing enactment of the Veterinary Code. The Code has not yet been presented to the Council of Ministers for approval and subsequent presentation to parliament for debate and enactment and it appears that MoL has experienced delays in preparing a summary of the Veterinary Code to facilitate rapid understanding of the key issues by the Council of Ministers and Members of Parliament. These delays need to be overcome for the process to move forward.

ii) The Ministry of Livestock in Somaliland has implemented many of the recommendations in the Master Plan prepared jointly with Terra Nuova and MoL. However, financial limitations and perhaps inadequate local capacity to absorb all the recommendations have prevented the wholesale adoption of the Institutional Procedures and Guidelines derived from the Master Plan. Consequently, some positions envisaged in the Master plan remain unfilled. There is a need to comprehensively review the status of implementation of the Master Plan with stakeholders and to make recommendations on a practical way forward that takes into account the local capacities for sustaining the structures, positions and procedures recommended in the Master Plan.

iii) The planned rehabilitation of MoL buildings to house the EDMU, library and laboratory is anxiously awaited by the Somaliland authorities and other key livestock sector stakeholders. Indeed, other Projects including the FAO/EXCELEX and UNDP/WB/LICUS Projects have carried out limited rehabilitations of MoL buildings that they now use as offices. The Somaliland Government has also provided funding for some repair works and painting of the MoL Headquarters. Buildings that remain to be rehabilitated by the Somali PACE Project are in a dilapidated state and are frequently cited as an example of failed promises by development partners. There is even skepticism and cynicism over the commitment of the Somali PACE Project to carry out the rehabilitation as proposed.

The Somali PACE Project received the Bill of quantities submitted by MoL and obtained independent verification by a private engineer. Approval for the rehabilitations now needs to be secured and the funds released for the works to commence as soon as possible and be completed by 31st March 2005.

iv) The laboratory training of 2 Somaliland SVPs at the Kenya Agricultural Research Institute (NVRC Muguga and Biotechnology laboratories) is yet to be undertaken. The requests for the training have been submitted to KARI by SCIU and a reply on the final arrangements is awaited.

v) A study tour by 2 senior MoL staff to the Department of Veterinary services in Kenya has also not been undertaken. Preliminary contact has been made between SCIU and the Chief Veterinary Field Officer in Kenya but formal arrangements need to be made to enable the visa applications for the selected staff to visit Kenya.

vi) The proposed annual general meeting (AGM) for the United Livestock Professionals' Association (ULPA) has not been convened. The Somali PACE Project is still committed to providing support for ULPA to hold a training session for members of the Executive Committee on proposal/strategy preparation and preparation of an Association profile and for an AGM for members to review the ULPA constitution and hold elections for office bearers. This will enable the Somali Livestock Professionals' Forum (SLPF) to hold their AGM for preparation of its charter and constitution. There have been delays in implementation of the ULPA AGM mainly due to engagement of ULPA members in emergency relief operations over the last one year.

vii) Networking workshops planned for Somaliland and Puntland have not been held. The delays were partly due to lack of clarity on the purpose of the workshops, lack of agreement on the justification for proposed locations and lack of agreement with MoL to publicize the results of the Rift Valley fever surveys.

4.2 Commitments for enhancing implementation of activities with Zonal Staff, MoL and ULPA.

Meetings were held with the Zonal staff (Zonal Coordinator, the networking specialist and the Zonal Administrator), the Chairman and other representatives of the ULPA Executive Committee and with the Director General and the Director of Animal Health of MoL.

i) PACE staff expressed frustration at the lack of activities to occupy them fully in the Zone. They requested SCIU to ensure that requests for activities were expeditiously approved and followed-up. The Project Advisor requested Zonal staff to also follow-up on commitments made by MoL and ULPA to ensure that activities were implemented as agreed. The Project Advisor discussed a format for preparation of a final report on implementation of the Somali PACE Project from January 2002 to January 2005. The report should be submitted to SCIIU by 5thFebruary 2005 for inclusion in the Final report of the Somali PACE Project.

ii) The meeting with the ULPA Executive Committee members was very fruitful. They expressed appreciation for the continued support by the Somali PACE Project and agreed to review the proposed attendance lists and proposed budgets for the AGM. It was agreed that the training for the ULPA Executive Committee would be held from 17th to 22ndJanuary 2005 and the AGM would be held from 23rd to 26thJanuary 2005. It was also agreed that the Mogadishu-based Centre for Technology and Communication (CTC) would be contracted to facilitate the training to ensure uniformity of approaches and methodology with those already conducted for the other four Zonal Associations (BENALPA, CERELPA, PULPA and SOWELPA).

iii) The Minister for Livestock (Dr. Idris Ibrahim) was out of the Country on official engagements in Saudi Arabia. In the absence of the Minister, the results of Rift Valley Fever and Rinderpest serological surveys were not discussed. The Project advisor accompanied by the PACE Zonal Coordinator for Somaliland paid a courtesy call to MoL and outlined arrangements for implementation of outstanding activities. The Director of Animal Health provided a brief overview of the MoL structure in Somaliland and the main activities currently being undertaken in the livestock export system. On the part of MoL, it was understood that commitments on major activities would await the Minister's return. However, agreements were reached on the need to move forward with the training of Somaliland SVPs at KARI, the study tour by senior MoL staff to the Kenyan Department of Veterinary Services, the rehabilitation of MoL buildings for the EDMU, the enactment of the Veterinary Code, review of implementation of the Master Plan and improvement of the working relationships between MoL and the Somali PACE Project.

4.3 Briefing for project staff on preparations for implementation of the follow-on Project.

The Project Advisor informed Zonal staff were informed that the Implementing Partners (Terra Nuova, UNA and COOPI) have secured a new project to consolidate the achievements of the Somali PACE Project. The new Project would be implemented for about three years from 1stApril 2005 after the end of the Somali PACE Project. It was clarified to staff that discussions were currently underway between the Partners, the EC and SLPF on the way forward with the new Project. Lessons learnt in implementation of the Somali PACE Project would be used to improve implementation of the new Project at all levels. In this regard, decisions on the staffing needs and individual staff to be recruited for the new Project have not been made but should be finalized by February 2005.

5.1 To the Ministry of Livestock Somaliland

i) To enhance understanding and implementation of the remaining aspects of the Veterinary Code and the Master Plan, the Somali PACE Project should be allowed by the Minister of Livestock to facilitate workshops for stakeholders including the Council of Ministers and Parliamentarians. During these workshops, the objectives of the activities will be outlined and summaries of both documents will be presented for discussion and recommendations on the way forward with their implementation by the key stakeholders will be made.

ii) There is need for a meeting between the Somali PACE Project Advisor and the Minister for livestock to discuss the results of the Rinderpest and Rift Valley Fever survey results including the implications of these results for the Somaliland Livestock sector and the action required to secure livestock export trade against any adverse publicity of the results.

5.2 To Somali PACE SCIU and Implementing Partners

i) To rapidly review and approve budget requests of activities with subsequent release of funds to implement activities in the field. Particular reference is made to the rehabilitation of MoL buildings, requests for workshops (Vet Code, Master Plan and Networking) and support to the ULPA AGM.

ii) To follow-up the implementation of Project activities with regular communications and field visits to resolve outstanding and potential difficulties for smooth implementation.

iii) To maintain dialogue with the Minister of Livestock, ULPA and other key livestock sector stakeholders in order to enhance mutual trust and strengthen collaboration to attain agreed objectives.

iv) To arrange a meeting between the Project Advisor and the Minister of livestock at the earliest convenience to discuss Rinderpest and RVF survey results and the way forward for safeguarding the livestock export trade.

5.3 To ULPA

i) To maintain a proactive approach to collaboration with the Somali PACE Programme in the implementation of activities in Somaliland.

ii) To finalize arrangements for the training of ULPA Executive Committee members and convening the ULPA AGM for support by PACE (This was achieved during the mission).

5.4 To PACE Zonal staff in Somaliland

i) To develop and maintain proactive and cordial working relationships with MoL, ULPA and other key livestock sector stakeholders.

ii) To follow-up on recommendations made by Implementing Partners, SCIU and plans agreed with partners in Somaliland on behalf of SCIU.

iii) To provide regular briefs to SCIU on progress and constraints to implementation of Somali PACE activities at the local level.

Appendix 1: List of people met during the mission

	Name	Position
1.	Dr. Mohamed Ali Gire	Director-General, Ministry of Livestock
2.	Dr. Abdillahi Ahmed Hassan	Director of Animal Health, Ministry of Livestock
3.	Mr. Ismail H. Ibrahim Warsame	Chairman, United Livestock Professionals' Association (ULPA)
4.	Mr. Mohamed Hussein Hassan	Vice Chairman, ULPA
5.	Mr. Yusuf Mohamed Jama	Treasurer, ULPA
6.	Mr. Deeq Abdi Hashi	Cashier, ULPA
7.	Mr. Nasir Muse Ismael	Member of the Board, ULPA.
8.	Mr. Mohamed Wayrah Warsame	Auditor, ULPA
9.	Dr. Ahmed Hashi Nur	Somali PACE Zonal Coordinator, Somaliland
10.	Dr. Abdullahi Rabile Good	Networking Specialist
11.	Mr. Gureh	Somali PACE Zonal Administrator, Somaliland
12.	Dr. Ahmed Hashi Farahan	Coordinator, Somali Livestock Boards (LICUS) Project
13.	Chris Print	Chief Technical Advisor, Somali Water and Land Information Management (SWALIM) Project
14.	Mr. Cody	Water Coordinator, SWALIM.

Mission Report of visit to Hargeis
by the Project Advisor

Mission Report of visit to Hargeisa by the Project Advisor

1. Dates of the mission:

Thursday 27th January to Tuesday 1st February 2005

2. Objectives of the mission:

4. To review progress in implementation of public and private sector support activities in Somaliland
5. To participate in the ULPA Executive Committee Training and the ULPA Annual General meeting.

3. Itinerary of Mission activities

Thursday 27th January:	
12.00 pm:	Arrival in Berbera
1.00 pm – 2.30 pm	Travel to Hargeisa
3.00 pm – 3.30 pm	Briefing meeting with the PACE Zonal staff.
Friday 28th January	
9.00 am to 1.30 pm:	Participation in final session of ULPA Executive Committee Training.
Saturday 29th January	
10.00 am to 11.00 am:	Meeting with the Minister of Livestock.
12.00 – 2.00 pm	Meeting with ULPA Executive Committee
Sunday 30th January	Participation in ULPA AGM
Monday 31st January	Participation in ULPA AGM
Tuesday 1st February	
7.00 am:	Departure for Berbera for flight to Nairobi

4. Findings and Observations

4.1 Status of implementation of Somali PACE Project activities

Progress in the implementation of activities planned for the no-cost extension period between 1stNovember 2004 and 31stMarch 2005 was slow. The details are as follows:

viii) The planned rehabilitation of MoL buildings to house the EDMU, library and laboratory is still anxiously awaited by the Somaliland authorities and other key livestock sector stakeholders. The Minister for Livestock was unwilling to discuss the implementation of other PACE activities in the absence of visible progress with the rehabilitation works. A draft notice to invite Expression of Interest from registered contractors in Somaliland was discussed and amendments agreed with the Minister for Livestock. The Minister was emphatic that he would only publish the notice in the Somaliland media once funding for the rehabilitation works was guaranteed. This is dependent on improved cash-flow within the Project.

ix) The Minister expressed discomfort with publicizing the results of the recently concluded Rift Valley Fever Surveys. He indicated that he would be more willing to disclose the earlier (2002) survey results as they showed a lower sero-prevalence. The project Advisor emphasized that the results mean something in terms of the presence of Rift Valley Fever infection in the affected areas and stressed the need for a forum where the Minister would be given a full briefing of the results, their implications and future actions required to safeguard animal health and trade in Somaliland against

x) No further measures have been undertaken by MoL towards presenting the Veterinary Code to the Council of Ministers for approval and subsequent presentation to parliament for debate and enactment. It was agreed that the Zonal Coordinator would continue to liaise with the Minister of Livestock to arrange for PACE staff to hold briefing workshops with the Ministers, Parliamentarians and other stakeholders to facilitate understanding of the requirements of the Vet. Code.

xi) There was no further progress with the review of the status of implementation of the Master plan. The Zonal Coordinator would also follow up on this activity with the Minister for Livestock.

xii) The laboratory training of 2 Somaliland SVPs at the Kenya Agricultural Research Institute (NVRC Muguga laboratory) was agreed and the names of the two individuals identified for the training were provided to the Project Advisor. KARI has now made the final arrangements for the training and will also facilitate the processing of visas for the trainees. The training will be carried out for ten working days starting in mid-February 2005.

xiii) The Minister for Livestock indicated that he would undertake the study tour to the Department of Veterinary services in Kenya with another colleague from his Ministry or a relevant Ministry that supports the functions of MoL. The names and documents to support the visa applications for the two nominees will be provided to PACE Somalia within the next seven days. The Director of Veterinary Services in Kenya has agreed to conduct the study tour for the Somali personnel. The visit will be arranged to start in mid-March 2005.

xiv) The Minister for Livestock volunteered an explanation on the circumstances that led to the denial of entry into Somaliland for Dr. Abdullatif Abdi, the Somali PACE National Coordinator. He indicated that the Somaliland national Security apparatus had advised authorities that Dr. Abdullatif has a political role as a special Advisor to the Prime Minister of the Transitional Federal Government of Somalia. On this basis, instructions were issued to bar him from entering Somaliland to participate in the mid-term review of the FAO/EXCELEX Project. The Minister indicated that the Somaliland Government had no problem with Dr. Abdullatif as an individual or as the National PACE Coordinator or the SLPF chairman. He requested that Dr. Abdullatif should renounce his role as an advisor to the Prime Minister so that he could be allowed entry into Somaliland to enable him to discharge his responsibilities as the PACE National coordinator and the SLPF chairman.

xv) Activity requests for the networking workshops planned for Somaliland and Puntland have now been approved by the Project Implementing Partners. The workshops will be held in March after the completion of the Rinderpest survey in Central and Southern Somalia when funds and the networking Specialist will be available.

4.2 Review progress in implementation of public and private sector activities initiated under the Somali PACE Project. For consolidation under SAHSP.

ULPA Executive Committee training and the AGM

i) The Project Advisor attended the last session of the ULPA Executive Committee training where the final version of the proposed strategy paper for ULPA was discussed. Sixteen members of the Executive Committee were in attendance and all expressed appreciation for the process supported by PACE. They also expressed satisfaction with the competence of the Somali consultant from CTC in guiding the training and preparation of the strategy paper.

ii) The ULPA AGM was initiated and progressed satisfactorily. Between 40-50 members of the Association attended the AGM sessions. Support for ULPA from MoL was clearly manifested by attendance of the Vice Minister for Livestock at the opening ceremony and by the Director-General and the Director of Animal Health at sessions on subsequent days. However, the Vice-Minister urged ULPA to open up its membership to interested professionals from both the public and private

the AGM. The completion of the ULPA AGM now opens the way for the SLPF to hold its AGM. The minutes of the AGM and proceedings of the Executive Committee training are awaited.

5. Way Forward

v) There is need to expedite the preparation of tenders for the rehabilitation of the MoL buildings. Funding for this must be assured so that MoL appreciates PACE as a serious partner despite the seeming lack of progress on project supported activities that are within the control of MoL for the achievement of progress. PACE should set an example for the meaning of commitment to set objectives. Phases of the rehabilitation should be conditional on progress with the veterinary Code and Master plan implementation.

vi) There is need to plan a one day detailed briefing session on RVF for the Minister and other senior public and private sector livestock stakeholders in Somaliland. This will help to dispel the unfounded fears regarding the results of the more recent RVF surveys as well as to enable suggestions for the establishment of more effective surveillance and response mechanisms in future.

vii) The rehabilitation of the MoLAE buildings for the EDMU should be closely linked to visible progress towards approval and enactment of the Veterinary Code and further implementation of the master plan. The SCIU will prepare tender documents for the phased implementation of the rehabilitation so that phases are undertaken following progress on commitments made by MoL.

viii) SCIU will finalize arrangements with KARI and process visas to facilitate travel of the selected SVPs for training at KARI.

ix) SCIU will similarly process visas for the Minister and another senior officer to undertake the study tour in Kenya.

x) Zonal staff should make arrangements for completion of the Networking workshops once their supervisory inputs to Rinderpest survey activities in Southern and Central are completed.

xi) SCIU will facilitate translation and printing of the revised ULPA Constitution and Association profile once the final documents are received from the CTC consultant.

ANNEX F2: MINUTES OF IMPLEMENTING PARTNERS MEETINGS

(1ST NOVEMBER 2004 – 31ST MARCH 2005)

Minutes – Somali PACE Partners Meeting

1st December 2004

Present:

Alessandro ZANOTTA – Terra Nuova Representative - Chairing
Raffaele DEL CIMA – UNA Representative
Seiffuddin H. MALOO – VSF/CH Suisse Representative
Asfaw WONDWOSEN – CAPE Representative

Henry M. WAMWAYI – PACE Somalia (Project Advisor)
Dario ZECCHINI – PACE Somalia (Project Administrator), taking minutes

Agenda:

The meeting was called as an operational meeting with the following agenda:

1. Update on progress of Project activities by SCIU
2. Approval of the next quarterly activities work plan
3. Human resources and project management (leaves, office hours, material and money transfer, etc.)
4. AOB

Documents circulated for the meeting:

- Work plan and Way forward for November 2004 – March 2005
- Breakdown of cross sectional survey costs
- 1st narrative report (executive) May 2004 – August 2004

Introduction:

Zanotta introduced the new UNA representative to participants and requested, in the future, to harmonise meetings (implementing partners' and steering committee's) with the reporting.

1. Update on progress of Project activities by SCIU

In the **public sector**, there was little progress to record. In Somaliland activities have been delayed waiting for presentation of the VET code for approval by the council of ministers. The SCIU mission in Hargeysa achieved promises for action on the VET code but no progress has been made so far. The MOL provided a quotation for the rehabilitation. While waiting the go ahead from the IP, the project is providing independent quotations. The selected engineer will also follow the execution of the works, once the tender process will be completed. In Puntland no progress was registered. There was extensive dialogue between the Puntland Zonal staff and the Minister of Livestock, Agriculture and Environment. However, no major activities were carried out. The team is planning to hold sensitisation workshops on the VET code and Master plan. Based on previous experience and the recently installed government, Maloo suggested using allocated funds for other more appropriate activities. If we don't want to discontinue the dialogue with the authorities, then try to open the invitation to as many international interlocutors as possible, like EXCELEX, LICUS, and LTC and so on. To keep on having workshops on the same matters and with the same interlocutors, as we had during the last three years, even though it is showing the importance of the issue, it is not leading to the expected results. Zecchini agreed that the same was happening in Somaliland where, suspending all activities while keeping the offices open and consequently all running costs paid (salaries, rent, etc), did not lead to any result. We should act by closing the offices and keeping relations through frequent SCIU

missions. The project must involve the steering committee to develop relations at a higher level than the project one. The first steering committee meeting should be held in January 2005 to have a clear commitment of the authorities, while the second meeting, possibly in March, should decide whether Somaliland should continue to be considered within the project intervention.

Action points:

Workshops to be held as planned in Somaliland and Puntland (on VET Code and Master Plan), taking into consideration the need of having a larger group of international interlocutors;

Laboratory training for Puntland and Somaliland public officers;

KARI staff to visit Somaliland and Puntland to follow up the training;

Senior Somali public officers to come and visit Kenya VET Departments;

Launch the tender for the public building rehabilitation in Hargeysa, breaking the entire work into phases, which are going to be singularly executed every time one of the activities or actions planned by the authorities is implemented.

In the **emergency response sector**

During a recent the OIE (Middle East Commission) meeting in Djibouti, it was highlighted that most of the livestock export trade between Somalia and the Gulf States is illegal.

We should focus on the message: you can export even from an infected country, but you must get your system trusted through intensified surveillance and transparent disease reporting. The Project steering Committee should reinforce this view at a higher level.

No major activities were carried out in this area. The main focus has been on Rinderpest and we should now start thinking of emergency responses to Rift Valley Fever (RVF).

It was reported that the Project had submitted a proposal for Rinderpest eradication from Somalia to AU/IBAR/PACE but feedback on this was received only as a Power Point presentation. A formal response is still awaited.

Action points:

To contact AU-IBAR for a Somali ecosystem protocol for emergency response and routine interventions for Rinderpest.

Most of the key Project staff will be engaged in the cross sectional survey from mid January 2005. Zanotta proposed to ask the Zonal Coordinators staff to produce protocols of the interventions carried out during the first phase of the project. The experiences should be translated into manuals that can be continuously updated during the next phase.

Private sector

The Project supported four Zonal Livestock Professionals' Associations (PULPA, CERELPA, BENALPA and SOWELPA) to hold their AGMs and review their constitutions. ULPA in Somaliland did not hold an AGM. The delays were partly due to lack of political willingness. This delay has prevented the AGM of the SLPF and the development of SLPF strategies and policies on CBAHWs related activities.

CERELPA and SOWELPA were linked to external sources of funding.

CAPE ACTIVITIES: A gender training workshop was held and a manual was prepared. The training of CBAHWs was continued.

Action points:

To prepare the AGMs of ULPA and SLPF and to obtain recommendations on linkages of Somali Veterinary Professionals and CBAHWs.

CAPE to invite selected key Somali livestock sector stakeholders to visit areas of northern Kenya where the community based delivery of animal health services is functioning.

DISEASE SURVEILLANCE

Serological surveys for Rinderpest and RVF were conducted in Somaliland and Puntland. In Somaliland the RVF survey focused on areas where initial results showed significant serological prevalence.

In Central and Southern Somalia, 431 samples were collected from suspected clinical cases of mild Rinderpest. All laboratory tests for the presence of Rinderpest virus were negative on a selection of these samples.

Laboratory tests on about 3000 stored cattle sera showed that CBPP infection was present in parts of Central and Southern Somalia at the time when the samples were collected.

Action points:

A major serological survey will be carried out in Central and Southern Somalia in harmony with similar surveys in Kenya and Ethiopia. This will provide results to delineate the areas of endemic maintenance of Rinderpest virus in the entire Somali ecosystem. The Somali PACE team is designing the survey methodologies. PACE Kenya completed comprehensive surveys in October and November and they will not repeat the surveys in January. The results will be used to design a regionally integrated Rinderpest eradication strategy for implementation under the Coordination of the AU/IBAR Somali Ecosystem Rinderpest Eradication Unit.

Stored sheep and goat sera will be tested for the presence of PPR antibodies to provide baseline data on PPR sero-prevalence in Somalia.

Training in the use of the PACE integrated database (PID) will be provided for SVPs in Somaliland and Puntland.

A series of workshops will be held in Central and Southern Somalia to sensitise stakeholders on the planned serological surveys.

Discussion with PACE Kenya, Ethiopia and Somalia to agree on the way forward for RP Unified method of eradication

Networking

None of the workshops planned in Somaliland and Puntland were held, partly due to delays in approval of activity requests by the implementing partners. The outcomes of the workshop held in Central Somalia are in the quarterly report.

The Somali PACE Bulletin was distributed and another one is almost completed. It will be circulated before Christmas. Somali Professionals would like to have a Somali version of the bulletin, which has always been well accepted.

Action Points:

SCIU to resubmit requests for approval of the networking workshops for the Northern part of Somalia (the previous one was showing weaknesses in contents and very high costs).

2. Approval of the next quarterly activities work plan

The work plan is considering the period up to the end of the project (31st March 2005) and the majority of the activities that require approval are planned from mid-January to March 2005.

The plan is approved, with the above-mentioned comments, specifically concerning the workshops and the tender for the rehabilitation of MoL buildings in Hargeysa.

3. Human resources and project management

This issue needs more time to be properly discussed and it is therefore postponed to the next implementing partners' meeting:

(Zanotta) There is need of revisiting all project forms and contracts to verify if they are still complying with implementing partners requirements (there is a new partner and requirements may have changed during these three (3) years of project implementation).
(Zecchini) After submission of 47 accounting and financial reports without a single disallowance and two independent audit reports with only minor internal procedures findings, we should study the possibility of delegating more responsibility for implementation of the project to the PMU in Nairobi, while designing a different role to be played by the implementing partners at steering committee level.

(Wamwayi and Zanotta) Absence for studies and payments for project tools or products (not only personal knowledge) developed outside the project area with the constructive support of academic institutions (e.g. during PhD studies) are to be regulated to avoid tensions and misunderstandings.

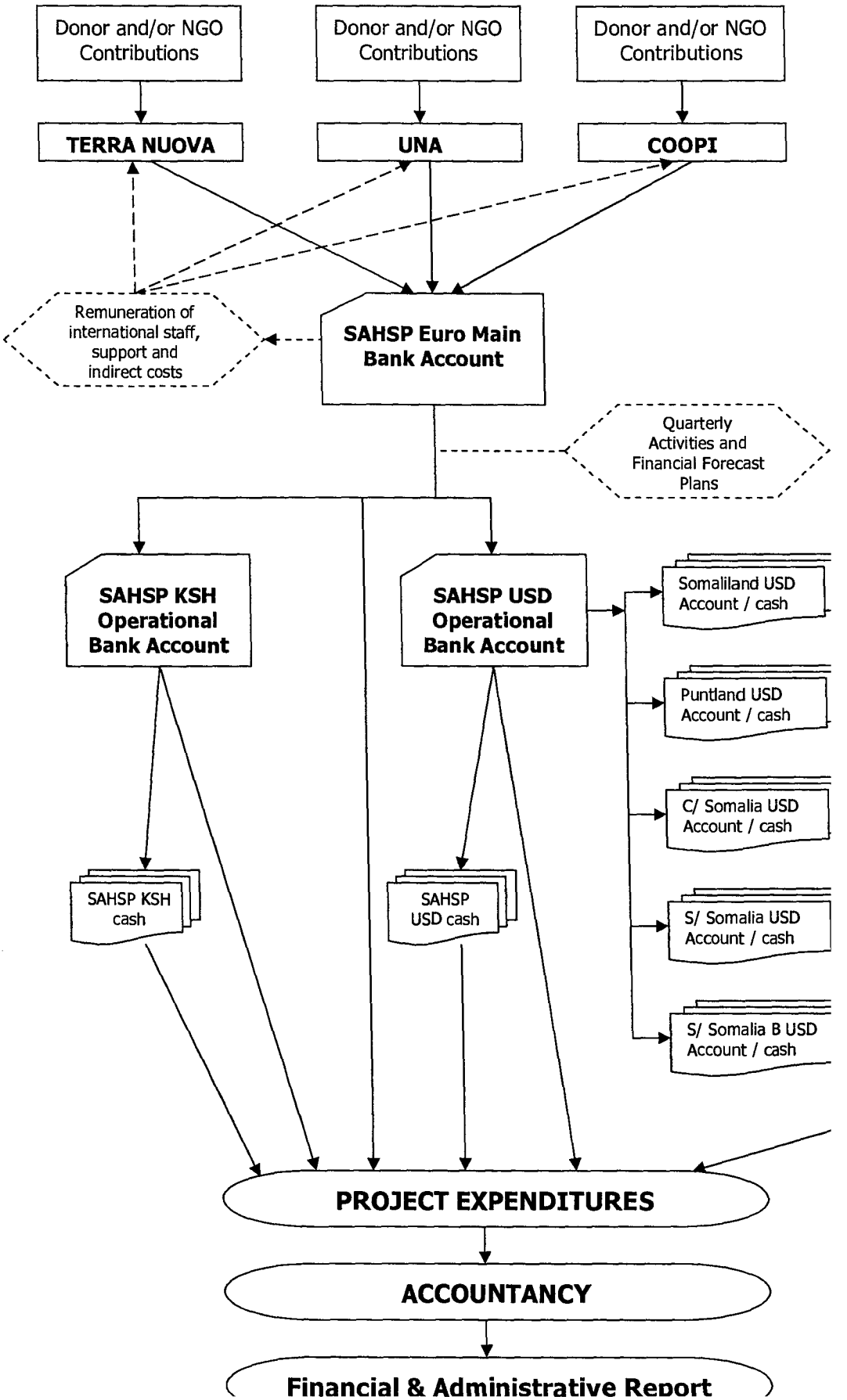
4. AOB

Zanotta received a request of clarification from Dr. Fritz Mahler about a possible contribution of PACE project for the publication of a book containing pictures taken from projects implemented by UNA (GRT intervention, camel milk project and PACE). Zanotta did not approve the expenditure.
The meeting ended at 2.30 pm because some of the participants had other commitments. The remaining points will be exhaustively discussed during the next meeting.
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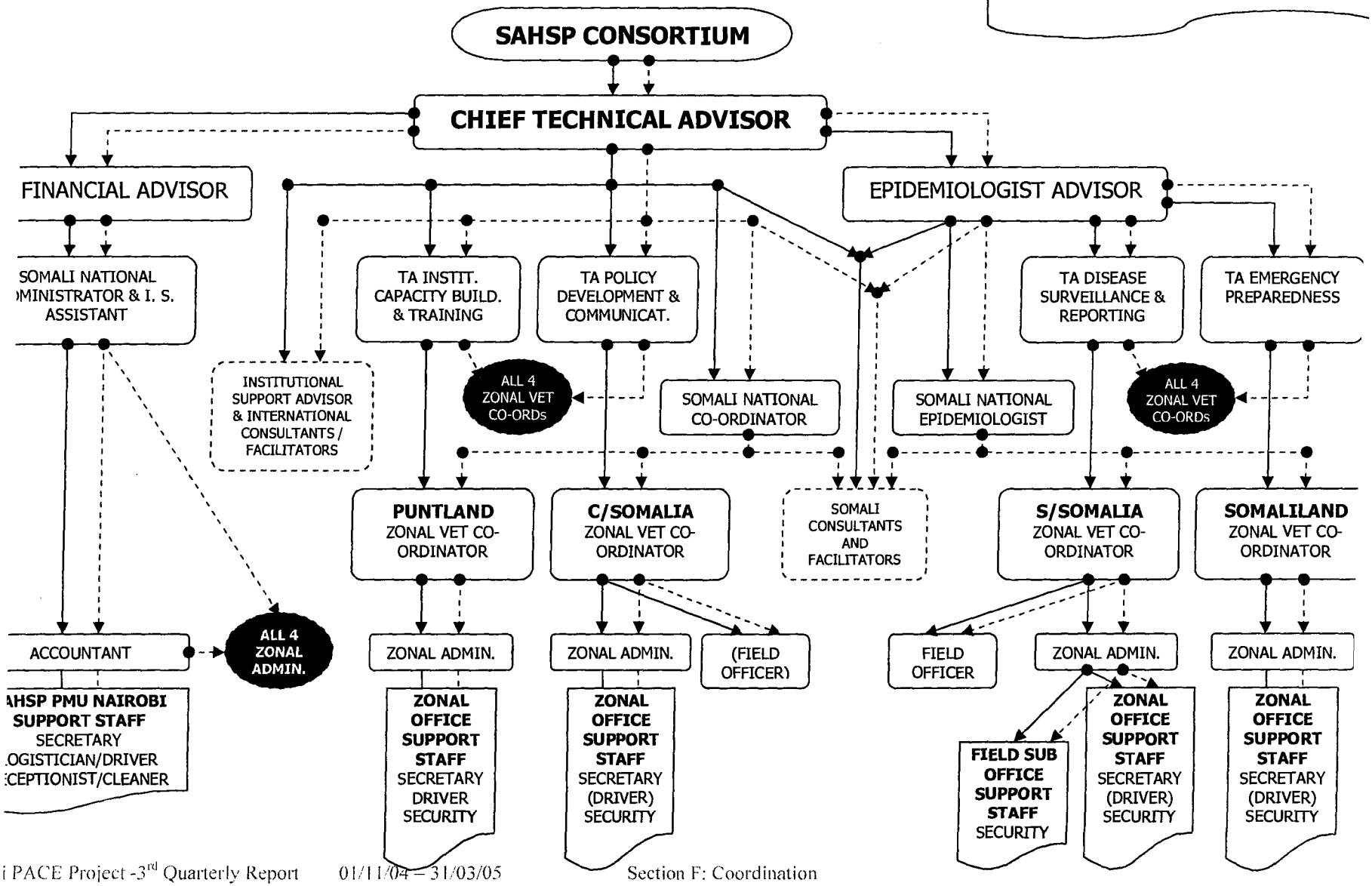
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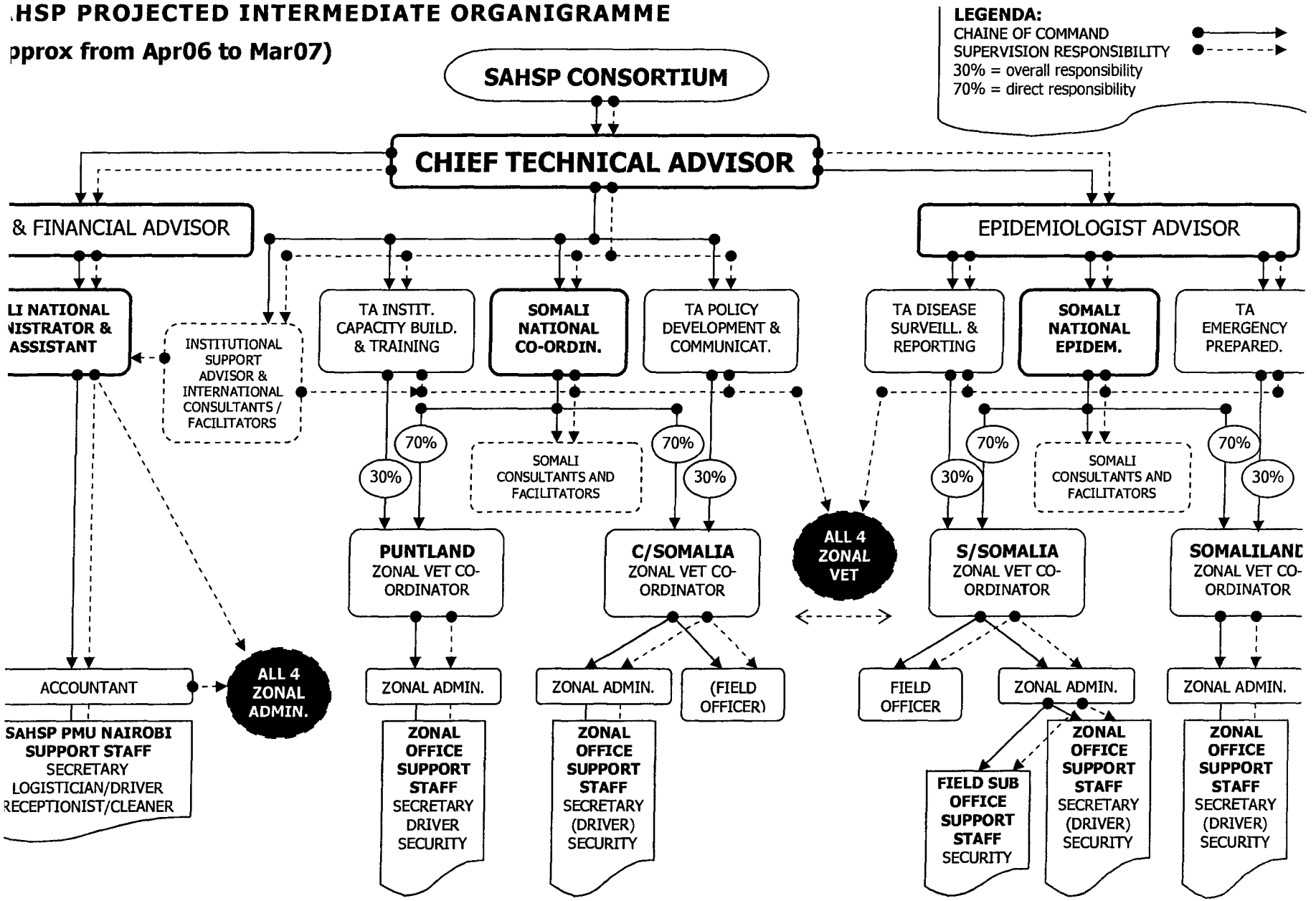
SAHSP ORGANOGRAMMES

Annexe I: SAHSP FLOW OF FUNDS 26TH JAN.2005



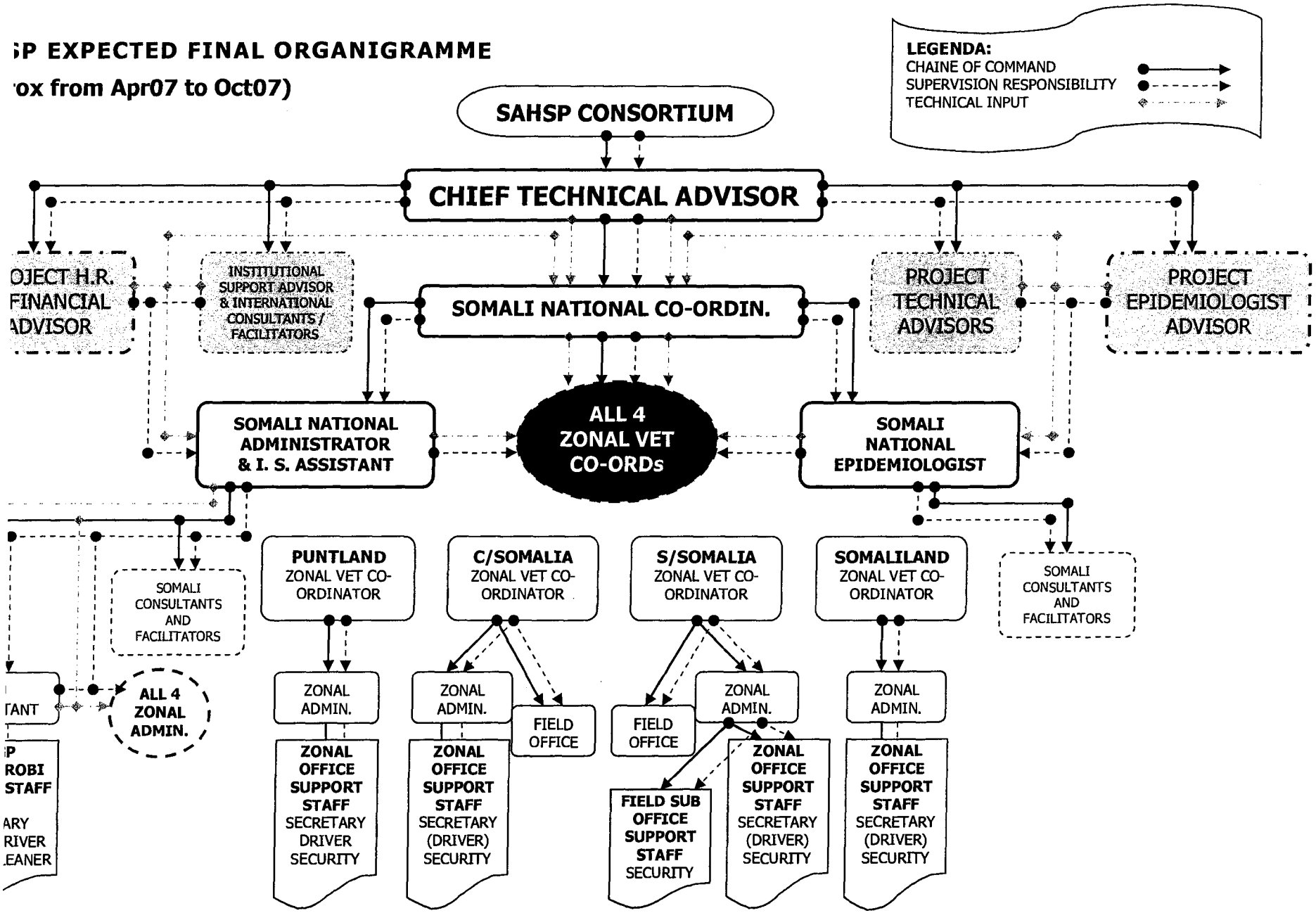
ɘxe III: SAHSP INITIAL ORGANIGRAMME
(Approx from May05 to Mar06)




.HSP PROJECTED INTERMEDIATE ORGANIGRAMME
pprox from Apr06 to Mar07)
LEGENDA:
CHAINE OF COMMAND
SUPERVISION RESPONSIBILITY
30% = overall responsibility
70% = direct responsibility
SAHSP CONSORTIUM
CHIEF TECHNICAL ADVISOR
& FINANCIAL ADVISOR
EPIDEMIOLOGIST ADVISOR
LI NATIONAL NISTRATOR & ASSISTANT
INSTITUTIONAL SUPPORT ADVISOR & INTERNATIONAL CONSULTANTS / FACILITATORS
TA INSTIT. CAPACITY BUILD. & TRAINING
SOMALI NATIONAL CO-ORDIN.
TA POLICY DEVELOPMENT & COMMUNICAT.
TA DISEASE SURVEILL. & REPORTING
SOMALI NATIONAL EPIDEM.
TA EMERGENCY PREPARED.
70%
30%
SOMALI CONSULTANTS AND FACILITATORS
ALL 4 ZONAL VET
PUNTLAND ZONAL VET CO-ORDINATOR
C/SOMALIA ZONAL VET CO-ORDINATOR
S/SOMALIA ZONAL VET CO-ORDINATOR
SOMALILAND ZONAL VET CO-ORDINATOR
ACCOUNTANT
ALL 4 ZONAL ADMIN.
ZONAL ADMIN.
(FIELD OFFICER)
FIELD OFFICER
SAHSP PMU NAIROBI SUPPORT STAFF
SECRETARY
LOGISTICIAN/DRIVER
RECEPTIONIST/CLEANER
ZONAL OFFICE SUPPORT STAFF
SECRETARY
DRIVER
SECURITY
SECRETARY
(DRIVER)
FIELD SUB OFFICE SUPPORT STAFF
SECURITY

SP EXPECTED FINAL ORGANIGRAMME

ox from Apr07 to Oct07)



Minutes -SAHSP Partners Meeting held at Terra Nuova Office on 14th February 2005

Minutes -SAHSP Partners Meeting held at Terra Nuova Office on 14th February 2005

Present:

Alessandro ZANOTTA – Terra Nuova Representative

Andrea Berloffa - COOPI Representative

Daniele – UNA Representative

Henry WAMWAYI - PACE Somalia (Project Advisor)

Agenda:

1) Inception phase plan
2) MOU between the partners
3) SLPF role in the project
4) ToR of human resources
5) Financial issues: indirect cost and direct cost shares
6) Policy for sabbatical period

Documents circulated for the meeting:

- TORs for the Technical Advisors, Zonal Coordinators and Field Vet Officers

1. **Inception Period Plan**

- Preparation and signing of MOU between Partners and between PACE and SLPF, AU/IBAR and EC funded BBC project.
- Staff recruitment both International and National
- Preparation of contracts for staff and service providers
- Sensitization of stakeholders
- Preparation of strategies the project is going to undertake. Based on the strategies we have to develop on action plan and shall refer to the following:-
    1. Capacity building
    2. Rinderpest eradication
    3. Emergency preparedness

The planning should be done in a participatory manner all PMU has to be there.
It would be important to develop (at the same time of the work plan) a monitoring system with the double purpose of:-

(a) internal monitoring tool
(b) explanatory tool for the authority

- inception period has to last at least about 6 weeks
- Official opening of the project will be organized and harmonized by PMU and Implementing Partners
- Official opening will be held in Nairobi during the planning workshop
- Official opening in Somalia is anticipated to be in at least three locations.

The planning workshop is expected to take place around 20th April 2005 with the support of the Partners and facilitation by a Consultant expert in planning and monitoring.

PMU will develop the MOU with the Partners

Partners will recruit International staff

PMU will recruit local staff

PMU and staff to prepare the three strategies

2. MOU: with reference to last point of page 2 (Current Somali PACE Partners Moue)

Planning

Alessandro requested to set up a monitoring tool which is able to link the different level of project management between the:-
Project Managers Unit, Project Manager and the field level and the local authorities.

Andrea suggested allowing a higher level of elasticity at field level.

Consensus: Majority vote or 100% consensus

It was suggested that Terra Nuova will have the last say on contractual issues and after discussion it was decided that Terra Nuova will have the last say in respect to contractual obligations.

Action Point:

Alessandro will prepare the draft of MOU by 25th February 2005: UNA and COOPI will provide comments on the Terra Nuova MOU proposal.

3. Role of SLPF

- Contact the counterparts for field implementation of activities.
- To Facilitate the PACE SOMALI COMPONENT activities. In the past the Chair of SLPF was a PACE employee. For the future SLPF should be considered an associate to avoid conflict of interest between the project and Implementing Partners.

4. Human resources

TOR's have been distributed by the PMU; a soft copy has already been distributed

Feed back and comments on the Terms of reference for the various posts has to be provided by Monday 21st February 2005, at 8.00am at the Terra Nuova office.

5. Financial Issues: Direct and Indirect costs share

Direct Cost Share:

Terra Nuova	60%
UNA	30%
COOPI	10%

Indirect Cost Share:

	administrative support
UNA	2000 €
COOPI	2000 € per month

2% of administrative cost is proportional to the Indirect cost share of each INGO. The same logic has to be respected for the contribution to the project. If no other Donor will be found the different INGO's will reduce their share of 7% (administration costs).

6. Policy for sabbatical period

The sabbatical period should be allowed (in principle)

PMU should have the last say

Henry to provide a written document regulating the issue by Monday, 21st February 2005

Minutes -SAHSP Partners Meeting held at Terra Nuova Office on 21st February 2005

Minutes -SAHSP Partners Meeting held at Terra Nuova Office on 21st February 2005

Present:

Alessandro ZANOTTA – Terra Nuova Representative

Andrea Berloffa - COOPI Representative

Raffaele Del Cima – UNA Representative

Henry WAMWAYI - PACE Somalia (Project Advisor)

AGENDA:

(1) Comments on TORs (by Partners)

(2) Draft Policy on Sabbatical leave

7. **Action point**

- Provided comments on TORs by Partners
- Henry provided a written document on policy for sabbatical period
- Henry to send Andrea the minutes of 14th February 2005

Technical Advisors' TORs:

Presentation was made by Henry

One of the constraints: financial resources might not be enough. The Minster of Livestock and the minister of Finance should be able to lobby for financial resources.

Alessandro enquired why the TOR for the National Coordinator / National Epidemiologist has not been developed.

Henry replied that it was assumed that Abdullatif was going to be the National Coordinator while for the TOR of National Epidemiologist was an oversight.

TOR of the emergency preparedness and response system:

Andrea emphasized that some attention has to be given to the real capacity to react in case of any outbreak.

Henry will revise the COOPI TOR.

Advertisement:

Each Agency will have to advertise its own TOR and the Vacancy to be closed by 31st March 2005.

Henry to circulate by today the revised TOR and the covering letter.

PMU will take care of the Vacancy for the National employees.

Sabbatical period:

It is important that the studies match with Project interests.

Application for sabbatical leave applications have to be recommended by the chief Technical Advisor, endorsed by the Partners and approved by the Donor.

The plan of activities and a report of the study will be required.

If the study is related to the activities of the project we can negotiate on the time those people will take for the studies.

The Project will allow paid leave of only one month in a year.