EUROPEAN UNION
ORGANISATION OF AFRICAN UNITY/IBAR

PAN AFRICAN PROGRAMME FOR THE CONTROL OF EPIZOOTIC DISEASES (UGANDA COMPONENT)

Project No: REG/5007/005

Project Duration: Four years

Total project of funding (EDF): Euro 2,658,630

Period Funding: 2001 to 2004

Date : 12th October 2000.

SUMMARY OF UGANDA PACE COMPONENT

PROJECT TITLE: PAN AFRICAN PROGRAMME FOR THE CONTROL OF EPIZOOTICS (PACE)

OVERALL OBJECTIVE: INCREASED PRODUCTION OF LIVESTOCK AND LIVESTOCK PRODUCTS CONTRIBUTING TO RURAL DEVELOPMENT AND POVERTY ALLEVIATION

PROJECT PURPOSE:

1. Strengthening the capability to assess the technical and economic aspects of animal diseases and create appropriate programmes for their control
2. Safeguarding animal health in Uganda against major animal diseases with private sector participation

IMPLEMENTING AGENCY: MAAIF

KEY OUTPUTS:

1. Enhanced national capacities
2. Improved veterinary services and animal health care
3. Rinderpest verifiably eradicated
4. Control of other epizootic diseases improved

TARGET GROUPS: Livestock keepers, private sector animal health care personnel, veterinary staff of MAAIF and Minstry of Local Government personnel.

AREA COVERAGE: 23 districts with rinderpest control/surveillance and 5 other districts with cross border control of CBPP.

TIME FRAME: 4 years

PROJECT COST:	**EDF-**	**Euro 2,658.630**	**USH 4.591.454.000**
	GOU-	**EURO 345.400**	**USH 595.815.000**

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ABBREVIATIONS

AEP	AGRICULTURAL EXTENSION PROGRAMME
ASF	AFRICAN SWINE FEVER
CBAHW	COMMUNITY BASED ANIMAL HEALTH WORKERS
CBPP	CONTAGIOUS BOVINE PLEUROPNEUMONIA
CCPP	CONTAGIOUS CAPRINE PLEUROPNEUMONIA
CVO	CHIEF VETERINARY OFFICER
ECF	EAST COAST FEVER
FAO	FOOD AND AGRICULTURE ORGANISATION
FITCA	FARMING IN TSETSE CONTROL AREAS
FMD	FOOT AND MOUTH DISEASE
FVM/MUK	FACULTY OF VETERINARY MEDICINE, MAKERERE UNIVERSITY
GOU	GOVERNMENT OF UGANDA
GTZ	GERMAN TECHNICAL COOPERATION
HC	HEAD OF CATTLE
HPI	HEIFER PROJECT INTERNATIONAL
IBAR	INTER-AFRICAN BUREAU OF ANIMAL RESOURCES
IDA	INTERNATIONAL DEVELOPMENT AGENCY
LSP	LIVESTOCK SERVICES PROJECT
MAAIF	MINISTRY OF AGRICULTURE ANIMAL INDUSTRY AND FISHERIES
MOU	MEMORANDUM OF UNDERSTANDING
NARO	NATIONAL AGRICULTURAL RESEARCH ORGANISATION
NGO	NON GOVERNMENTAL ORGANISATION
OAU	ORGANISATION OF AFRICAN UNITY
OIE	OFFICE INTERNATIONAL DES EPIZOOTES
PACE	PAN AFRICAN CONTROL OF EPIZOOTICS
PARC	PAN AFRICAN RINDERPEST CAMPAIGN

PAVAU	PARA-VETERINARY ASSOCIATION OF UGANDA
PCR	POLYMERASE CHAIN REACTION
PVP	PRIVATE VETERINARY PRACTITIONER
UCB	UGANDA COMMERCIAL BANK
UNFA	UGANDA NATIONAL FARMERS ASSOCIATION
UVA	UGANDA VETERINARY ASSOCIATION
UVB	UGANDA VETERINARY BOARD
UVRI	UGANDA VIRUS RESEARCH INSTITUTE
WHO	WORLD HEALTH ORGANISATION

I. BACKGROUND

1.1. THE GOVERNMENT POLICY

The general policy of the Ministry of Agriculture, Animal Industry and Fisheries in respect of livestock sub-sector is to support, promote and guide animal production and marketing to ensure self-sufficiency in animals and their products within environmental limits and have surplus for export. Increased production will result in raising the incomes and living standards of the small-scale farmers who produce the bulk of meat and milk.

The GoU has recently embraced the Macro-economic policies of liberalisation, privatisation, decentralisation and Civil Service reform. Implementation of disease control and surveillance activities is therefore done by technical staff in local governments, PVPs and NGOs with supervisory and backup support from MAAIF staff. The government therefore fully supports the privatisation of delivery of animal health services.

The GoU has divested itself from procurement and distribution of pharmaceuticals, chemicals and some biologicals to the private sector and has instituted a cost sharing policy on CBPP and FMD programmes to make them sustainable.

1.2. THE LIVESTOCK SUB-SECTOR IN UGANDA

Livestock production constitutes an important sub-sector of agricultural production in Uganda, contributing 16% of agricultural GDP and 7.5% of the total GDP in form of milk, meat, hides, skins and other by-products. This estimate does not include their contribution to investment, security, farm traction power and provision of manure for farm production. Livestock forms an integral part of the farming system in Uganda and the livestock population of Uganda consists of 5.6 million cattle, 5.5 million goats, 1.2 million sheep, 1.08 million pigs and 22 million chickens. Over 90% of the cattle are owned by smallholder farmers and grazed communally. However, animal diseases remain the major constraints to livestock production. The major diseases include Rinderpest, CBPP, FMD, Trypanosomosis, ASF, CCPP, LSD and Tick-borne diseases. The sub-sector is also affected by an ill-established surveillance and diagnostic network and hence lacks a data bank.

1.3. BENEFICIARIES AND MAIN ACTORS

While the ultimate beneficiaries of this project will be those who derive their livelihood from livestock, this project will also benefit crop farmers, dealers and consumers of animal products and by products, NGOs working in animal related activities, Private and Government Veterinarians. The programme will lead to an improvement in the income of livestock producers and the living conditions of the people and increase GDP. This project will also benefit wildlife welfare and conservation. The programme will lead to increased monitoring and surveillance of diseases in the wildlife of Uganda.

The main actors will include a national Co-ordination Unit headed by the PACE Co-ordinator and supported by steering committee. A full time technical assistant will augment the local expertise. The district veterinary staff, PVPs, and CAHWs will be the major implementers of PACE activities at field level.

1.4. ACHIEVEMENTS AND CHALLENGES

1.4.1. Pan African Rinderpest Campaign (PARC)

1.4.1.1. The Situation of rinderpest Eradication

Between 1966 and 1979, rinderpest was under control. After the 1979 war, rinderpest recurred in Kotido and spread to other districts of Luwero (1985), Jinja (1987), Arua (1989) and Moroto (1994). Emergency vaccination campaigns in 1988 to 1989 and PARC programme of 1990-1992 whose second phase of 4 years began 1997 have contained the disease.

Pan African Rinderpest Campaign's main objective was to control and eradicate rinderpest over a period of 10 years. There has been effective rinderpest control throughout the country and the last outbreak was in Moroto in 1994. Uganda made a zonal declaration of provisional freedom from rinderpest in May, 1999 (OIE Pathway) and vaccinations only remain in the immune barrier (Zone A), which includes districts of Arua, Moyo, Gulu, Adjumani, Kitgum, Kotido and Moroto.

Achievements

(a) Rinderpest vaccination campaign is ongoing in Zone A with the aim of achieving satisfactory herd immunity. The vaccination work has faced difficulties caused by extreme weather conditions, insecurity and frequent cattle raiding.

Table: Vaccination campaign returns in zone A after declaration of provisional freedom

	Estimated cattle population	Vaccinated Aug 97-Nov 98	Vaccinated Aug 99-March 00
Adjumani	27,000	15,688	10,571
Arua	108,000	19,112	18,188
Gulu	6,000	2,958	3,000
Kitgum	6,000	3,505	4,473
Kotido	369,000	164,847	41,000
Moyo	16,000	10,449	1,118
Moroto	344,000	155,839	13,256
Total	877,000	372,398	91,606

Table. Cattle vaccinations at Sudan border 1999

Port of entry	No. offered	no. sold	no. vaccinated for RP and CBPP
Agoro	4482	3,480	3,480
Afoji	2000	NA	NA
Karenga	NI	-	-
Kerwa	1206	1206	1206
Oraba	4007	4007	4007

(a) Sero-monitoring

Sero-monitoring based on random samples (3120 serum samples) was carried out in the 7 districts. Results of the cELISA testing are at this date not yet available.

Facilities and staff at boarder posts of Oraba, Kerwa, Afoji, Agoro and Karenga have been established for continuos monitoring of cattle entering from Sudan. These animals are vaccinated and quarantined for two weeks prior to being released for marketing or breeding purposes.

CAHWs have been participating in vaccination Campaigns in Kotido and Moroto. They have been vaccinating alongside with the GoU veterinary staff in accessible areas of the two district. The work has been difficult because of the climatic conditions, mobility of the pastoralists and periodic insecurity.

(b) Disease surveillance and reporting in all districts/MAAIF

DVOs in all districts, using formats from the Epidemiology Unit, have been participating in rinderpest surveillance.

DVOs are encouraged to report on monthly basis to the Epidemiology Unit at MAAIF the first week of the following month. All reports are, however not received within the target period. More work is required to sensitise district staff under the introduced decentralisation policy

(c) Support to Diagnostic and Epidemiology Unit

- Reagents and equipment have been made available for the rinderpest laboratory.
- The laboratory is in a position to handle 6,000-8,000 sera for rinderpest per year. Last year, 2840 sera were tested for rinderpest on cElLISA in the laboratory.
- Various staff have been trained in diagnostic skills for rinderpest diagnosis.
- All rinderpest-like diseases have been promptly reported and investigated whenever they

occur. According to the records of the diagnostic center, 3 suspected cases were investigated by the laboratory staff in 1999.

(d) Emergency preparedness plan

This plan is still under preparation and will be made operational before the end of the current PARC phase.

1.4.1.2. Control of CBPP

CBPP vaccination campaigns were carried out throughout the country. Consequently CBPP has been controlled and cases are limited to lunger cases, which have been reported at abattoir level. All DVOs have been sensitised to be on the look out for CBPP lungers at abattoirs and other slaughter facilities. The DVOs report monthly on CBPP lungers situation according to abattoir returns. In this way, 39 cases of CBPP were found in 5 slaughter houses in Uganda 1999. The data accruing from such surveillance reports will help to zone the country into high, medium and low risk areas and this will guide the vaccination programmes.

1.4.1.3. Privatisation of Veterinary Services

Privatisation of Veterinary Services has been a major component of PARC and this was initiated by furnishing the Uganda Veterinary Association Office. A Consultant was appointed and produced a report on "Modalities of Private Veterinary Practice in Uganda" in 1992. Implementation of privatisation of veterinary services is in progress since UVA has already signed an agreement with Uganda Commercial Bank and the Privatisation Manager has been recruited. A blue print on 'policy for improved delivery of veterinary services' will soon be implemented and will streamline the roles of public and private sectors. All the funds for the privatisation process have been released and are banked with Uganda Commercial Bank Limited awaiting disbursement to beneficiaries.

1.4.1.4. Rehabilitation of Artificial Insemination services

A liquid Nitrogen Plant at the Artificial Breeding Centre was rehabilitated and a stand by generator provided. Another liquid Nitrogen Plant and its standby generator were procured and are in the process of being installed in Mbarara to serve the South Western Zone of the country. This will enhance artificial insemination activities in the country.

1.4.1.5. Increased public awareness through communication office

The programme has provided public awareness for stakeholders through PARC communication office. Livestock farmers have been sensitised through the radio, television and other communication media such as flip charts, booklets, brochures and posters on the strategies for rinderpest/CBPP control, vaccination requirements and also the role of surveillance in the management of the two diseases. Several workshops/seminars have also been held to augment the public awareness process and the OIE pathway.

1.4.1.6. Support to animal health services

The Veterinary services were generally improved through provision of vaccination

equipment, vaccines, cold chain equipment and transport. Cost recovery was instituted for CBPP control programmes. A fee of 100 Uganda Shillings was initially charged for every head of cattle vaccinated and this money would be eventually banked on a Livestock Development Fund accessible by the PARC Co-ordinator to use for more vaccines and allowances. This fee has recently been revised to 300/= Shillings. The returns from vaccinations will be used to purchase more vaccines and to improve services to livestock farmers.

1.4.1.7. Training

There has been increased capacity building and manpower development through training of staff and livestock owners. Staff have been trained in rinderpest ELISA technology, sample frame preparation and use of modern computers software. Workshops, seminars for both the technical and support staff as well as for livestock owners were held.

1.4.2. Constraints to animal health care

Many of the problems facing livestock development in Uganda are related to the high prevalence of livestock diseases. These are illustrated in the attached diagram of problems. In wider sense problems affecting livestock development can be divided into technical and non-technical as is highlighted below.

Technical problems include:-

- High prevalence of diseases and mortality rates
- Lack of adequate information on status of rinderpest and other diseases in domestic and wild animals due to poor communication, diagnostic facilities and capacity as well as insufficient funding of veterinary services.
- Inadequate professional/technical advice and poor Research/Extension/farmer linkages from both the public and private sectors have hindered livestock development. Equally the extension staff need appropriate training.
- Scarcity and high cost of inputs like drugs, chemicals, biological, equipment and uneven distribution of these inputs.
- Scarcity of good breeding stock (semen, embryos, livestock) and disease resistant breeds
- Inadequate training for the farmers resulting in poor farm management and production due to lack of farmers organisations and specific policies in the Agricultural sector.
- Insufficient infrastructure such as roads, quarantines, holding grounds, water points and markets.
- Poor pastures and shortage of water especially during prolonged dry seasons. This is usually associated with overgrazing and consequent environmental degradation.
- Inadequate implementation of regulatory services. The laws and Acts that govern animal health need to be updated and enforced and the public needs to be sensitised about them

accordingly.

- Insufficient supply of vaccines; the public and private sectors need to address this issue so as to serve the stakeholders appropriately.

Non technical problems include:-

- Lack of capital limits farmers' capacities to acquire new breeds of stock, technology, more land, inputs etc.
- Unavailability & inaccessibility of credit due to the high interest rates from commercial banks that were never conducive
- Land tenure system varies from region to region and land may be communally/individually owned.
- Customary practices e.g. pastoralism
- Undeveloped business skills like keeping animals for status rather than as a business.

The objectives tree was developed on the basis of the diagram of problems. See next page.

DIAGRAM OF PROBLEMS

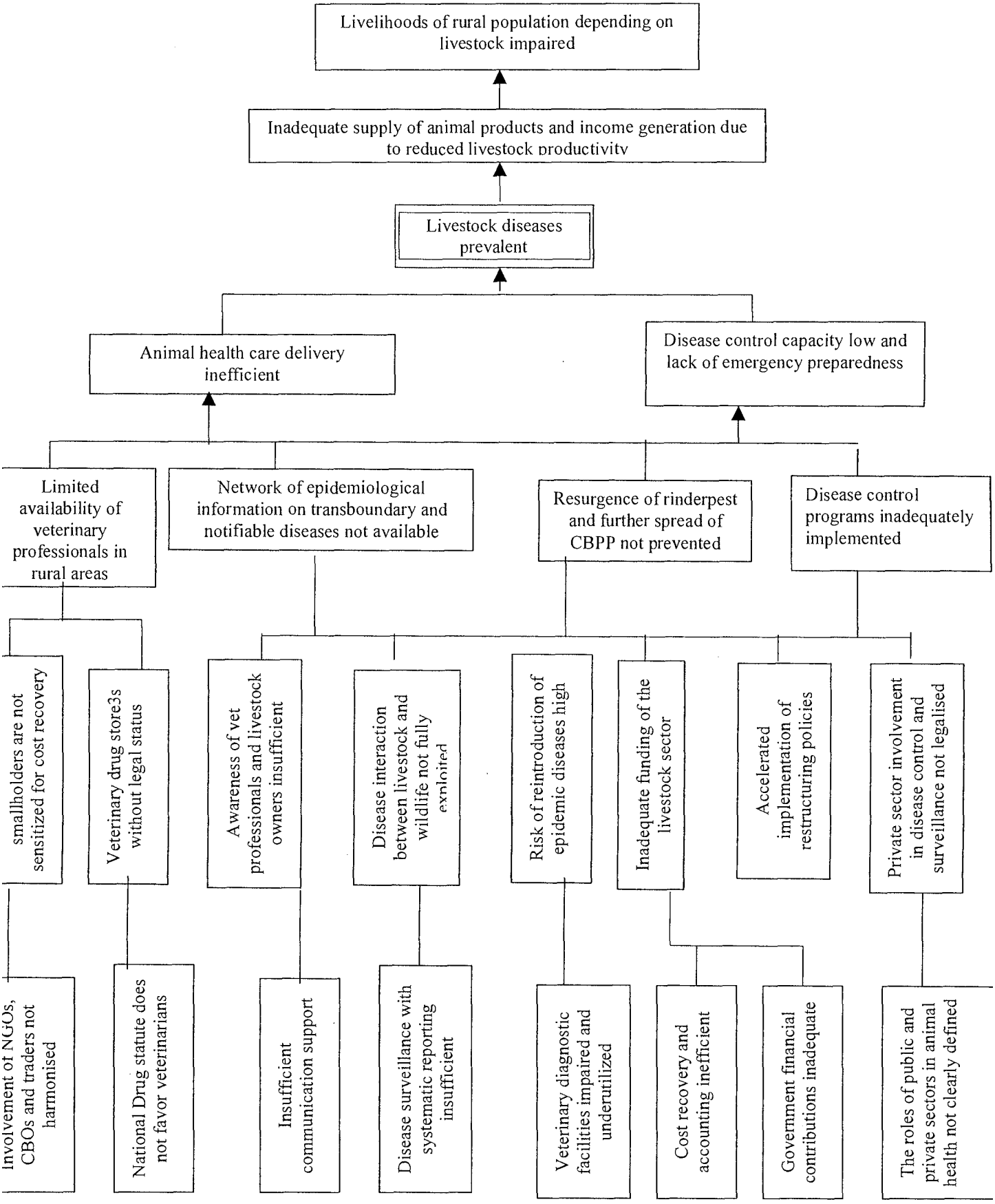
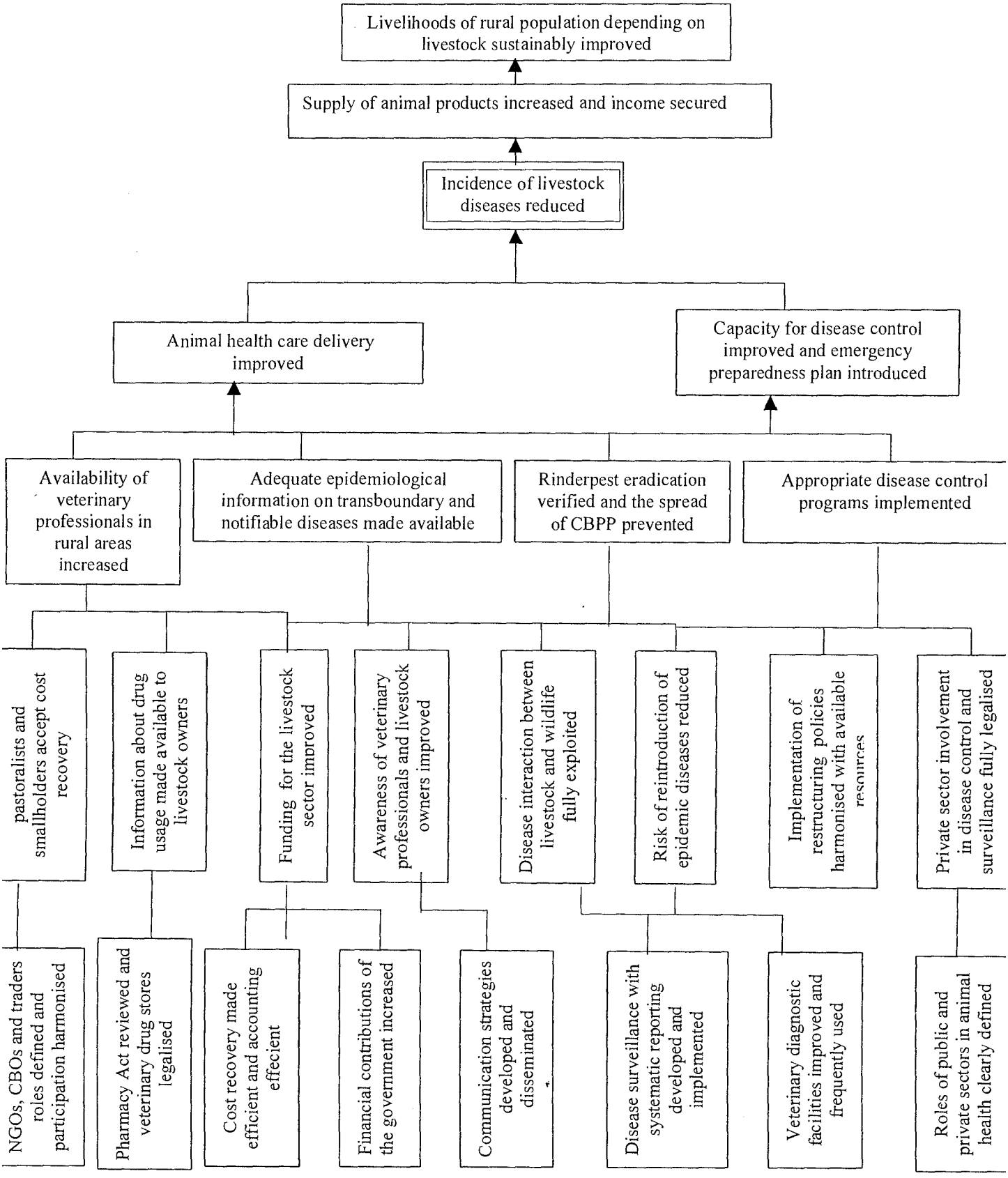


DIAGRAM OF OBJECTIVES



1.5. OTHER INTERVENTIONS IN THE LIVESTOCK SUB-SECTOR

1.5.1. The National Livestock Development Projects

- The livestock services project funded by IDA and Government of Uganda ran from 1994 to 1998. It dealt with MAAIF capacity building, animal disease control, tsetse control in selected districts, pasture development and water for livestock development.

  The project equipped all district laboratories with some basic diagnostic equipment and reagents. It provided technical and field equipment to the district staff and most veterinary officers were given motorcycles while some DVOs were given vehicles. It occasionally provided operational support (allowances) for PARC activities. The project ended 1998.

- The Agricultural Extension Programme (AEP) funded by IDA and the Government of Uganda started in 1993 and is dealing with the unified approach for extension services. The project was divested to the National Agricultural Research Organisation (NARO) in 1998 and is implemented by technical staff of the local authorities at the district level. Its main objective is to deliver agricultural and veterinary extension messages using a unified approach.

  The project has sensitised the public about government policies and disease control programmes.

- The promotion of veterinary services (Epidemiology) project to MAAIF sponsored by government of Germany through GTZ and government of Uganda set up a functional veterinary Epidemiology Unit at Entebbe and created a Vaccine Production Unit. The unit is not producing any vaccines today. The project set up a surveillance and reporting network, which led to an organised databank. The project ended in 1997 and currently most computer facilities are outdated.

- The Co-ordination office for the Control of trypanosomosis in Uganda (COCTU) project conducts surveillance and control of Tsetse and trypanosomosis in the endemic regions of central, eastern and North Western Uganda. It is funded by EEC and government of Uganda and deals with both human and animal trypanosomosis. The objective of this project is to reduce the incidence of trypanosomosis. It has been running since 1990. COCTU is going to handle FITCA, which is about to begin. FITCA'S main objective is to encourage farming in Tsetse controlled areas and make them productive.

- National Agricultural Research Organisation (NARO) was given the mandate of research and transfer of crop, forestry, livestock and fish technologies to extension staff and farmers for improved production services. Multilateral agencies such as DANIDA, DFID, IAEA, IDA and GOU are supporting NARO. NARO through its Livestock Research Systems will be a very good service provider for disease surveillance.

- Universities, NGOs, PVPs, LIRI, the pharmaceutical companies are all involved in the delivery of animal health services and animal production. Data collection and dissemination from the above stakeholders is still incoherent and unregulated. There is need to harmonise this through Memoranda of understanding between MAAIF (PACE)

and these stakeholders and close dialogue.

- The TCP-Emergency assistance to the control of CBPP TCP/UGA/4554 (E), which run between 1988-1989, was a follow up of TCP/UGA/2251. The objective was to strengthen the zoo-sanitary infrastructure. This was meant to include assistance to government to establish an efficient animal movement control system in the northern parts of the country and at borders. It was also meant to strengthen disease surveillance in general and also monitor slaughter facilities. This FAO TCP has ended.

- The Integrated Pastoral Development Project sponsored by the government of Germany through GTZ and government of Uganda based in Mbarara is limited to one sub-county and is basically to facilitate former ranch squatters (partial nomads) to lead a sedentary life while improving animal health delivery services, providing water and improving crop husbandry. This is a decentralised project ending in 2001.

- Agricultural Sector Support Programme (ASSP) under DANIDA and GOU is helping livestock farming systems, research, household agricultural support and assisting farmers' organisations. ASSP is also supporting institutional development at MAAIF. It gives financial assistance to the East Coast Fever Immunisation project, NARO (Livestock Research Systems), Artificial Breeding Centre and will soon be supporting the division of Inspectorate and Regulation under the Department of Livestock health and Entomology.

- Policy Formulation project sponsored by the British Department for International Development (DFID) is supporting the country to establish an appropriate policy framework for the 'improved delivery of veterinary services'. The project commenced in November 1998 and is ending September 2000. It will produce a blue print, which will streamline the roles of the private and public sectors, when it is implemented.

- At the local level, mechanisms have been developed for regular meetings between officials of border districts in neighbouring countries to harmonise livestock movement and disease control programmes.

- Internationally, Uganda collaborates with OIE, OAU/IBAR, WHO, WTO and FAO for animal disease control activities and livestock trade harmonisation.

- PARC second phase funded by EU with 3.9 million Euro for 4 years started in January 1997 and ends in September 2000. PARC objectives remain as follows;-

  - Control and eventual eradication of rinderpest and CBPP

  - Increased milk production by stimulating Artificial Insemination and milk collection and distribution.

  - Improvement of delivery of veterinary services through setting up PVPs under a loan scheme.

  - Training and Communication

1.6. AVAILABLE DOCUMENTATION

World Bank (1992) conducted a household survey, which indicated that, the annual consumption of meat and milk was 6 kg and 26 litres respectively per capita/year. This represents about 3% of the average household diet and it shows that there is a net protein deficiency.

Commercial milk output increased from 235 million litres in 1981 to 660 million litres in 1998 per year. Beef output however, has declined slightly from 72,035 metric tonnes in 1981 to 71,920 tonnes in 1994. The drop is mainly attributed to the civil strife in the country but is also due to failure in the disease control programmes as a result of under funding of the ministry responsible for disease control. As a consequence there was an increase in major disease outbreaks such as CBPP, rinderpest, FMD. Disease control improved following implementation of PARC 1 and LSP projects.

Currently the country has embarked on an economic rehabilitation programme and the key reforms including liberalisation, privatisation, civil service reform are being implemented. The government has attempted to address problems of production and marketing in the agricultural sector thereby abolishing marketing monopolies of agricultural produce. The department of Veterinary Services has divested procurement of Pharmaceuticals, chemicals, equipment, some vaccines and other inputs to the private sector.

Other available documentation is on the following:

- National Vaccination Programme 1994
- Livestock Development Strategy 1998
- Farming in Tsetse control Areas-FITCA Project
- Integrated Ticks and Tick borne disease control
- PARC phase 1 and phase 2
- PARC report of planning workshop, 1999
- PARC Uganda consultancy report on CAHWs in Karamoja, 1998
- World Bank Project Documents
- DANIDA Proposal and Report (ASSP)
- FAO TCP Final Report
- DFID Draft Report on Policy Formulation

II. PREPARATION AND DESIGN OF THE PROJECT

2.1 RATIONALE

2.1.1 The concept

The conceptual basis for the project design is in line with the overall PACE strategy, which aims to:

- Enhance national capacities in disease control
- Eradicate Rinderpest from Africa
- Improve services to livestock farmers;
- Improve Pan African co-ordination in the control of animal diseases (control of Trans-boundary diseases, evolution and harmonisation of animal health policies, privatisation of the veterinary services and reinforcement of the state services to better assume their regulatory and monitoring functions).

The project concept takes into account the discussions and resolutions of the 5th Conference of Directors of Veterinary Services and the 5th conference of Ministers both held in Mbabane, Swaziland on 4^{th} –8^{th} August, 1997 which clearly stress the need to:

- "consider the comparative advantages of harmonising and co-ordinating the national policies under policy framework";
- ensure "continued supply of services to complement government services", progressively put in place cost recovery" to guarantee the sustainability of the provision of services to the livestock producer",
- "promote the role of livestock owners' organisations and community animal health workers in the delivery of animal health services",
- to explore "ways and means of intensifying and co-ordinating vaccination campaigns against Trans-boundary diseases including the contracting of private veterinarians and where appropriate, community based animal health workers", and
- to enhance "the epidemio-surveillance of the relevant diseases in wildlife". Disease surveillance in wildlife will help to improve the knowledge of the health status of both domestic and wild animals. For example information on the strains of Foot and Mouth Disease in buffalo will guide government on what strains to vaccinate the cattle against.
- establish partnership "between public and private sectors in information and data collection, dissemination and utilisation";
- encourage donors to "better co-ordinate their support and standardise their approaches to livestock development policies", and

- Calls upon member states, the OAU, and the donors to take 'all measures to eradicate rinderpest' and 'to take action and organise a Pan African programme to control/eradicate CBPP from Africa along the lines of the PARC Programme'.

The PACE concept originated with an evaluation of PARC in 1996.

Animal diseases form a major obstacle to successful development of livestock production and rural society in Africa. The continent imports animal products. Africa imported products worth 21 million US dollars in 1994 (OIE document on Trans-boundary diseases). Due to disparity between livestock production and human population growth rates, this figure is expected to multiply rapidly. The World Bank estimates that unless sub-Sahara African countries increase productivity of livestock by 4% per annum, there will be severe food shortages and insecurity by the year 2005 on the continent. One of the main contributing factors to this shortage is poor animal health status since it has direct consequences for livestock production and increases the risks to investment in the sector.

2.1.2. The regional PACE project

The project has been prepared along the lines of the proposed objectives set up for the PACE programme. The global objective is to improve animal production and animal protein supply in sub-Saharan Africa through the specific objectives of improving the delivery of animal health services to farmers as well as disease control and emergency preparedness. The PACE Programme will contribute to the goal of reducing poverty among those involved in stock farming by improving productivity, thereby improving their livelihoods and enhancing food security.

The vision is improved prevention and progressive control of major epizootic diseases by providing a sound technical basis and enhanced national decision support for strategic animal health management, at national and regional levels.

The intervention would take advantage of the activities required to achieve these objectives in order to specifically aim at developing a global and co-ordinated framework of disease control and surveillance, and at establishing a reference databank regarding epidemiology of animal diseases in Africa. The purpose of the PACE Programme is to revitalize animal health services through strengthening national and regional capabilities to sustain surveillance, as well as strategic control of major animal diseases, and to improve animal health care in 32 sub-Saharan countries.

2.1.3 The Four thrusts of the PACE programme

PACE activities consist of four main operational components according to the actual rinderpest situation.

2.1.3.1 Reinforcing animal epidemiology services and control of the major diseases by enhancing national capacities

The development of control strategies requires reliable information, which, in turn, depends upon the existence of effective disease surveillance systems. These systems encompass continuous, systematic collection, analysis and interpretation of animal health data in

association with prevailing risk factors and economic considerations, for use in planning, implementation, monitoring and evaluation of disease control by veterinary personnel.

Disease surveillance is a core function of national veterinary authorities. Whereas PARC established and strengthened networks primarily for the surveillance of rinderpest, in support of its control and eradication, PACE will further strengthen them for the long-term surveillance of other priority animal diseases. PACE will provide levels of support that are consistent with the affordability and sustainability of these networks at the national level.

The major activities of this thrust include the development and strengthening of reporting systems for major animal diseases, in accordance with national, regional and international obligations. PACE will also link these systems with each other.

Strengthened, accelerated and harmonized reporting systems will feed information into the national and regional systems to provide a basic framework for understanding the major disease constraints and facilitate safe international trade in livestock, their products and byproducts.

Disease surveillance to detect and investigate epidemiologically significant events will be strengthened. Passive and active disease surveillance techniques will be strengthened and developed to contribute data to clarify the determinants of disease occurrence. In this general context, PACE will promote the active participation of all stakeholders in surveillance networks. For active disease surveillance and purposive epidemiological investigations, attention will focus on specific disease syndromes of local and transboundary importance, and the capacity will be established for disease surveillance in important wildlife populations at national and sub-regional levels.

Laboratory capabilities will be strengthened to permit the differential diagnosis of the major diseases to ensure the accuracy of disease data.

In close collaboration with national experts, regional and international technical assistance will develop and strengthen national capacity particularly with regard to disease data analysis and communication. National units will be developed to manage and analyze data on disease incidence to form a basis for the development of national and regional strategies. Elements of these data management systems will include:

- disease data management to handle the flow of information
- disease mapping
- epidemiological analysis
- Appraisal of economic impact.

PACE will provide appropriate skills-oriented training to nationals who will manage these surveillance and decision support systems.

The Programme's Co-ordination Units will promote dialogue with national governments to increase the financial contributions to the maintenance of disease surveillance networks. This important activity will enhance the long-term sustainability of animal health in the PACE countries.

In Uganda basic disease-reporting systems are in place and diagnostic laboratories support epidemiological surveillance for rinderpest. PACE will enhance the efficacy of these surveillance systems and promote the appropriate development of national diagnostic laboratories, for which increased government financial contributions will be required.

2.1.3.2 Greater privatization of veterinary services and public/private linkages in the field to improve the distribution of veterinary services and medicines

PACE will promote the rationalization of veterinary services to ensure that public goods are effectively safeguarded with appropriate involvement of the private sector.

National authorities will be supported to continue the rationalization of the delivery of veterinary services. Veterinary legislation in many countries now permits the involvement of private veterinary practitioners in state veterinary services. Where necessary, national PACE programmes will assist the refinement of legislation and regulations to provide an enabling environment for the private sector. Contractual mechanisms will be developed to engage private sector partners (appropriately qualified private veterinarians and veterinary auxiliaries) for essential disease surveillance and control. Where required this will include the use of community-based animal health workers, primarily in marginalized, extensive pastoral communities. PACE will raise the awareness of livestock owners' associations concerning diseases and regulatory requirements, in order to promote their active participation in improved disease surveillance and control.

The Programme will also promote and encourage the development and strengthening of appropriate mechanisms for the distribution of veterinary medicines, to enhance the availability of quality products (drugs and vaccines) to livestock keepers in remote areas.

In Uganda PACE will assist in the further development of the private veterinarians and CAHWs. The legislation will be reviewed to provide an enabling environment for such private sector stakeholders. The contacts between CAHWs and their supervisors will be intensified, and their subsequent training will be provided and their numbers increased through the existing structures.

2.1.3.3 Rinderpest eradication from Africa through elimination of the last reservoirs and verification of freedom

It is essential that the fight against rinderpest be sustained to safeguard the investments made to date, by achieving the goal of continental eradication of rinderpest, and contributing significantly to the global eradication of the disease.
Activities will focus on identifying, containing and eliminating the residual reservoirs of infection in eastern Africa against a background of intensified verification of rinderpest freedom in compliance with international guidelines (the OIE pathway). Wildlife surveillance will be supported as a pre-requisite for both verifying freedom and disclosing the presence of infection.

PACE will provide rinderpest vaccine where necessary, and will promote the involvement of private veterinarians in vaccination campaigns. However, it is envisaged that the levels of vaccination in the control of rinderpest will be progressively reduced, as the intensity of

surveillance increases and the disease is contained in smaller focuses

The detailed strategies that the Programme will adopt in the fight against rinderpest will be continuously revised and updated in the light of the results of epidemio-surveillance, and the changing situation at field level. The PACE approach will be based on halting vaccinations as soon as possible and on giving aid to countries to fulfil the OIE procedure for being declared free from rinderpest. PACE will align its blueprint for rinderpest eradication (under review) with that of the Global Rinderpest Eradication Programme (GREP), which currently, is based on the OIE pathway. Both blueprints will be reviewed and updated to reflect the changing situation in the field, as revealed by the results of surveillance conducted under the national PACE programmes.

In Uganda, PACE will promote and strengthen emergency preparedness planning to limit the impact of disease emergencies. This will ensure an improved capacity, first, to recognize rapidly evolving disease emergencies and, second, to mount an appropriate rapid reaction to them, both at national and regional levels.

Uganda will maintain surveillance to verify freedom from disease and will improve emergency preparedness. Emergency preparedness plans will be improved and control strategies will be revised. It is anticipated to declare the whole country provisionally free from rinderpest by March 2002.

2.1.3.4 Control of major epizootic diseases

PACE will assist the development of national, sub-regional and regional strategies for the control of major epizootics. The comparative economic advantages of various strategy options will be highlighted by the results of specific studies but PACE will not fund the implementation of such strategies. Epidemiological and economic data will be collected in standard formats to enable their analysis, comparison and mapping at regional level. These activities will be inextricably linked to those outlined above. Based on the analysis of these data, strategies for the control of priority diseases will be developed in a regional context and will facilitate the elaboration of co-ordinated plans for their exclusion or progressive control.

IBAR will, through the PACE Programme, promote the timely reporting by all countries of the occurrence of OIE List A diseases. This will reinforce the links between the epidemio-surveillance networks and the refinement of strategies for the control of epizootics.

At the Pan-African level, OAU/IBAR will strengthen its capacity to co-ordinate national programmes for the control of epizootics. This will include the strengthening of management capabilities, the development of information management systems and emergency preparedness plans.

PACE will continue to fund the Pan-African Veterinary Vaccines Centre (PANVAC), to promote the use of quality assured vaccines in control operations in PACE countries. In view of the anticipated long-term decline in the need for rinderpest vaccine, PACE will encourage the expansion of PANVAC's mandate to enable it to diversify its activities and enhance its sustainability. In addition to providing vaccine quality services, PANVAC could produce and market diagnostic reagents. PACE will provide vaccines in special circumstances, and only if

functional cost recovery is in place, principally involving private veterinary practitioners. The outputs of research commissioned under the PACE Programme, notably on diagnostic tools and vaccines, will be assimilated into control operations, as appropriate.

In Uganda the priority during PACE will be to maintain intense surveillance of the rinderpest situation because of the lasting endemic situation in Sudan. However, the same surveillance systems will be used to monitor the situation regarding other transboundary diseases, including CBPP. Uganda will have to intensify CBPP surveillance along its borders with Tanzania and Rwanda.

2.2. THE OVERALL STRATEGY

The Organization of African Unity Interafrican Bureau for Animal Resources (OAU/IBAR) will implement the PACE Programme through national, sub-regional and regional programmes. The PACE Programme Co-ordination Unit (PCU) at OAU/IBAR will be responsible for the coherence of programme implementation at all levels. The PCU will have the managerial and technical capacity to assess operations and to keep them in line with the Programme's objectives.

It is essential that the investments and achievements made during PARC be protected. The basic strategy of PACE is to build on the foundation provided by PARC, strengthen national and regional capacities for the sustainable surveillance and strategic control of priority epizootic diseases, and ensure that countries continue to follow international guidelines for the verification of freedom from rinderpest infection, thereby safeguarding animal health in Africa.

Regional co-operation will be an important feature of the PACE Programme and it is envisaged that a multiplier effect will be produced through regional and sub-regional meetings and joint actions that the Co-ordination Units will be responsible for organizing.

2.2.1 The National PACE programme:

PACE Uganda will pursue the same broad objectives of the overall PACE Programme; these are included in the attached logical framework. The operations of Uganda national PACE programmes will fall under four headings.

2.3. OVERALL OBJECTIVE

Increased production of livestock and livestock products is contributing to rural development and poverty alleviation.

2.4. PROJECT PURPOSE

(a) Strengthening the capability to assess the technical and economic aspects of animal diseases and create appropriate programmes for their control.

(b) Safeguarding animal health in Uganda against major animal diseases with private sector participation.

Uganda will take advantage of the support provided by OAU/IBAR to implement its national programme. PACE Uganda will be assisted by the PACE Programme's Common Services and will participate actively in the development and implementation of sub-regional strategies to control priority epizootic diseases. PACE Uganda will report to OAU/IBAR, through the PACE Programme National Co-ordinator, and will enhance the Department of Livestock Health and Entomology's reporting to the OIE.

At the national level, the programme will protect the investments and achievements made during PARC. The basic strategy of PACE Uganda is to build on the foundation provided by PARC, strengthen national capacities for the sustainable surveillance and strategic control of rinderpest and other priority epizootic diseases, and ensure that the country continues to follow international guidelines for the verification of freedom from rinderpest infection.

Regional co-operation will be an important feature of the PACE Programme. In addition to participating in the development and implementation of regional control strategies, PACE Uganda will promote the exchange of information and experiences through close collaboration with other PACE member countries, and elsewhere, as necessary.

2.5. UGANDA NATIONAL PACE PROGRAMME COMPONENTS

2.5.1. Enhanced national capacities for sustainable surveillance of major epizootic diseases

This will be based on the development and enhancement of epidemiological and economic capacities. It will consist mainly of training of the field veterinary personnel in disease surveillance and disease reporting and laboratory veterinarians in specific laboratory techniques as well as economic impact assessment methodologies. A strengthened communication component will be put in place to assist other components of the programme to package and disseminate information to all the stakeholders.

By setting up a national framework for disease control, surveillance and reporting, the livestock sector will be in a position to improve its productivity and hence improve farmers incomes and standards of living. The epidemiology of the different epizootics will be better understood and this will facilitate the formulation of the control strategies at national, subregional and regional levels.

PACE will facilitate Institutional strengthening in the field of domestic and wildlife epidemiology and Economics of animal health. Close liaison with private sector, UVB, UVA, PVPs through both the communication component and the PCU will strengthen the national surveillance network.

2.5.2. Improved delivery of veterinary services and animal health care

During PARC, privatization of veterinary services was encouraged. A privatization fund was established and, by the end of the programme, 20 veterinarians will have established private practice, mainly in the high potential areas.

PACE will strengthen the delivery of veterinary services by private veterinarians, primarily by establishing links between government and private veterinarians; assist the re-establishment of the Veterinary Board of Uganda, which is responsible for the regulation of the profession; assist the review of veterinary legislation; and, in the remote pastoral areas of the north east, where there are few veterinarians, promote the development of community-based animal health workers as a means to deliver veterinary services and enhance disease surveillance.

2.5.3. Rinderpest verifiably eradicated

The immediate threat of rinderpest (lineage 1) exists in the northern districts of Uganda, which border Sudan. In this zone, pastoralists frequently move their herds of cattle across the borders with Sudan and Kenya, and close liaison between the veterinary authorities of the three countries will be necessary to ensure that rinderpest is eradicated. Similarly, close liaison will be established between the Departments of Livestock Health & Entomology and Uganda Wildlife Authority, to ensure that disease surveillance is conducted in selected wildlife populations. Detection of rinderpest antibodies in wild animals indicates that rinderpest virus is circulating in the population of wild animals and therefore a potential source of infection for domestic livestock. This will be supported by OAU/IBAR PACE Wildlife Epidemiologist.

The key elements of the strategy for the eradication of rinderpest from Uganda include:

- Halt vaccination by October 2001
- Continue with intensive surveillance and make provisional declaration of freedom in March 2002
- Develop the surveillance system for government funding in these districts by March 2001
- Promote and participate in sub-regional/joint surveillance of (initially) rinderpest with Kenya and Sudan

PACE Uganda will ensure that rinderpest surveillance is strengthened in all key districts. The surveillance system will be developed to support the broader requirements of the department of Livestock Health and Entomology. Rinderpest diagnostic facilities will be maintained and a national emergency preparedness plan will be finalised, which will include the identification of the means for rapid response in the event of an outbreak of rinderpest.

2.5.4. Improved control of other epizootics

In addition to rinderpest, other major epizootics confront Uganda; these include CBPP, CCPP, PPR, FMD, ASF, LSD and RVF. PACE Uganda will support the development of strategies for the control and elimination of these important diseases. Initially, the programme will focus on CBPP, particularly in the south-western districts, where the problem is shared with Rwanda and Tanzania. With the assistance of OAU/IBAR, PACE Uganda will seek regional collaboration to develop and apply a CBPP control strategy.

PACE will engage private veterinarians on contract to conduct surveys of CBPP and initially the GoU will supply vaccines to be used by private veterinarians to conduct vaccination campaigns, for which farmers will pay the full costs. Later vaccine will be purchased with funds from cost recovery. In these regions, CBPP surveillance will be conducted alongside that for rinderpest.

Laboratory capacity for the diagnosis of CBPP will be established and refined as the results of research commissioned by OAU/IBAR become available. Activities corresponding with the outputs are included in the attached Logical framework (Appendix 1). Detailed explanations of the activities are attached to the breakdown of the global budget(Appendix 11).

III. ASSUMPTIONS, RISKS AND FLEXIBILITY

3.1. ASSUMPTIONS

- GOU is committed to meet its obligation as specified in PACE project Memorandum
- GOU and EDF will provide timely operating funds for staff
- District administrators will recruit and retain staff for PACE field activities
- Security situation allows programme implementation
- GOU ensures enforcement of stock movement control
- Liaison and co-operation between UWA and MAAIF and FVM (MUK).
- Climatic stability

The following are the assumptions for each particular activity:

3.1.1. Enhanced national capacities

- The relationship between the Ministry staff and the decentralised staff remains strong.
- The available draft policy on Delivery of Veterinary Services is finalised and implemented. All the other Laws and Regulations are revised accordingly.

3.1.2. Improved veterinary services and animal health care

- The privatisation of veterinary services is accelerated to cover most of the country.
- The private sector will continue to sell quality drugs, vaccines and biologicals.
- A legal framework is put in place to oversee these activities and monitor the quality and standards of these inputs.

3.1.3. Rinderpest verifiably eradicated

- It is assumed that in Uganda rinderpest has been under control since 1994 but since it still lingers in neighbouring southern Sudan, co-ordinated regional control programmes are established within the countries neighbouring Sudan to avoid re-introduction into Uganda.
- It is also assumed that rinderpest vaccination continues in Zone A in the 7 border districts

for the next 1st project year and the district veterinary staff carry out the last vaccination campaign efficiently.

3.1.4. Control of other epizootics

- CBPP control strategy is already under implementation and some of the remaining foci are already identified according to abattoir surveillance. It is assumed that the abattoir management co-operates with the surveillance teams.

- The livestock producers will present their animals in view of the increased cost recovery and the occurred tail reactions following $T_1$44 use.

3.2. RISKS ASSOCIATED WITH THE PROJECT

- Re-incursion of the rinderpest disease from neighbouring countries such as Sudan and Kenya will remain a risk if all necessary steps to control rinderpest are not taken in these countries in a harmonious manner.

- Control/eradication of CBPP will remain difficult if existing tools to diagnose and control the disease are not improved and if cattle movement control is not regulated and enforced.

- Effects of Civil Service reform could have an adverse impact on project organisation and implementation.

- Development of disease surveillance for rinderpest and CBPP may lead to the identification of new emergency diseases that may have to be taken into account under the project.

- Technical risks:

  -There is need for MAAIF to recruit more technical staff in the field of epidemiology and diagnosis.

  -The linkage between the field staff and MAAIF is fragile especially if the local Government Act is not revised to address this issue.

- Financial and economic risks-GoU priority to disease control and surveillance could be diverted to other issues. This would curtail the project finances and affect implementation. This is more so if there is economic stagnation or decline.

- Procurement risk: -delayed procurements would affect implementation.

- Implementation risk: -change of project management would interfere with implementation.

- vaccine quality control risk -efficacy, potency, sterility, safety and storage.

IV. PROJECT IMPLEMENTATION

4.1. PROJECT DETAILS

PACE project will cover the districts in Zone A and B1 while CBPP surveillance will be extended to the five districts neighbouring Tanzania and Rwanda. The implementation of PACE will take into account the recommendations of the PARC Phase II Terminal Evaluation Report, which may cause changes to the workplans.

Implementation of PACE will follow the guidelines of OAU/IBAR.

4.1.1. Enhanced National Capacities

The GOU has embraced the liberalisation, privatisation, and decentralisation and civil service reform policies. MAAIF is responsible for controlling notifiable diseases, monitoring, surveillance, policy formulation, technical guidance and regulatory services. The district technical staff of the Ministry of Local Government are carrying out veterinary extension work and are implementating most of the disease control and surveillance programmes initiated by the Central Government.

The same district veterinary staff will implement the PACE activities supported by PVPs, CAHWs, and technical staff from research and teaching institutions, MAAIF and farmers.

The Local Government in the 28 districts where PACE will primarily operate, employ 222 Veterinarians and 1436 Diploma and 76 certificate holders with a network based at sub-county level. The government may still recruit additional staff for Ministry of Local Government to ensure availability of sufficient manpower. At the Ministry level there are 28 officers that will be involved with PACE.

These 28 officers have different levels of training and skills (certificates, diploma, degrees and postgraduate) in different disciplines.

Most field staff own government motorcycles and some DVOs own vehicles to ease transport. The GoU has a legal framework, which governs notification of disease outbreaks and control of diseases.

The project will support the institutional strengthening and increase public awareness in the following areas:

- Training of district staff/private practitioners in sample collection, submission and basic diagnostic techniques.
- Training of 20 trainers at the Faculty of Veterinary Medicine, Makerere University in the above subjects so as to enable them pass on the above knowledge to the undergraduates to enhance sustainability. This facility will be in-built in the country and it will contribute to

continued veterinary training even after the end of the project.

- Livestock farmers' training and sensitisation to improve their understanding of disease surveillance and control. The communication component of the project will design messages in form of brochures, posters and radio/TV broadcasts. Some of these messages will be given to DVOs and will be disseminated during routine extension.

- Training, MAAIF economist in livestock economics (short term). PACE will ask the MAAIF (Agricultural Planning Division) to second one or two economist to the project.

- Train the communication team in modern communication strategies

- Workshops will be conducted each year to train 50 district staff on emergency preparedness (5days), and 50 on communication, disease surveillance and reporting techniques (5 days) and 50 in diagnostic techniques (5days).

- Study tours will be organised for 6 veterinarians in other countries, which are implementing the OIE Pathway for rinderpest eradication.

- Short-term training in laboratory techniques will be provided for 6 laboratory staff. These will be complemented by regular support from regional laboratories.

- Train 3 veterinarians (one per year) in information processing , data base management and geographical information system (GIS) techniques

- Participate in sub-regional/regional/international meetings organised by OAU/IBAR.

4.1.2. Improved veterinary services and animal health care

The GOU divested itself from procurement and distribution of pharmaceuticals, equipment, chemicals and biologicals to the private sector with the exception of the following vaccines; rinderpest, CBPP, FMD and rabies since 1994. This has ensured regular and adequate supplies of drugs and biologicals according to demand in the private sector.

Privatisation of Veterinary practice is in top gear and it is planed to be fully implemented by the 3rd Quarter of 2000 in most of the productive areas of the country. According to the plan, the first batch will include 20 veterinarians. The Uganda Veterinary Association (UVA) through a Manager supervised by the Steering Committee is implementing the Privatisation Scheme. The Uganda Veterinary Board (UVB) and the Department of Livestock Health and Entomology (DLH&E) will be monitoring the performance and professional conduct of the private practitioners.

Improved delivery of veterinary services will be enhanced through development of a standardised approach to the privatisation process, review and modernisation of legislation, the supervision of private practitioners and the establishment of community based animal health delivery systems. PARC-VAC at OAU/IBAR and some NGOs based in Kotido and Moroto have been involved in training of CAHWs. It is intended to harmonise the curriculum of CAHWs under PACE. The DVOs and district staff are supervising the CAHWs at the

moment.

The support to the private sector in procurement and distribution of drugs, vaccines and biologicals is a crucial component of this process. The National Drug Authority in conjunction with the DLH&E registers tests and inspects all pharmaceuticals, biologicals and chemicals to be used in the country to ensure good standard products. The recently created division of Inspectorate and Regulation is spearheading quality control in the Department of Livestock Health and Entomology.

A review on guidelines to improve delivery of veterinary services is about to be completed and this will detail the specific contribution of the public and private sectors by December 2000.

GoU through Cabinet adopted the cost recovery policy, in 1992 starting with CBPP under PARC Phase 1. An initial fee of 100/= which has been revised to 300/= is being charged for every head of cattle vaccinated. The DVOs bank these funds on a collection account under supervision of local Authorities, and later remit the funds to the Livestock Development Fund under PARC/PACE Co-ordinator.

This money is easily accessible to the Co-ordinator through NAO for purchase of more vaccines, allowances for campaigns and surveillance. Later on Cost Recovery Schemes will be introduced for other diseases like FMD and laboratory activities.

The Local governments do contribute some funds to disease control and surveillance and we hope this contribution will continuously grow as the economy improves.

The current government funding is however not sufficient for all the disease control work and surveillance activities but it is hoped that this will progressively be increased.

Other potential sources of funding include; World Bank, DANIDA, IAEA, NGOs and Private Sector.

4.1.3. Rinderpest is verifiably eradicated

Uganda has joined OIE pathway under a two-zone arrangement (See Appendix 1V). Rinderpest vaccination is being carried out in 7 northern border districts of Arua, Adjumani, Moyo, Gulu, Kitgum, Kotido and Moroto which border with Sudan and Turkana. The animals are ear notched for identification as vaccinated stock.

The strategy is to create a protective seroconversion in herds of the high-risk areas adjacent to the Sudan and Kenya borders. It is planned that vaccination in the seven districts will continue until October 2001. The Local governments' veterinary staff, PVPs and CAHWs in these districts will be involved in implementing the vaccination campaigns and surveillance. Where the private sector will be involved entirely in vaccination, the public sector will play a supervisory role. The staff from Epidemiology and Diagnostic Unit (MAAIF) will carry out sero-monitoring and rapid appraisals, while district staff, PVPs and CAHWs will carry out passive surveillance and reporting. Active surveillance that has already been established and sero-surveillance, which will start in two years time, are to be carried out jointly by MAAIF,

district staff, PVPs and CAHWs. Provisional Freedom from rinderpest will be declared in March 2002 for Zone A and B1.

Cattle numbers in the seven districts still vaccinating are indicated in the table below

	Estimated cattle population
Adjumani	28,000
Arua	108,000
Gulu	6,000
Kitgum	6,000
Kotido	369,000
Moyo	16,000
Moroto	344,000
Total	877,000

Campaign periods and Months for vaccination

The best campaign period for Kotido and Moroto is from April to October during the long wet season when animals are not moving. For the other 5 districts, inhabited by mixed farmers who are smallholders, the best time for vaccination is between December -February and May-July because there are minimal agricultural activities during these periods.

Communication

A massive sensitisation campaign will be carried out especially in Kotido and Moroto districts to get best possible compliance of the livestock keepers. This will enhance the vaccination coverage and increase the acceptance of ear notching.

Modalities and logistics

PARC provides vehicles, vaccines, vaccination equipment, cold chain facilities and allowances for staff and vehicle maintenance. The Karamoja Project Implementation Unit (KPIU) will assist the district staff in the execution of the campaign through their district field officers.

Animal movements

There are no animal movements except for Kotido and Moroto districts where animals normally move to the neighbouring districts in search of pastures and water (October to March) depending on the severity of the dry season. The farmers in the other five districts are sedentary.

The trade cattle from Sudan enter the country through gazetted entry points of Oraba, Kerwa (Arua), Ofoji (Moyo) and Agoro (Kitgum) districts every month. These movements are closely monitored and regulated. More trade animals enter the country during the dry seasons

in Sudan.

Occasionally Turkana, Pokot, Didinga and Toposa cattle enter Kotido and Moroto when they experience very harsh dry conditions in their countries and the pattern of their movements is therefore unpredictable.

Rinderpest sero-monitoring and surveillance

Sero-monitoring will follow vaccinations to assess the sero-conversion in the vaccinated cattle herds and also to evaluate the efficiency of the vaccination teams. The project epidemiologist has developed sampling frames and established sero-monitoring teams, from both the public/private sectors. All collected samples will be submitted to the Central Veterinary laboratory, Entebbe for rinderpest antibody testing using C-ELISA.

A Surveillance system has been established in the country to meet the requirements of the OIE pathway. It consists of;

Clinical rinderpest surveillance

Active disease search through monthly examination of randomly selected herds in Zone B (including B2 as zone declared provisionally free and B1 as the surveillance zone) by private/public veterinarians/CAHWs and will be done in the respective districts. Surveillance has been intensified at ports of entry and markets. More stock routes, Quarantine centres and Holding Grounds will be re-established to enhance surveillance. Provision will be made for the purchase of eight vehicles assigned to disease surveillance and to meet the more specific needs of CBPP and other epidemic disease surveillance in selected areas (markets, stock routes). District staff have been sensitised through workshops on the OIE pathway and the methodology to follow in implementing satisfactory levels of disease surveillance and reporting as required by OIE. The district staff have been given packages consisting of surveillance formats, booklets for recognising rinderpest, sampling equipment (vaccutainer bottles/needles) and cold chain. There is need to purchase 50 fridges for the districts to meet this requirement as well as diagnostic and sampling materials.

Routine passive surveillance

The district staff will be instructed to investigate all rumours and keep a rumour register. They will also investigate all suspected cases of rinderpest resembling outbreaks (ocular/nasal/anal discharges associated with stomatitis/enteritis), and report to the co-ordination unit immediately using fastest possible means (telephone, fax or e-mail). The project will purchase mobile phones and radios telecomunication equipment for all key PACE districts to enhance quick communication. Weekly status reports, from DVOs to MAAIF by phone, will be submitted.

Passive clinical surveillance of other epizootics will continue through the existing veterinary staff (public/private/CAHWs).

Purposive surveillance

This will be carried out in areas considered to be at high risk and at ports of entry and markets. At ports of entry any un-vaccinated animals from Sudan will be vaccinated and

quarantined for two weeks before entering the country. This will be done at Oraba and Kerwa (Arua), Agoro (Kitgum), Karenga (Kotido), and Afoji (Moyo), near the border with Sudan.

Random surveys

To complement the work done by the district staff, the Diagnostic and Epidemiology unit staff will be visiting 4 randomly selected districts to assess the performance of the district staff. During the visit Livestock farmers will be interviewed using questionnaires. The responses and observations made by the MAAIF team will be compared with the surveillance results carried out by the district staff. One vehicle will be purchased for this purpose.

Wildlife surveillance

This will be carried out by Uganda Wildlife Authority (UWA) with MAAIF officers supervised by regional PACE Co-ordination Officers. Rinderpest surveillance of buffaloes and other susceptible wild animal species will be done in selected National Parks of Uganda. Important national parks are Kidepo Valley, Murchison Falls, Queen Elizabeth, Kibaale, Lake Mburo and also in Pin Upe and Semliki Valley wildlife reserves. There will be provision of a budget line to cater for this activity. The samples from these animals will be analysed by both the MAAIF laboratory, the regional and international reference laboratories. The results from the wildlife surveillance will be compared with the results from domestic animals and this will give a broader and better epidemiological understanding of the disease status. If young wild ungulates are found serologically positive, thorough surveillance of domestic stock has to be carried out, as rinderpest virus might be circulating in the area, where sampling of wild animals took place. This will necessitate vaccination of domestic animals in the neighbourhood.

Diagnostic support for the priority diseases is needed from PACE in the following-

- Provision of additional equipment to the Central veterinary laboratory at MAAIF,
- Supply of kits for diagnosis of rinderpest and CBPP initially and later other priority epidemic diseases, especially, FMD and ASF.
- The project will continue giving assistance to enable the national rinderpest scientific officer to attend regional/international meetings and sample submission to reference laboratories.
- Strengthen and equip district laboratories through provision of reagents and training staff in diagnosis especially of priority diseases.
- Training of field staff (public/private) in diagnostic techniques to enhance the capacity building of the public/private sector.
- In addition to strengthening the National Diagnostic laboratory at Entebbe, considerations will be made to support district laboratories.

Emergency preparedness programme

The essence of the strategy adopted is to enhance the national capacity for early warning in

case of fresh introduction of the rinderpest virus into Uganda. A national emergency preparedness programme is being finalised to prevent the re-introduction of the disease in susceptible cattle considering that vaccination will cease October 2001 throughout the country

Its maintenance and enforcement will involve;

- Constitution of the following bodies;

  -National animal disease emergency committee

  -Rinderpest emergency task force Committee

  -Rinderpest expert team

- Commissioning of all the above activities
- Organising regular committee meetings
- Ensuring that appropriate legislation is in place
- Ensuring that the laboratory keeps viable diagnostic facilities ready
- Ensuring that the government contacts are permanently kept alert (field services, epidemiology, diagnosis, transport, maintenance) a vaccine bank in Nairobi will be always stocked with sufficient doses of rinderpest vaccine
- Organising workshops and training at national and regional levels which will cover rinderpest, CBPP and other major epidemic diseases.
- Accessing the available IBAR based emergency fund and vaccine bank,

Establishment of Epidemiological Surveillance Network

An epidemio-surveillance network is to be established in the 28 priority districts under PACE including all stakeholders (public veterinarians, PVPs, FVM (MUK), Agricultural Institutions, Research institutions, NGOs, CAHWs, UVA, PAVAU, UVRI, UNFA) and will be centrally manned at the Epidemiology Unit, MAAIF. This will initially involve signing of Memoranda of understanding between PACE Co-ordination Unit on behalf of MAAIF and the representatives of the various private sectors and the local authorities.

Data collection and reporting

All stakeholders will be involved in data collection and reporting. Monthly district disease report formats and rinderpest surveillance formats will continue to be prepared at the Epidemiology Unit and will be distributed to the PACE Co-ordinators of the respective districts. The district Co-ordinators in turn will distribute the reports to their staff and to other stakeholders operating in the district in question. Other stakeholders will liaise with the co-ordinators to harmonise reporting.

All the data collected will be channelled through the DVOs of the respective districts who in turn will submit the data to the epidemiology unit of MAAIF through private couriers, postal systems or directly delivered. Logistics will be given to the DVOs for this facility.

The faculty of Veterinary Medicine, Livestock and other Research Institutes (LIRI & UVRI) and Agricultural colleges will submit their data directly to the Epidemiology Unit on a monthly basis. All these institutions are on phone or/and e-mail.

Similarly all the laboratory results from the Central Veterinary Laboratory are to be submitted to the Epidemiology unit for interpretation and integration into the national/regional/OIE, OAU/IBAR standardised reports.

All the above reports will be expected at the epidemiology Unit by the first week of the following month.

The Epidemiology Unit will receive the district reports, analyse them and make standardised reports for MAAIF, OAU/IBAR, EU and OIE.

Currently the Epidemiological unit is equipped with two Dos-based computers and thus there is need to renew hardware, accessories and soft ware. Software available at the moment includes; Ms Access, Word, Excel, PowerPoint, Sid3 and EDI. To ease quick flow of information and ensure proper establishment of the epidemio-surveillance network in the whole country, mobile phones will be provided to the PACE participating districts and e-mail/fax facilities established at the headquarters. The Epidemiology Unit is responsible for collection, collation and dissemination of information within the network.

There is need to recruit a statistician to augment the work of the National epidemiologist. In addition there is need to train two other veterinarians in epidemiology and support staff of the unit. Additional refresher training will be required for the national Epidemiologist.

4.1.4. Control of CBPP and other epizootics

Improved control of other epizootics will particularly target Contagious Bovine Pleuro-pneumonia (CBPP) and other major diseases in List A of the OIE.

CBPP vaccination and surveillance

The current control strategy is to continue with national vaccinations for at least three years to ensure that all animals are protected when the country will join the OIE Pathway. Currently, there is cost recovery for CBPP vaccinations and the GOU is using the returns to purchase vaccines and to organise more vaccination campaigns.

There is need to determine the prevalence of the disease per district to allow for stratification into low, medium, and high-risk areas. Ultimately, resources for vaccination will be concentrated only in the medium and high-risk areas. A combination of pathological, clinical and serological surveillance techniques will be used to determine the incidence of CBPP. The GOU is in a process of sensitising all stakeholders and to centralise all information regarding the disease, especially from abattoirs and it will be collated with serological surveys. There is

need to develop skilled manpower especially in laboratory diagnosis and to re-establish and equip the CBPP diagnostic laboratory at MAAIF and train staff in Mycoplasma culturing.

Surveillance of CBPP and other major epizootics will be carried out concurrently during rinderpest surveillance (Economies of scale). The sera collected during rinderpest serological surveys will also be used to screen for other major epizootic diseases. Effective economic assessment of these epizootics require improved knowledge in livestock economics and control of herd movements and dynamics. Training of all stakeholders, increasing public awareness and availability of the vaccines are vital tools in these control programmes. It is also essential to carry out cost benefit analyses of the different options for various control strategies in order to use the most cost effective. Close liason with IBAR common services will help in this area.

Communication

The communication unit will sensitise all stakeholders (livestock farmers, policy makers, field vets and their associates, etc) on the aims and objectives of PACE. It will also provide information on various epizootic diseases prevalent in the country and the neighbouring countries. Detailed information about the PACE methodologies and approaches will be provided through printed materials, radios and TVs.

Special attention will be given to Karamoja area, where the sensitisation of the mobile pastoralist livestock keepers for rinderpest vaccination and later for disease surveillance has a high priority. A special workplan for this approach will be prepared by the PACE communication.

The unit intends to make use of the trained core communication Team Leader from PARC II to carry out the sensitisation and training programme. The work of sensitisation, training and production of communication materials and their distribution over the country will require a vehicle.

The activities of the communication unit will include:

- Production of communication materials
- Distribution of the materials, sensitisation and training of programme stakeholders
- Monitoring and impact evaluation of the communication campaign.

Farmers and other stakeholders will be sensitised through 'Participatory Rural Communication Appraisal (PRCA)'. Since this method facilitates dialogue among the rural people themselves and between them and the development workers, a mutual understanding will be reached to enhance the implementation of PACE activities.

4.2. ORGANISATION AND IMPLEMENTATION PROCEDURES

4.2.1. Programming, work plans and budget procedures

The project management structure will consist of the National Co-ordination Unit and the current District Veterinary Offices of priority districts through district PACE co-ordinators. The Regional PACE common services and Co-ordination Unit in Nairobi will be called upon regularly for its support. A general plan of operation for four years of the project will be submitted for approval to the PACE Advisory Committee before the beginning of the project. The Co-ordination Unit, through a National Workshop, will prepare overall work-plans. All the stakeholders, district Veterinary staff, will attend this workshop and give their inputs. The annual programmes and their budgets will be submitted to the Co-ordination Unit in Nairobi for approval. The programme will be guided by the Global PACE procedures.

4.2.2. Reporting

The PACE Co-ordination Unit will submit regular standardised reports to MAAIF, OAU/IBAR, EU and OIE prepared according to the PCU PACE guidelines.

4.2.3. Monitoring and evaluation

The monitoring of PACE program will involve continuos follow up of the implementation performance through systematic compilation of information on the program inputs, activities, outputs and results by MAAIF staff from the division of monitoring and evaluation (Agricultural Planning Department).

Monitoring and evaluation shall be done using the following:

- Monitoring and evaluation of physical performance of the project using performance indicators or targets as indicated in the logical framework.
- Impact monitoring and evaluation will be done to establish whether the activities performed have actually caused any impact.
- The outcome of this assessment may lead to modifying the project workplan for the subsequent year. The design of this project will ensure availability of more information for management purposes and also feed back to the donors.
- If the assessment is not satisfactory in the first year this could assist the project manager to modify the project in the second year or adjust the performance indicators.

Evaluation of the PACE program will be a systematic examination of completed or ongoing component activities with a view of ascertaining the efficiency, impact, sustainability and development value. The purpose of evaluation is to provide feedback through analysis of

component impact and effects so as to enable appropriate policy and institutional changes.

There will be a midterm and final evaluation at the end of second and fourth year respectively carried by external consultants.

4.2.4. Technical assistance

The project will require a full time technical assistant for 4 years.

Four short-term technical assistance will be sought in the following areas;

- Epidemiology and economics of Animal Health delivery systems to improve on the existing capacity.
- Establishment of GIS and other relevant technologies
- Disease surveillance of wildlife, processing of samples and analysis of data.

4.3. IMPLEMENTATION TIME SCHEDULE

The project will be implemented for a period of 4 years from April 2001 through October 2004. Such a time period is deemed sufficient to ensure that the main project activities will have been implemented. These activities include; establishment of an epidemiology network, review and amendment of the veterinary legislation, eradication of rinderpest, implementation of the OIE pathway activities and assessment of the control strategies of the major epidemic diseases.

4.4. TENTATIVE COSTS AND FINANCING PLAN

Tentative cost estimates for the project cover a 4-year period. EDF is contributing 2,658,630 Euro while the Government of Uganda will contribute 340.400 Euro for operations & maintenance, salaries and other allowances.

V. VIABILITY

5.1. SUPPORT POLICIES

5.1.1. The poverty alleviation policy

The Poverty Eradication Action Plan (PEAP) which has been developed and adopted by Government has prioritised agriculture as one of the key sectors whose activities are vital in fighting poverty.

The poverty alleviation fund, from Donors Debt Relief, is currently benefiting Primary Health care, Universal Primary Education, Infrastructure development and MAAIF. This money could be used to support surveillance as it is being given directly to the districts.

Disease control under PACE will lead to improved yield in animal products hence improved income to household, which is in line with poverty alleviation policy.

5.1.2. The Agricultural modernisation policy

Uganda has now embarked on a path to modernise its agriculture to promote further economic development.

Under the Modernisation Plan the following areas have been earmarked among others as intervention areas;

- Improving Research, Extension and Farmer Linkages;
- Development of Marketing Infrastructure and strategies
- Improving Access ability and Availability of Credit in Rural Areas;
- Control of epizootic diseases and pests

PACE will therefore benefit from Plan for Modernisation of Agriculture

5.1.3. Agricultural Extension Programme

The Agricultural Extension programme covers most of the PACE districts. Surveillance will be incorporated as one of the extension activities.

5.2. APPROPRIATE TECHNOLOGIES

PACE will rely on the outputs of research institutions which that have been tested and adopted while maintaining international standards.

5.3. ENVIRONMENT

PACE will work within the broader framework of the National Environment Management Authority (NEMA) and will be closely linked with FITCA project.

PACE Uganda will be in constant liaison with OAU/IBAR for future guidance on environmental matters.

5.4. SOCIO-CULTURAL ASPECTS: WOMEN AND DEVELOPMENT

PACE will back the socio-cultural practices while spearheading improvement of health care for the animals. The women who are the major stakeholders in the livestock subsector will benefit from the interventions of PACE. PACE will also support the current restocking programme.

5.5. INSTITUTIONAL AND MANAGEMENT CAPACITY

MAAIF has undergone restructuring /Civil Reform and has divested most of its activities to the private sector and local government Authorities (attached organogram). The remaining staff however, have undergone advanced training in the relevant technical fields. PACE is inheriting a management team that successfully steered PARC to its conclusion. PACE will therefore require the services of a full time Technical Assistant, Administrator, and Secretary to supplement the expertise inherited from PARC management. The National Co-ordination unit will therefore build on the experience gained from PARC.

5.6. THE LABORATORY CAPACITY TO PROVIDE DIAGNOSTIC SUPPORT IN PACE

The Central Veterinary Diagnostic Laboratory has the capacity to diagnose rinderpest using Competitive Enzyme linked Immunosorbent Assay (C ELISA), Agar Gel Immuno Diffusion

Test (AGIT) and Capture ELISA.

The capacity to diagnose Foot and Mouth Disease (FMD) as a differencial diagnosis to rinderpest is being developed. Staff is already trained.This capacity will assist in accurate diagnosis of rinderpest, surveillance and final eradication.

Compliment Fixation Test (CFT) will be used for Contagious Bovine Pleuropneumonia (CBPP) diagnosis and finding out its prevalence and distribution in different areas of the country in order to lay out proper eradication programmes during PACE. Parasitology, histopathology and helminthology laboratories have the capacity to support PACE with some improvement both in personnel and equipment.

VI. MONITORING AND EVALUATION

6.1. MONITORING INDICATORS

6.1.1. Performance indicators

Monitoring of physical performance of the project using performance indicators or targets as indicated in the logical frame-will be carried out some of which include;

- Number of reports submitted per 100,000 HC vaccinated or sero-monitored.
- The % of reports from each district that are laboratory confirmed
- Number of data-quality queries per 100 reports submitted
- Number of reports submitted for wildlife sero-surveillance

6.1.2. Impact indicators

Monitoring of the impact of the project will be done to establish whether the activities performed have actually caused any impact.

6.1.3. Physical indicators

Monitoring of physical indicators will be done to establish farmers' responses and their level of acceptance to the disease control programmes. This will be done during field surveys.

Source of data:

- contact farmers in various selected villages
- On-farm/field visits by the monitoring team
- Participating farmers (discussion and interviews)

6.2. PROJECT EVALUATION

Technical experts (external) will do project evaluation from the donors (OAU/IBAR/FAO and EU) at mid-term (second year) and at the end of the project (fourth year).

Evaluation of the PACE program will be a systematic examination of completed or ongoing

component activities with a view of ascertaining the efficiency, impact, sustainability and development value. The purpose of evaluation is to provide feedback through analysis of component impact and effects so as to enable appropriate policy and institutional changes.

Review of the project activities will be done midway in the second year of the project and after the fourth year of the project by consultants from the regional co-ordination office which will also facilitate them.

APPENDIX 1: LOGICAL FRAMEWORK- UGANDA PACE PROJECT

Intervention logic	Verifiable indicators	Means of Verification	Important Assumptions
Overall objective: Increased production of livestock and livestock products is contributing to rural development and poverty alleviation			GOU is committed to meet its obligation as specified in PACE project Memorandum GOU and EDF will provide timely operating funds for staff District administrators will retain staff for PACE field activities Security situation allows programme implementation Liaison and co-operation between UWA and MAAIF and FVM(MUK). Climatic stability

Specific objectives 1. Animal disease control capacity and animal health care delivery reinforced and distribution of medicines consolidated 2. Safeguarding animal health in Uganda against major diseases with private sector participation	Number of trained personnel working with the project At the end of the project tested control strategies available for the immediate control of rinderpest, CBPP.FMD, ASF	Training certificates Strategy documents with Dir. Of Animal Resources	
Results 1.1. Enhanced national capacities for disease surveillance 1.2 Improve delivery of veterinary services and animal health care	Number of staff trained and working with the project Number of blood samples examined by 3rd project year Number of PVPs in the loan scheme Number of CAHWs and paravets participating in vaccination and surveillance Number of sanitary mandates issued by 2nd project year	Training certificates and staff list Laboratory ledger UVA reports KPIU reports	

	Veterinary legislation updated by 2nd project year	Relevant laws gazetted	
1.3.Rinderpest verifiably eradicated	Declaration for provisional freedom of rinderpest by March 2002	OIE bulletin	
	Sero-monitoring results indicate an 80% minimal conversion	Laboratory reports	
	Emergency preparedness plan adopted and signed in the Ministry of Disaster Preparedness	Emergency preparedness plan document	
1.4. Improved control of other epizootics	Number of confirmed disease outbreaks at the end of the project versus incidence statistics	Records in epidemiology unit	

Activities	OVI	Means of verification	Assur tions
1.1. Enhanced National Capacities for Disease Surveillance **1.1.1 Establish/maintain PACE co-ordination & management** ♦ Procure sound communication and office equipment ♦ Recruit appropriate personnel ♦ Procure 5 vehicle ♦ Provide O+M for vehicle ♦ Provide audit fees ♦ Provide supportive services ♦ Keep transparent records GoU and EDF spending ♦ Submit records punctually	Financial reports submitted on a monthly basis Network communication kept functional at all times	Statement of spending	
1.1.2 Provide appropriate training to enhance national capacities ♦ Train livestock economist if available;if not train later ♦ Train accountant/assistant in financial management ♦ Train project staff in computer skills ♦ Train district staff in communication skills ♦ Organise 1 week workshops for laboratory staff (2 per year) ♦ Organise 3 workshops for district laboratory staff at Central Laboratory ♦ ♦ Train laboratory personnel from the diagnostic unit in good laboratory practice ♦ Train personnel from the epidemiological unit in the use of Geographical Information System(GIS)	Project staff fully literate in excel and power point Number of slides stained and examined in district laboratories Cartographic presentation of disease incidence introduced by 3rd project year	Project reports Training materials produced for workshops Laboratory ledger Monthly reports	
1.1.3 Strengthen reporting systems, and link to national surveillance and epidemiology services (NSES) ♦ Appoint district PACE coordination officers with the help of DVOs ♦ Procure office/commnunication equipment for epidemiology unit ♦ Design reporting surveillance forms ♦ Establish weekly reporting linkages to districts	PCU at OAU/IBAR receives regularily (monthly) reports on list A and B disases electronically	PACE database at OAU/IBAR	

♦ Sensitise technical staff on NSES ♦ Provide communication facilities to PACE districts and headquarters			
1.1.4 Establish capacity for and support epidemio-surveillance system in wildlife ♦ Carry out wildlive surveillance together with UWA in national parks ♦ Involve UWA staff in epidemio-surveillance ♦ Maintain close linkage with Wildlife Authority	UWA staff member attends regularly PACE steering committee meetings	Project Reports Minutes	
1.1.5 Strengthen/establish laboratory differential diagnostic capacities and networking; Engage private veterinarian, auxiliaries and stakeholders in surveillance activities ♦ Involve UVB, UVA & FVM in training needs assessment Workshop ♦ Support and encourage UVB/UBA activities ♦ Establish strong linkages with private sector in diagnosis and surveillance activities ♦ Rehabilitate livestock movement facilities (holding grounds, quarantine stations) ♦ Liaise with division of Inspectorate and Regulation of the Dept of Livestock Health & Entomology ♦ Procure kits for differential diagnosis for rinderpest-like diseases ♦ Establish strong linkages with other reference laboratories	Number of PVPs, auxiliaries and other stakeholders engaged in surveillance and diagnosis Number of holding grounds & quarantine stations rehabilitated Number of FMD outbreaks confirmed with typing per year	Project reports FMD vaccine purchased according to sero-types identified	
1.1.6 Develop and strengthen communication capabilities at all levels ♦ Procure vehicle ♦ Provide O+M for vehicle ♦ Procure equipment (TV, cameras, projectors, telephones etc.)	Number of excursions to priority districts for sensitisation	Lists of participants	
1.1.7 Commission economic assessment of diseases and their control ♦ Recruit/hire a livestock economist ♦ Liaise with Common Services of OAU/IBAR	Number of economic studies done	Project reports	
1.1.8 Formulate/develop/revise national and regional disease control strategies ♦ Organise 1 workshop for coordination unit ♦ Establish working commitees (expert, technical, steering) ♦ Organise regular consultations and meetings for the working commitees	No. of workshops, meetings & consultancies held	Project reports	

♦ Liaise with Common Services of OAU/IBAR ♦ Organise interdistrict meetings ♦ Organise international, regional meetings ♦ Utilise existing consultant's studies and reports on control strategies ♦ Submit reports of notifiable diseases to OAU/IBAR and OIE	CBPP vaccination campaigns carried out simultanously with Tanzania and Rwanda		
1.2: Improved delivery of veterinary services and animal health care The PCU and Common Services (Privatisation/Legislation Unit) will provide guidance for the national programme's activities in this area			
1.2.1 Support veterinary privatisation scheme through loans and/or professional assistance unit ♦ Continue evaluating progress of PVPs in high, medium and low production areas ♦ Carry out regular supervision of PVPs ♦ Carry out regular appraisals of private pharmaceutical companies, laboratories, AI stations and abattoirs ♦ Ensure that the DVOs oversee the activities of PVPs and the drug distribution and usage ♦ Continue cost recovery and encourage full recovery ♦ Contract out rinderpest vaccination and surveillance sample collection to PVPs where feasible ♦ Support UVA and UVB activities	Number of vaccinations contracted out to private sector Number of samples collected	Reports	
1.2.2 Veterinary legislative framework; reviews ♦ Hire a legal expert ♦ Initiate a study of the existing legislation and reviews ♦ Establish the legal constraints ♦ Implement the recommendations ♦ Legalise the CAHWs	Legslation updated	Uganda gazette Laws of Uganda	
1.2.3 Community based initiatives ♦ Train veterinary auxiliaries and CAHWs and others in disease surveillance and control ♦ Follow-up and supervise performance of CAHWs ♦ Harmonise and standardise their training ♦ Coordinate the network of private and public veterinarians, paravets and CAHWs	Number of samples collected by CAHWs per month ion campaign districts Number of rinderpest	Test results DVO's	

♦ Contract out rinderpest vaccination to CAHWs and paravets under the supervision of the DVOs ♦ Support initiatives to obtain participation of livestock owners in disease surveillance	vaccinations carried out by CAHWs during campaigns	reports	
1.2.4 Promote and encourage development and strengthening of appropriate mechanisms for the distribution of veterinary medicines ♦ Support policies that encourage liberalisation and privatisation of the distribution of veterinary medicines ♦ Strengthen linkages with the private pharmaceutical sector ♦ Esablish strong linkages with the National Drug Authority ♦ Establish linkages with the organs/other bodies which deal with drug quality control	Veterinary drug/vaccine imported by the private sector increased	NDA records	
1.2.5 Veterinary auxiliary training ♦ Harmonise and affiliate the training of paravets with Makerere University ♦ Standardise the curricula and examinations of public and private paravet training institutions Up-grade their training	Curriculum for paravets standardised	Faculty (FVM) reports	
1.2.6 Communication ♦ Produce communication materials on privatisation of veterinary services ♦ Distribute communication materials to all stakeholders ♦ Sensitise all stakeholders about privatisation of the veterinary service and regulatory requirements	Number of posters, brochures, radio and TV spots produced	Project reports	
1.3 Rinderpest verifiably eradicated			
1.3.1Rinderpest vaccination campaigns implemented in zone A ♦ Develop and review control strategies and provide 400.000 doses of thermostable rinderpest vaccine to all districts in zone A ♦ Provide O+M for transport (motor cycles and vehicles) ♦ Procure vaccination equipment ♦ Provide campaign allowances (public and private) ♦ Involve PVPs in rinderpest vaccination	Amount of rinderpest vaccine procured Number of animals vaccinated (%) Amount of vaccination equipment procured	Project reports	
1.3.2 Continuation of disease surveillance of rinderpest in compliance with OIE pathway ♦ Organise 3 teams from the epidemiology unit to carry out sero-monitoring in zone A during vaccination phase ♦ Collect 60 samples from each of the 15 districts in zone B 1 (900) per month	Number of sensitsation gatherings held for farmers on disease surveillance and reporting	Number of farmers participating in gatherings	

♦ Collect 60 samples from each of the 7 districts in zone A (420) per month ♦ Carry out wildlife surveillance in the major national parks by UWA/OAU/IBAR veterinarians to verify freedom from rinderpest infection ♦ Promote passive reporting and livestock owner participation	Number of samples collected and analysed from zones A and B1 Number of samples collected from National Parks	Laboratory reports	
1.3.3 Establishment of capability for laboratory-based differential diagnosis of rinderpest-like diseases ♦ Procurement of lab equipment/diagnostic kits ♦ Test and analyse the collected samples ♦ Carry out regular checking of reagents equipment (standardisation, revalidation, evaluation)	Number of kits procured, Number of samples tested Number of revalidations carried out	Laboratory reports	
1.3.4 NSES/regional linkages ♦ Prepare and distribute surveillance forms to the districts ♦ Analyse filled forms, prepare reports and dissiminate them to districts, MAAIF policy makers, OIE, OAU/IBAR and EU on a monthly basis ♦ Establish regional linkages through: ♦ Regular reports ♦ harmonisation meetings ♦ OAU/IBAR website network ♦ Telephone and E-mail ♦ task force for similar ecosystems ♦ consultations with regional PCU	Number. of formats produced, distributed & analysed Number of reports submitted to MAAIF and international. organisations No of regional/international meetings held Number of telephone/E-mail contacts	Departmental reports Project reports E-mail/ Telephone reports	
1.3.5 OIE pathway milestones ♦ Stop rinderpest vaccination by October, 2001 ♦ Declare provisional freedom from disease in zones A and B1 in March, 2002 ♦ Organise sensitisation workshop in zones A and B1 on stoppage of rinderpest vaccination in zone A by December, 2001 ♦ Conduct tours in the other countries implementing OIE pathways	No rinderpest vaccination carried out after October, 2001 Provisional freedom disease declared by March, 2001 Number of tours conducted	OIE Bulletins Project reports	

	Nmumber of rinderpest stoppage sensitisation workshops held in zones A & B1		
1.3.6 Finalisation of emergency preparedness plan ◆ Develop/improve national capacity for rapid response to disease emergencies ◆ Constitute the following bodies: - National animal disease emergency commitee - Rinderpest emergency task force meeting - Rinderpest expert team ◆ Commission all these bodies ◆ Obtain approval at all levels ◆ Organise regular commitee meetings ◆ Ensure that appropriate legislation is in place (see 2.3) ◆ Ensure that the laboratory keeps viable diagnostic facilities ready ◆ Ensure that government contacts are permanently kept alert (field services, epidmiology, diagnosis, transport, maintenance); A vaccine bank in Nairobi will be always stocked with emergency doses of rinderpest vaccine ◆ Organise workshop on emergency preparedness	Number of rinderpest-like diseases investigated Number of workshops held on emergency preparedness Number of meetings held by the various committees and task forces	Project reports Laboratory reports Minutes of meetings held	
1.3.7 Communication ◆ Produce communication materials on rinderpest eradiction ◆ Distribute communication materials ◆ Sensitise livestock owners ahead of vaccination by district staff and communication unit	Number of posters, brochures, radio and TV spots produced Number of sensitisation meetings held	Project reports Number of livestock owners attending these meetings	

1.4 Improved control of other epizootics			
1.4.1 Conduct disease surveys (including abattoir surveillance/surveys) of priority diseases ◆ Produce and distribute priority disease formats to districts ◆ Investigate CBPP and other disease outbreaks by teams from the epidemiology unit	Number of formats produced Number of CBPP and other disease outbreaks investigated o	Project reports Test results from laboratory	
1.4.2 Surveillance of specific priority diseases ◆ Produce and distribute disease surveillance formats ◆ Establish specific laboratory diagnostic capacity	Number of formats returned from districts Number of surveys conducted Number of Laboratory staff trained Amount of lab equipment/ reagents procured and used	Project reports Laboratory inventory	
1.4.3 Conduct economic studies of the impact of selected diseases and their control ◆ Liaise with Regional PCU, Common Services, to provide guidance and support on economic studies of priority diseases	Number of economic studies conducted on specific diseases	Project reports	
1.4.4 Publicise priority disease syndromes and reporting requirements ◆ Produce communication materials on other priority diseases ◆ Distribute commununication materials ◆ Sensitise livestock owners on sample collection	Number of communication materials produced & disseminated Number of farmers attending sensitisation workshops	Project reports Workshop minutes	
1.4.5 Provide information to epidemio-surveillance unit, map distribution and report findings ◆ Procure software ◆ Hire consultant to install the mapping software and to train the staff in usage ◆ Strengthen the liaison with national and international institutions on information systems	Amount of software procured and installed Number of staff trained	Maps produced on disease distribution Consultancy	

		reports	
1.4.6 Develop/revive strategy options for national and regional programmes to control priority diseases ◆ Establish local district surveillance teams ◆ Collect information every Monday morning from districts on priority disease status by telephone ◆ Develop and maintain border controls and checkpoints to enhance surveillance ◆ Ensure availability of quality vaccines (Panvac tested) for administration primarily by private veterinarians, at cost ◆ Develop emergency preparedness plans for priority diseases ◆ Liaise with the Common Service, OAU/IBAR	Number of samples by surveillance teams per year ,per district Number of animals held in the holding ground per year Amount and kind of vaccine imported	Project reports	
1.4.7 Provide appropriate training to ensure capacity for diagnosis and control activities ◆ Train district technical staff in laboratory techniques at Central Diagnostic Lab ◆ Train headqurters and field staff to carry out disease suveillance programmes, disease investigation missions and to collect appropriate samples ◆ Provide short-term training in laboratory techniques to 6 laboratory staff ◆ Train 3 veterinarians in information processing and data base management	Number of tests carried out in district laboratories in Key zones Number of epidemiology reports prepared by trained veterinarians with proper analysis	Project reports Laboratory ledger	
1.4.8 Logistic support ◆ Provide 56 motor cycles to concerned district staff to enable to carry out disease surveillance and control measures ◆ Provide 2 vehicles to the diagnostic and epidemiology unit ◆ Provide O+M for motor cycles and vehicles ◆ Supply operational maintenance to cold chain	Motor cycles used in 28 districts for sero-surveillance	Project reports	

GLOBAL BUDGET FOR PACE UGANDA

Budget for PACE Programme										
CU										
1-2004										
Cost heading	year 1	year 1	year 2	year 2	year 3	year 3	year 4	year 4	Total	Total
	EDF	GoU	EDF	GoU	EDF	GoU	EDF	GoU	EDF	GoU
Enhanced national capacities										
Establish PACE management										
Personnel										
Local personnel										
Headquarters		28,050		28050		28050		28050		
Project personnel										
TA	140,000		140,000		140,000		140,000			
Accountant	12,000		12,000		12,000		12,000			
Administrative Assistant/Secretary	9,600		9,600		9,600		9,600			
Data entrant	3,600		3,600		3,600		3,600			
Driver	21,000		21,000		21,000		21,000			
Messenger	3,600		3,600		3,600		3,600			
	0		0		0		0			
	0		0		0		0			
Epidemiology data specialist	4,500		0		0		0			
Community dialogue specialist	36,000		0		0		0			
Provide bonus for management	5,100		5,100		5,100		5,100			
sub total										
Equipment										
PC	15,000		0		0		0			
Fax	4,000		0		0		0			
Copy machine	4,000		0		0		0			
Mobile telephones	900		0		0		0			
Furniture			0		0		0			
Chairs	2,000		0		0		0			
Office chairs	600		0		0		0			
Tables	900		0		0		0			
Metal cabinets	8,000		0		0		0			
Vehicles	70,000		0		35000		0			
Computer, printer, soft.econ.imp.	5000		0		0		0			
sub total		0	0							

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GLOBAL BUDGET FOR PACE UGANDA

Cost heading	year 1	year 1	year 2	year 2	year 3	year 3	year 4	year 4	Total	Total
	EDF	GoU	EDF	GoU	EDF	GoU	EDF	GoU	EDF	GoU
Running costs										
E-mail, fax, telephones etc.	5,000		5000		5000		5000			
Electricity, water		4,750	0	4750	0	4750	0	4750		
O&M vehicles	7500	7500	7500	7500	7500	10000	7500	10000		
Provide training										
Organise training needs assess-										
ment workshop	5,000		0		0					
National training workshops on economic										
mpact assessment	2,000		0		2000		0			
Train in computer skills	3,400		0		0					
Train communication skills	3,500		0		0					
Organise workshop for lab staff	3,000		3000		3000		0			
Organise workshop for district										
ab staff at Central Lab		3,000		3000		3000		3000		
Train lab staff in good										
aboratory practice			2000		2000		1000			
Train Epid staff in the use of GIS			5000		5000		0			
sub total										
Operational Office Costs	20000		20,000		20,000		20000			
Strengthen NSES										
Personnel										
Appoint district PACE officer	1,000	0	0		0					
Equipment										
Procure office equip. epidem.			0							
Computer	5,000		15000							
Fax	2,000		0							
Copy machine	10,000		0							
Mobile telephones	600		0							
Metal cabinets	7,600		0							
Chairs	300		0							
Office chairs	500		0							
sub total		0	0							

GLOBAL BUDGET FOR PACE UGANDA

Cost heading	year 1 EDF	year 1 GoU	year 2 EDF	year 2 GoU	year 3 EDF	year 3 GoU	year 4 EDF	year 4 GoU	Total EDF	Total GoU
Support epidemio. Surveillance system capabilities										
Personnel										
Equipment										
Running costs										
Rehabilitate livestock movement facilities										
Barbed wire	4,000		0							
Fence posts	4,000		0							
Gates	2,000		0							
Involve UVB,UVA & FVM in training needs assess. Workshop	500		0		0					
Support UVB/UVA activities	5,000		2500		2500		0			
Establish linkage with private secto	1,000		1000		1000		0			
Supervision of quarantine stations	3,000	1,000		1000		1000		1000		
sub total			0							
Strengthen communication										
Personnel										
Communication Officer	9500		9500		9500		9500			
Radio producer/artist	2900		2900		2900		2900			
sub total			0		0					
Equipment										
Procure vehicle	29,000		0		0					
Running costs										
Provide O+M for vehicle	0	5,000	0	5000	0	5000		5000		

GLOBAL BUDGET FOR PACE UGANDA

Cost heading	year 1 EDF	year 1 GoU	year 2 EDF	year 2 GoU	year 3 EDF	year 3 GoU	year 4 EDF	year 4 GoU	Total EDF	Total GoU
Commission economic assess-										
ment of diseases and control										
Personnel										
Secondment of livestock economist										
Collection of bio-economics and epidemiology data				3000		3000		3000		
Liase with Common Service OAU/IBAR	0	500		500		500		500		
sub total	0									

GLOBAL BUDGET FOR PACE UGANDA

Cost heading	Total cost per item									
	EDF	GoU								
Formulate national & regional										
disease control strategies										
Running costs										
Organise 1 workshop for co-ordination unit	3,500		0		3500		0			
Establish working committees		1,000		1000		0		0		
Organise regular meetings for working committees		2,300		2300		2300		2300		
Organise interdistrict meetings	13,300		7000		7000		7000			
Organise regional harmonisation meetings	19,000		10000		10000		8000			
Attend international co-ordination meetings	6,000		6000		6000		6000			
Submit reports of notifiable di-seases to OAU/IBAR & OIE	1,200		1200		1200		1200			
Sub-t	526,100	53,100	292,500	56,100	318,000	57,600	283,000	57,600		
Improved delivery of										
veterinary services										
Privatisation										
schemes										
Running Costs										
Continue evaluating process of PVPs										
Train PVPs in project planning and business manageme	4,000		4000		0					
Bank guarantee fund	140000		0		0					
Veterinary legisla-										
tive framework										
Personnel										
Hire a legal expert	10,000		0		0					
Running costs					0					
Initiate a study of existing legislation	5,000		0							
Establish the legal constraints										

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GLOBAL BUDGET FOR PACE UGANDA

Cost heading	year 1	year 1	year 2	year 2	year 3	year 3	year 4	year 4	Total	Total
	EDF	GoU	EDF	GoU	EDF	GoU	EDF	GoU	EDF	GoU
Community based initiatives										
Running costs										
Train vet auxiliaries and CAHWs in disease surveillance and control	5,000		0		2000		0			
Harmonise their training	2,000		0							
Coordinate the network of private and public veterinarians	2,000		2000		2000		0			
Veterinary auxiliary training										
Running costs										
Upgrade their training	5,000		0		5000		0			
Harmonise and affiliate the training of para-vets with Makerere University (FVM)		1,500		1500		1500		1500		
Standardise the curricula and examinations of public and private training institutions		4,000		4000		4000	0	0		
Communication										
Running costs										
Produce communication materials	10,000		5000		5000		0			
Distribute materials										
Sensitise stakeholders	5,000		2000		2000		0			
Sub-t	189,000	5500	7000	5500	12000	5500	0	1500		
Rinderpest verifiably eradicated										
Rinderpest campaigns implemented in zone A										
Equipment										
Develop strategies and provide R/P vaccine	60,000		0							
Procure vaccination equipment	10,000		0							
Running costs										
Provide O+M for transport		12,000		0						
Provide campaign allowances	26,000	9,000	0	0						

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GLOBAL BUDGET FOR PACE UGANDA

Cost heading	year 1	year 1	year 2	year 2	year 3	year 3	year 4	year 4	Total	Total
	EDF	GoU	EDF	GoU	EDF	GoU	EDF	GoU	EDF	GoU
Continuation of rinderpest surveillance										
Running costs										
Organise 3 teams to carry out sero-mon.surv. in zone A	20,000		20000		20000		20000			
Collect 60 samples from each of 15 districts in B1 per month	20,000		20000		20000		20000			
Carry out wildlife surveillance	28,000		28000		28000		28000			
Promote passive reporting	2,000		2000		2000		2400			
O&M vehicles	24000		12000		12000		12000			
Establish laboratory-based differential diagnosis of rinderpest-like diseases										
Equipment										
Procure laboratory equipment										
Refridgerator	7,500		0		70000	0	0			
Other equipment	10,000		5000		5000		0			
Reagents	10,000		10000		10000		5000			
Running costs										
Test and analyse the collected samples		1,000		1000	0	1000		1000		
Carry out checking of reagents equipment	2,000		2000		2000		2000			
NSES/regional linkages										
Running costs										
Prepare and distribute surveillance forms to the districts	2,000		2000		2000		2000			
Analyse filled forms and prepare reports monthly	2,000		2000		2000		2000			
Establish regional linkages	2,000		2000		2000		1000			
OIE pathway milestones										
Running costs										
Conduct tours in the other countries implementing OIE pathways	15,000		0		7500					

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GLOBAL BUDGET FOR PACE UGANDA

Cost heading	year 1	year 1	year 2	year 2	year 3	year 3	year 4	year 4	Total	Total
	EDF	GoU	EDF	GoU	EDF	GoU	EDF	GoU	EDF	GoU
Finalisation of the emergency preparedness plan										
Running costs										
Constitute the following bodies:										
National animal disease emergency committee		1,000		1000						
Rinderpest emergency task force		500		500						
Rinderpest expert committee		500		500						
Commission all these bodies		1,000		0						
Organise regular committee meetings		3,000		3000						
Organise workshops on emergency preparedness	4,400		4400		0					
Communication										
Running costs										
Produce communication materials on rinderpest eradication	10,000		0		0		0			
Distribute communication material	4,000		0		0		0			
Sensitise livestock owners ahead of vaccination	8,000									
Sub-t	266,900	28,000	109,400	6,000	182,500	1,000	94,400	1,000		
Control of other epizootics										
Conduct surveys of priority diseases										
Running costs										
Produce and distribute priority disease formats to districts		1,000		1000						
Investigate CBPP outbreaks	5,000		3000		3000		3000			

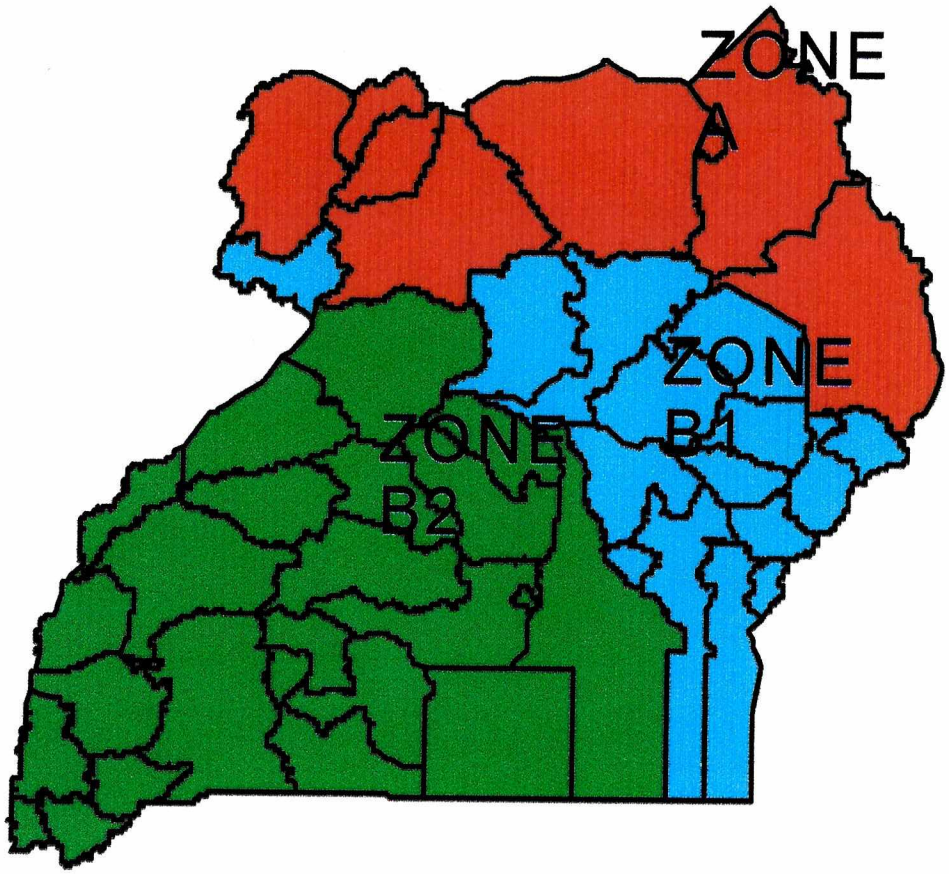
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GLOBAL BUDGET FOR PACE UGANDA

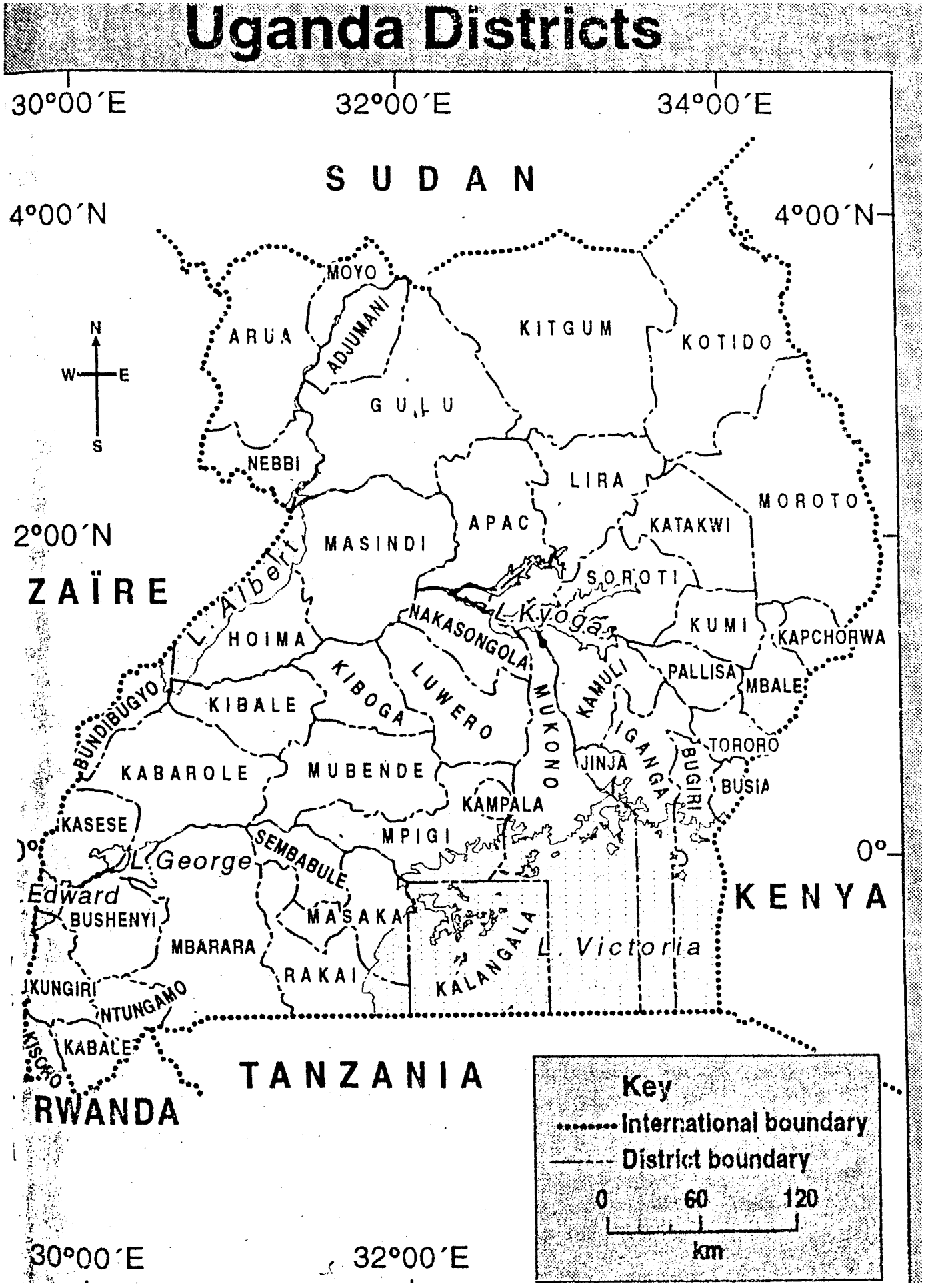
Cost heading	year 1 EDF	year 1 GoU	year 2 EDF	year 2 GoU	year 3 EDF	year 3 GoU	year 4 EDF	year 4 GoU	Total EDF	Total GoU
Surveillance of specific priority diseases										
Running costs										
Produce and distribute disease surveillance formats		1,000		1000						
Establish specific laboratory diagnostic capacity	10,000		0		10000		0			
Sensitise the public about priority diseases and reporting requirements										
Running costs										
Produce communication materials on priority diseases	8,500		4000		4000		4000			
Distribute communication material	5,000		2000		2000		2000			
Sensitise livestock owners on sample collection	8,000		0		5000		0			
Provide information to epidemio-surveillance unit on map distribution										
Running costs										
Strengthen the liaison with national and international institutions on information systems		1,000		1000						
Develop strategy options for national and regional programmes to control priority diseases										
Equipment										
Ensure availability of vaccines for administration by private veterinarians, at cost										
Running costs										

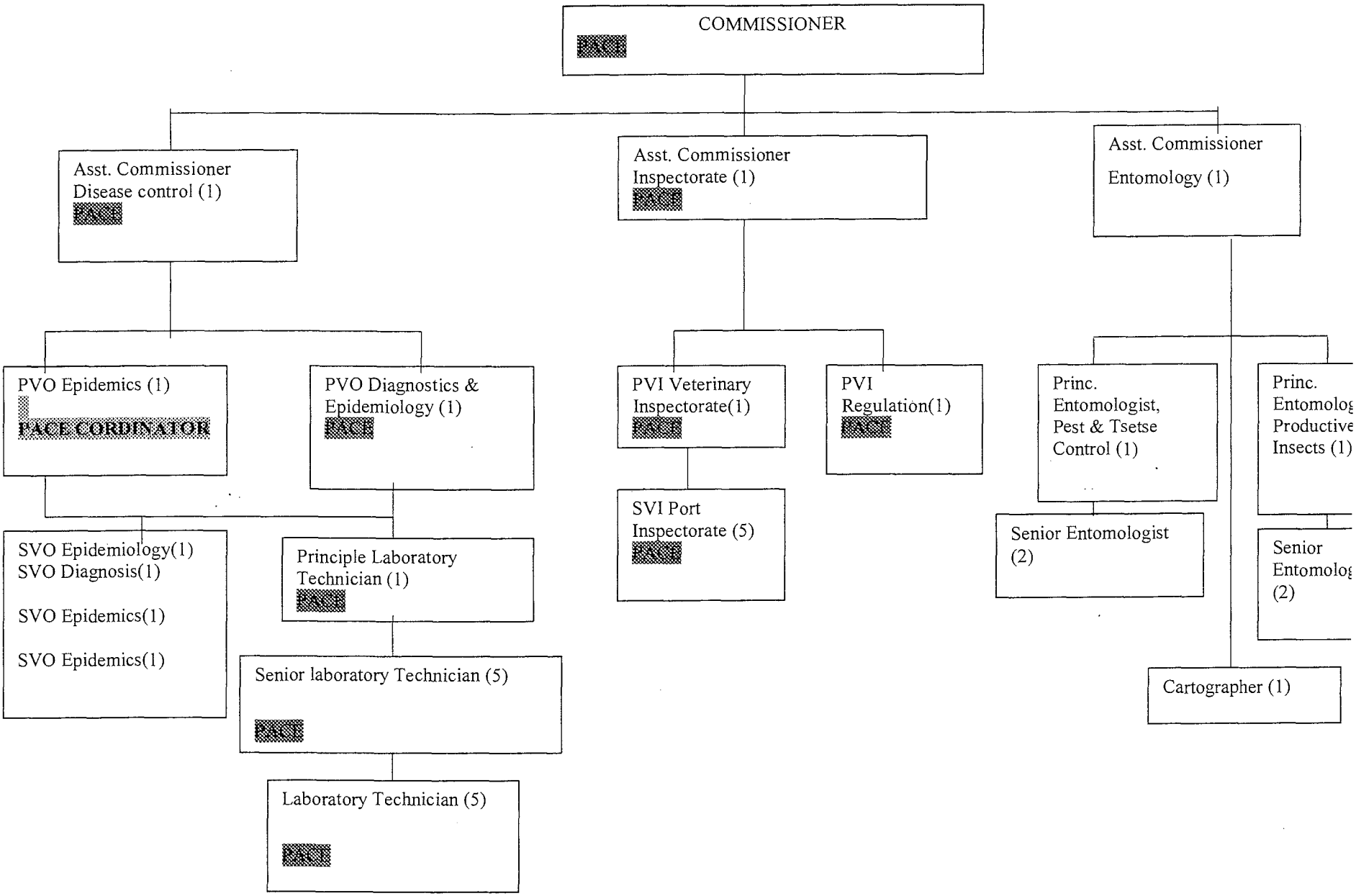
GLOBAL BUDGET FOR PACE UGANDA

Cost heading	year 1	year 1	year 2	year 2	year 3	year 3	year 4	year 4	Total	Total
	EDF	GoU	EDF	GoU	EDF	GoU	EDF	GoU	EDF	GoU
Develop and maintain border controls and check points		2,000		2000						
Print and distribute the emergency preparednes plan	1,000		1000		1000		0			
Establish local district surveillance teams		2,000		2000						
Provide appropriate training										
Running costs										
Train H/Q and field staff to carry out disease surveillance		1,000		1000						
Provide short term training in laboratory techniques to 6 vets	2,000		2000		2000		1000			
Train 3 veterinarians in information processing	5,500		5500		5500		0			
Logistic support										
Equipment										
Provide motobikes to concerned district staff	76,356		76356		0					
Provide operational maintenance to cold chain	20,000		5000		5000		5000			
Running costs										
Provide O+M for the motobikes		20,000		20000						
Provide O+M for the vehicles		10,000		10000						
Sub-T	141,356	33,000	98,356	38,000	37,500	0	15,000	0		
Total	1,122,356	124,600	507,756	105,600	550,000	64,100	272,400	60,100	2,552,512	354,400
Contingencies: +-6%	80400		25718						106118	
	1,202,756								2,658,630	


ZONE
A
ZONE
B1
ZONE
B2

Uganda Districts




COMMISSIONER
PACE
Asst. Commissioner
Disease control (1)
PACE
Asst. Commissioner
Inspectorate (1)
PACE
Asst. Commissioner
Entomology (1)
PVO Epidemics (1)
PACE CORDINATOR
PVO Diagnostics &
Epidemiology (1)
PACE
PVI Veterinary
Inspectorate(1)
PACE
PVI
Regulation(1)
PACE
Princ.
Entomologist,
Pest & Tsetse
Control (1)
Princ.
Entomolog
Productive
Insects (1)
SVO Epidemiology(1)
SVO Diagnosis(1)
SVO Epidemics(1)
SVO Epidemics(1)
Principle Laboratory
Technician (1)
PACE
SVI Port
Inspectorate (5)
PACE
Senior Entomologist
(2)
Senior
Entomolog
(2)
Senior laboratory Technician (5)
PACE
Cartographer (1)
Laboratory Technician (5)
PACE

APPENDIX V1: PERFOMANCE INDICATORS

PERFORMANCE INDICATORS FOR RINDERPEST-LIKE DISEASES

TYPE OF ACTIVITY	PERFORMANCE INDICATOR
Passive disease surveillance	Number of districts submitting general disease reports within 30 days of reporting period to veterinary headquarters, for at least 10 months of the year (80%), between PACE years 1 and 4, inclusive.
Active disease surveillance	Number of herds surveyed by active disease search techniques (participatory, questionnaire-based or clinical inspection) with results reported within 60 days to veterinary headquarters,/ total number of herds, each year between PACE years 1 and 4, inclusive.
	Number of reports by livestock owners of stomatitis/ enteritis (3Ds) received, recorded and reported within 30 days per million heads of susceptible animals annually, between PACE years 1 and 4, inclusive.
Investigations of stomatitis-	Number of reports of stomatitis/enteritis (3Ds)
enteritis syndrome	investigated within 7 days of initial report per million heads of susceptible animals annually, between PACE years 1 and 4, inclusive.
	Number of clinical stomatitis/enteritis (3Ds) cases sampled within 7 days of detection per million heads of susceptible animals annually, between PACE years 1 and 4, inclusive.

Laboratory (differential) diagnosis	Number of cases examined by rinderpest antigen or RND detection techniques with preliminary results reported within 14 days per million heads of susceptible animals annually, between PACE years 1 and 4, inc.
	Number of stomatitis/enteritis (3Ds) cases diagnosed definitively by laboratory methods within 30 days of receipt of samples per million heads of susceptible animals annually, between PACE years 1 and 4, inc.
Serological surveillance	Number of serum samples collected and by C-ELISA, indirect ELISA, VNT with results reported within 90 days of collection per million heads of susceptible animals annually, between years 1 and 4, inclusive.
Wildlife surveillance	Number of serum samples collected and tested with results reported within 90 days of collection per 10 000 heads of susceptible animals



SIGNATURES

1. Proposed by MAAIF – Permanent Secretary

Signed:
Date:

For Permanent Secretary
MINISTRY OF AGRICULTURE, ANIMAL INDUSTRY AND FISHERIES
P. O. Box 102, ENTEBBE

2. Read and agreed by the National Authorising Officer (EDF)

Signed:
Date:

DEPUTY NATIONAL AUTHORISING OFFICER FOR E.D.F.

3. Authorised by the Head of Delegation

Signed:
Date:

Endorsed at Kampala on 13 OCT 2000
Head of Delegation of the Commission
European Development Fund
B. Ryelandt

4. Read and endorsed by the **Director OAU/IBAR**

Signed:
Date: