Report of OAU/IBAR/IGAD meeting of Directors of Livestock Production

KAMPALA, 8-10 DECEMBER 1997

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Report of OAU/IBAR/IGAD Meeting of Directors of Livestock Production (Kampala, 8-10 December, 1997)

OPENING SESSION

The opening session was chaired by Dr. Masiga, Director of OAU/IBAR. He welcomed all participants to the meeting and said the aim of the meeting was to discuss the recommendations of the Fifth Meeting of Ministers Responsible for Animal Resources which took place in Mbabane, Swaziland and come up with a plan of action for the development of the livestock sector in Eastern Africa. To remind participants of the resolutions, Dr. Masiga called on Dr. Solomon Haile-Mariam to present the recommendations.

Review of recommendations of the 5th Meeting of Ministers Responsible for Animal Resources - Dr. Solomon H.M.

On behalf of OAU/IBAR/IGAD, Dr. Solomon presented the resolutions of the meeting, noting that it was one of the best OAU/IBAR meetings ever held because the Ministers discussed all aspects of livestock development in Africa. Nine resolutions were presented on general development policies, marketing and trade, livestock and environment, animal health and genetic resources, research, information management, human resources development, institutional support and food security and poverty alleviation.

Dr. Solomon stated that the present meeting is a follow-up of the Swaziland meeting which gave OAU/IBAR the mandate to implement the resolutions. The meetings objectives are therefore to provide information and analysis on issues affecting the optimal use of regional livestock and feed resources for a sustainable increase in food production and improvement of the welfare of producers and consumers in Eastern Africa. Dr. Solomon justified the need for reprioritisation in livestock development in the region on the basis of:

- Radical changes in policies affecting animal agriculture and marketing of livestock products
- Restructuring of state institutions, privatisation of state enterprises and liberalisation of trade
- Regionalisation concept e.g. ASARECA, IGAD etc.
- Expanded mandate of OAUIIBAR

The issues to be addressed by the meeting are as follows:

- Harmonisation of livestock policies within the region
- Strengthening of human capacity in the region for extension, research and training in animal agriculture

- Optimal use of resources in animal production in the region
- Delivery of improved animal health and production services
- Improvement of marketing within and outside the region

By addressing these issues, the meeting should be able to come up with terms of reference for the formulation and evaluation of a plan of action.

OPENING CEREMONY

Chairman: Executive Secretary IGAD, Dr. Tekeste Ghebray

The opening session was chaired by Dr. Tekeste Ghebray, Executive Secretary of IGAD. He welcomed all participants and indicated that it was the first time a meeting of this magnitude was being organised by IGAD. Drawing from the resolutions of the Swaziland meeting, Dr. Tekeste remarked that the livestock sector has been neglected by policy planners despite the changing climatic, domestic and international policy environment in the sub-region. These changes have had important implications for food security in the sub-region and it is necessary to develop programmes that will improve food security while taking into account the changing policy environment. The need for this is urgent, given that the region livestock sector has an enormous potential for improving food security and raising living standards.

Dr. Tekeste noted that one of IGAD's priority objectives is to promote food security for a vulnerable population while protecting the environment. Two strategies are being used by IGAD to achieve these objectives: Promotion of high yielding crop varieties through research and extension and promotion of livestock development through the control of trans-boundary livestock diseases and veterinary vaccine production. Capacity building in water resource management and integrated information system design is also being used to achieve these objectives.

Dr. Tekeste called on the Directors of Livestock Services to meticulously examine and discuss the issues of livestock development and identify priorities for a solid and action-oriented regional programme that would suit national and regional interests. The outcome of the meeting therefore, should be to come up with a concrete set of Terms of Reference for the elaboration of livestock development programme for eastern Africa. The TOR should involve the private sector.

Recognising the European Union's interest and those of other donors (USA, France and Italy) to support such a programme, Dr. Tekeste noted that IGAD is not an implementing agency, but has requested OAU/IBAR, which has considerable experience and expertise in co-ordinating livestock development programmes in Africa, to co-ordinate the implementation of the programme on behalf of IGAD. IGAD's role will thus be involved in monitoring and evaluation of the programme.

Dr. Tekeste thanked the EU and USMD for their interest and willingness to support livestock development in the region. He also thanked the EU for financing this meeting and OAU/IBAR and CIT for organising the meeting.

Director of OAU-IBAR

Dr. Masiga, was pleased that all stakeholders were able to come together to discuss all matters related to livestock development in the east African region. He stated OAU/IBAR's policy of collaboration rather than competition in the implementation of regional projects. OAU/IBAR's role is simply to co-ordinate activities while implementation is done by individual countries and other executing institutions.

He thanked the Executive Director of IGAD for accepting OAU/IBAR to be the executing organisation of the project and that OAUIIBAR will have to work closely with IGAD and other institutions such as ILRI and ASARECA.

USAID Representative

The Regional Director of USMD, Dr. Donald Mackenzie stated the role of USMD in supporting regional development projects in East Africa. He said USMD places emphasis on the following:

a) Emphasis on clients. Clients must be identified and their needs met

b) Results. There has been increased results from regional organisations

c) Empowerment and accountability. Need to devolve decision making away from hierarchy down to the most appropriate level. This requires human resources development.

d) Team work and partnership

He stressed USAID's willingness to work as a partner with regional organisations such as IGAD and OAU/IBAR.

European Commission

Dr. Werblow congratulated IGAD and OAU/IBAR for planning and organising this meeting which followed the National Authorising Officers meeting in Dar es Salaam to plan and organise this meeting. The EU will continue to work at the continental level beyond rinderpest to control other diseases (CBPP, tryps.). It will continue through the national indicative programs to support national governments to implement livestock related activities. At the regional level, it will continue to support regional policy initiatives, moving away from project to a more co-ordinated program approach to implementation. The move towards a co-ordinated program approach is intended to ensure efficient management including financial accountability.

He said the meeting should come up with areas to address and means to address them. It needs to propose a regional program which should include research that could be financed by the EU. Terms of reference for a program formulation and appraisal should be elaborated.

Minister of State for Agriculture, Animal Industries and Fisheries, Uganda

The Minister of State thanked IGAD and OAU/IBAR for organising the meeting and in particular the EU for funding livestock development projects in the region. While highlighting the importance of livestock in the sub-region and the role it can play in poverty eradication, the Minister of State underscored the importance of alleviating constraints to livestock development. Citing some of the livestock sector reforms undertaken by Uganda, the Minister of State mentioned the progress Uganda has made in the control of trans-boundary diseases.

Noting that the livestock sector has not received as much attention as the crop sector, he called for the adoption of a holistic approach towards livestock development. He called on the conference to consider the control of diseases that endanger human health. The Minister commented on the importance of natural resource management including land and water resources. He was particularly concerned by livestock trans-boundary diseases.

The Minister of State ended by declaring the meeting open.

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On-going and planned operation in the livestock sector in Eastern Africa, Dr. W.N. Masiga.

Dr. Masiga gave a background summary of IBAR and its role as a technical bureau of OAU responsible for animal resources on a continent wide basis. IBAR also works in collaboration with regional organisations (e.g. IGAD, SADC), international organisations (OIE, FAO, WHO), research organisations (ILRI, ICIPE, KETRI, etc.) and professional and academic institutions. IBAR is now liaising with ASERECA and intends to strengthen the ties. Through the OAU/IBAR Ministers meeting held every three years, Directors and Ministers responsible for livestock discuss problems and debate policy matters concerning animal resources over the whole continent. Resolutions of these meetings enable OAUIIBAR to pursue certain courses and carry out a number of tasks on behalf of member states.

OAU/IBAR produces and distributes information on livestock. In the area of animal health OAU/IBAR has succeeded through PARC to eradicate the disease in central and west Africa. In east Africa, there is a mild virus which is currently being brought under control and should be eradicated from the region.

There has also been success in vaccine production and quality control by PANVAC, an institution of OAUIIBAR in Debre Zeit in Ethiopia. OAU/IBAR is concerned with diseases of wild life in order to minimise disease transfer and ensure the survival of wildlife as an econ6mic resource. There are special projects supported by USMD under the GHM which deal with community based animal health delivery.

There is a new program for farmers in tsetse infested areas involving eight countries that will soon start. OAU/IBAR is co-ordinating a regional project for the control of ticks and tick-borne diseases. This was formerly managed by the FAO with funding from European countries.

Election of Bureau and adoption of agenda

Following discussions with participants, Dr. Masiga proposed the following officials for the bureau.

Chairman - Uganda
First vice Chairman: Eritrea
Second vice Chairman: Tanzania
Raporteur: Kenya and Tanzania

These officials were adopted by acclamation

PRESENTATION OF COUNTRY REPORTS

ERITREA (Dr. Zerabruk Abréhe)

Mr. Abrehe gave a brief presentation of Eritrea's country report. He indicated that in Eritrea, a livestock sector policy has been developed with the objective to improve the efficiency of the traditional sector through the provision of livestock services and input supplies, research and extension. He also mentioned that Eritrea has elaborated legislation on land use and farmers security, and has embarked on the improvement of marketing infrastructure.

DJIBOUTI (Dr. Moussa Ibrahim Cheik)

In his presentation, Dr. Cheik said in Djibouti, efforts to alleviate rural and urban poverty are among the major priorities. The aim is to improve livestock production and a legal framework for livestock development has been elaborated. The strategy for development involves a more intensive sanitary control, increased feed supply, development of marketing channels for livestock products, quality improvement, water supply, control of desertification and promotion of integration of crop and livestock production. Djibouti is making efforts to strengthen co-operation with countries in the region in the field of scientific and technical training. Attempts are also being made to control trans-boundary diseases as well as facilitating trade, communication and information exchange.

KENYA (Dr. J.K. Kajume)

Dr. Kajume said that the Kenyan delegation had received information about the meeting late. He added that inadequate information about the meeting was given on the invitation to enable them prepare a country report. However, Kenya does recognise that livestock constraints cannot be addressed within the livestock sector alone, hence the concept of agricultural sector investment program which acknowledges the importance of other players. Kenya has developed a mixed policy involving private and public sectors including beneficiaries. Kenya has also identified what the government should do - core functions, what the private sector should do and common areas for public and private sectors. Currently Kenya is addressing the issue of dairy development policy within the framework of the mixed policy. Animal health service delivery is being privatised and an institutional framework for this is being laid down.

UGANDA (Dr. Ociba)

Dr. Ociba presented the Ugandan country report giving an overview of the importance of the livestock sector in the national economy. Uganda ranks fourth in the region in terms of livestock production although it is not a major exporter of livestock products. However, there is cattle and meat trade with neighbouring countries. Currently, Uganda is undertaking a policy of liberalisation and privatisation with good governance.

There is a strong disease control program. No rinderpest has been reported for several years and there has been no FMD cases reported this year. There is also emphasis on extension-farmer linkages to ensure efficient service delivery. Privatisation of animal health services is also being pursued and there is increased decentralisation of services. Districts are now independent in their activities with the enabling environment guaranteed at the state.

Drug supply was liberalised in 1989, but government remained only with vaccines for strategic diseases such as rinderpest. A Master Plan for the dairy industry was elaborated in 1992 and it has been successful. Uganda no longer imports milk. Currently a Master Plan for meat has been drawn up and is being implemented. Also, a national vaccination program is being developed with the support from GTZ. A national agricultural livestock research programme is being implemented with the aim to improve genetic resources and conservation of final products.

The future of livestock in Uganda is bright. Institutional support to livestock development in Uganda involves the Department of Veterinary Services, universities, NGOs, private sector, etc. There are plans to put 100 vets in private practice.

BURUNDI (Dr. Biyanke Patrice)

Dr. Patrice said that he had not been properly informed about the meeting. Burundi's policy for livestock development is based on the fact that livestock production declined significantly in the last four years. Many animals (34% of cattle) were killed and the health status of animal deteriorated. Presently, a master plan is being elaborated with the objective of reconstituting the herd and improving its genetic potential. The private sector is being included in the development of livestock. A new strategy is being put in place with emphasis on developing livestock farmers associations and the provision of credit to these associations and individual farmers. The major constraints however, have been the suspension of donor funds to Burundi during the last four years. This has had

a negative effect on livestock production, making livestock products scarce and expensive.

Dr. Patrice stressed the need for Burundi to be included in the PARC program, noting that even though Burundi is under an embargo, the need to tackle livestock diseases is urgent if neighbouring countries are to be protected.

ETHIOPIA (Dr. Sileshi Zewdie)

The importance of the livestock sector in Ethiopia was highlighted in view of its large livestock population of over 30 million TLU. The country is undergoing restructuring with transition to a market driven economy. The Ministry of Agriculture has drafted legislation on issues of animal health modeled after accepted international practices. National and regional institutions have been requested to comment on the draft legislation and it is hoped the legislation will soon be in place on epidemic disease control, quarantines and meat inspection, and the licensing and regulation of private animal health delivery. Ethiopia's major trading partners are the Middle East. There is substantial informal export trade with neighbouring countries.

Ethiopia has been prone to livestock diseases with rinderpest being endemic since 1889. No rinderpest has been reported for the last two years and it is about to declare most of the country provisionally free of rinderpest following the OIE pathway. Ethiopia welcomes regional co-operation to prevent the spread of trans-boundary diseases. Its capacity for vaccine production is tremendous.

Research activities in the country are being carried out by three institutions. National agricultural research institute established in May 1997. A commodity approach being followed with 26 national commodity programs, 5 of which are in livestock. A national strategy has been elaborated for the five commodity programs and is being finalised.

RWANDA (Capitaine Antoine)

Dr. Antoine reported that the livestock population of Rwanda has been significantly reduced, owing to the civil unrest in that country. He added that the livestock sector infrastructure is completely run down the last five years Rwanda has not carried out any vaccination program. However, the cattle herd is being reconstituted despite the difficulties. In the last three years the small ruminant population has increased. A study has been commissioned for the livestock sector so as to reorient livestock development towards the long term. The study recommends diversification of livestock production, privatisation of animal health

services with state involvement in strategic disease control. The role of producers has also been defined.

TANZANIA (Dr. Mtei)

Dr. Mtei presented the Tanzanian country report in which he identified the importance of the livestock sector and its resources to the economy. Animal agriculture contributes about 18% of GDP. Domestic production has lagged behind consumption, necessitating increased imports. The country is not open to international trade because the sector has not been developed for this purpose.

The responsibilities of the public and private sectors have been defined within the reorganised set-up. The EC funded livestock project has been instrumental and rinderpest eradication is underway with plans to declare parts of the country provisionally free from rinderpest. Disease surveillance is being strengthened and diagnostic capabilities of regional laboratories is being strengthened. Seventeen private veterinary practices have been established. Demand for animal health services in pastoral areas is high and Community Based Animal Health Delivery is being considered. Cost recovery measures are being put in place and there is increased emphasis on movement controls to eradicate CBPP. Trypanosomiasis is a major challenge in the country and the need to control this disease outweighs the human and material resources available. Tick and tick-borne disease are also a major challenge. There is need for OAU/IBAR and other international organisations to assist Tanzania tackle these diseases.

SUDAN (Dr. El Zubeir Abdel Rahman - Under Secretary, Ministry of Animal Resources)

In his report, Dr. El Zubeir emphasised the importance of animal resources in Sudan, noting that public sector policies encourage privatisation and investments in fisheries, drug manufacture and animal trade. Strengthening and upgrading of capacities in livestock institutions are being ensured. Institutional reforms are also underway. The role of public and private sectors has been defined. Animal production and service delivery are the responsibility of the private sector. The public sector is now creating an enabling environment for the private sector to take over service delivery. Marketing and production systems have been described and the importance of animal health is being emphasised. Vaccines produced in Soba laboratory were specified and the future needs for vaccines, PAAT, trans-boundary diseases and Brucellosis control programme were set out.

PRESENTATIONS AND DISCUSSIONS OF ISSUES

1. POLICY ANALYSIS ISSUES (Chairman: Dr. T.C. Bamusonighe - Uganda)

(i) Policy analysis and harmonisation: land use, land access and risk with respect to livestock services (Dr. Brent Swallow, ILRI)

Dr. Swallow's presentation had two distinct components. The first component was concerned with the process of policy analysis and policy formulation. He raised four key questions: (1) What analysis should be done? (2) Who should do the analysis? (3) What process should be followed to ensure that the analysis is timely, comparable across countries and relevant to national and regional policies? (4) How will results of the analyses be used to support policy formulation?

In addressing the analyses that should be done, Dr. Swallow said it is important to consider the priorities identified by previous regional fora convened by organisations such as ASARECA, IGAD and ECAPAPA. It is also important to consider the various national, regional and international agencies that may have the capacity for policy analysis and the programme that ASARECA has established for agricultural policy analysis in East Africa i.e. ECAPAPA. Networking and collaborative projects involving NARS, international agencies e.g. ILRI and advanced research institutes with co-ordination from agencies like OAU/IBAR could help to ensure that research is timely and comparable across countries. OAU/IBAR and IGAD could facilitate policy formulation at the regional level.

The second component of Dr. Swallows presentation focused on land use, land access and risk. He identified several sources of risk including climatic risk, disease risk and price risk. Climatic and price risks are particularly severe in pastoral areas. Together they contribute to dramatic cycles in the terms of trade between livestock and food crops associated with drought. Mobility is a strategy used by pastoralists to minimise the effects of climatic risk; reductions in mobility may be desirable for disease control but may also impose costs on pastoralists. Reduction in disease risk are desirable from the perspective of individual farmers but may contribute to further overgrazing if there are no restrictions on the use of common pastures.

Dr. Swallow concluded by posing three questions: (1) How can we ensure that reductions in disease risk lead to net gains?, (2) What are the advantages and disadvantages associated with restrictions on mobility? (3) How can we ensure that reduced disease risk does not worsen cycles of herd construction and destruction?

(ii) Public and private sector reform (Dr. Chip Stem -TUSVM)

Dr. Stem's presentation focused on the role of the public and private sectors in the delivery of animal health services. He identified those roles that the government should undertake, those of the private sector and roles that can be shared by the public and private sectors. The role of the public sector is to facilitate and provide an enabling environment for the private sector to deliver animal health services. Policy reform in animal health services has occurred in high potential areas whereas in pastoral areas no reforms have taken place. There is therefore a need to focus on service delivery in these areas because of the high livestock populations and greater cross-border movement of animals. In most pastoral areas, there is basically no health care except vaccination services which are not quite often and reliable.

Dr. Stem proposed a model for animal health service delivery in pastoral areas as a veterinarian-supervised community-based animal health delivery for underserved pastoral areas. After listing the components of such a model, he then identified the roles of the public and private sectors as well as that of veterinary associations in such a model. Dr. Stem cited the advantages of the model, and justified why we should begin with animal health in pastoral areas.

(iii) Data requirements and information management - Dr. Van de Zipp, ICIPE

Dr. Zipp's presentation was based on the papers presented by Drs. Connor and Dale and the outcome of the working group at the livestock policy meeting in Swaziland, August, 1997 and other presentations i.e. Prof. Van Syk for the Nairobi cluster, December, 1997. According to Dr. Zipp, policy formulation need be based on valid data. She noted the following important facts about the role of valid data in policy analysis:

1. There is a continuum between basic, applied research and policy analysis. Research institutes, ministries and the private sector have a need for and access to policy analysis.

2. Policy analysis creates early awareness of new choices, followed by paradigm changes, creating new areas of research and abandoning others.

3. Data sharing and collaboration should become better organised through the national bureau of statistics. External agencies should be encouraged to strengthen the statistical services. Social scientists should use the Internet (website) to share basic household data for varying objectives (crops, animal, 1PM, etc.).

4. Strategies to support the goals of the policy should consider integration of technologies within disease areas (like the 1PM approach in coops and horticulture), between diseases (preventive designs at community level) and between human and animal health (i.e. effects of MDS and malaria).

5. Livestock policy formulation should address the fit with agricultural production systems, the socio-economic benefits and cultural structure and roles of policy/private sector to enhance rural development as a whole.

6. Ownership of the livestock policy is important for the execution i.e. should be client driven. This requires the involvement of many stakeholders in a participatory mode during the process of formulation and implementation.

II HUMAN CAPACITY BUILDING ISSUES (Chairman: Eritrea)

Human resources needs in development of livestock sector in the Greater Horn of Africa (Dr. Musiime - OAU/IBAR)

The presentation examined the cadres of personnel involved in the delivery of Veterinary services, the type of training and the training facilities available in the Sub-region.

It was pointed out that courses taught under the present curricula have adopted, with some little modifications, the curricula used in industrialised countries. In most cases these courses have no relevance to specific local needs. Also there has been less emphasis on practical training. There is therefore a need for a strong link between the training institutions and the governments so that the curricula are modified to serve the local needs without compromising the academic standards.

It was noted that a strategy that would lead to the staring of the available training facilities, especially at the post graduate level, would ensure maximum utilization of such facilities. Also research scientists should as much as possible be trained locally in order for their training to be relevant to the local needs.

It was further pointed out that efforts should be made to train extension service personnel adequately as extension plays an important role in the transfer of technology from the shelves to the farmers.

The presentation concluded by stating that there should be a government policy for the training of personnel for livestock development. The training must be target oriented. All personnel involved in delivery of livestock services should be adequately remunerated as a way of motivating them to do their work diligently.

During the discussion it was noted that farmers operate at different levels. It was therefore recommended that different training packages suitable for each of the level of farmers should be developed. These packages should be used to train farmers in order for them to adopt new technologies.

III. ANIMAL HEALTH ISSUES (Chairman: Dr. Njau - Kenya)

(j) Trans-boundary Diseases of importance and Regional Co-operation for their control (Dr. Jimmy Thomson, OAU/IBAR/PARC)

Dr. Thomson of OAU/IBAR/PARC said in his introduction that diseases know no national boundaries. However, with good regional co-operation and hard work these trans-boundary diseases can be controlled and eradicated and this has been achieved in a number of cases but the diseases to be controlled must be prioritised.

He then said that diseases could be grouped taking account of their importance, as well as their rate and method of spread. There were certain diseases such as rinderpest and CBPP which could only be tackled on a regional basis and could be eradicated. Vector borne diseases required different approaches including targeting the vector such as in the case of trypanosomiasis. Tick borne diseases were more of a national problem but could benefit from regional research and strategies.

The need for good accurate and honest reporting was stressed. He tabled a summary of the incidence of list "A" diseases which the states at the meeting had reported to the OIE in 1996. Few outbreaks of these diseases had been reported with relatively few deaths. It would appear from the officially reported statistics that there were no major disease problems and with these low reported outbreaks it would be difficult to convince donors of the need for support. The real picture was much more serious as the official reports only represented the tip of the iceberg.

He emphasised that surveillance would have to be improved to get a more accurate picture of the actual incidence and distribution of disease. Surveillance should be active as well as just passive.

Laboratory support was essential to ensure accurate diagnosis of diseases. There should be laboratories in provinces in large countries, as well as a central laboratory, which are all fully functional.

There should be an epidemiology unit in each country and the PARC Epidemiology Unit should work closely with the National units. The information produced by these units assists in planning control strategies and also soliciting

donor funds. He showed some of the tools being used in epidemiology, including mapping and nucleotide sequencing of rinderpest etc.

The PARC coordination unit has been an essential part of the whole PARC programme as it brought countries together to work for the common good. It co-ordinated policies, solicited donor funds, drafted projects and supervised their implementation as well as initiating research into important diseases like rinderpest and CBPP.

With regard to the major trans-boundary diseases he said that rinderpest had been largely controlled and had only been confirmed in Kenya and Tanzania this year but was also suspected in Southern Sudan. West Africa were now moving down the OIE Pathway for the declaration of freedom from rinderpest

The new phase of PARC would concentrate on the final eradication of rinderpest, which meant eradicating it from east Africa and surveillance in the other countries. As rinderpest was being controlled CBPP was becoming more important. PARC was supporting research to improve the vaccine and diagnostic tools. The next phase would only have a limited input for CBPP. This disease could only be controlled by a regional approach and its control should be included in any IGAD programme. He then described the importance of other trans-boundary diseases including FMD, tsetse and trypanosomiasis, RVF and AHS.

The importance of having efficient veterinary services which is the basis for any disease control was discussed. The private sector should be involved in the delivery of some services. This would include cost recovery and he described the recent success of contract vaccinations.

He then said that East Africa had the biggest and most diverse population of wild animals in the world and they were an important resource.

Dr. Kock then gave a brief overview of how the spread of rinderpest in Kenya could be traced using wild life. Wild life, which are unvaccinated against rinderpest, act as very good sentinals for the disease and serological studies in them very useful.

Dr. Thomson ended his talk by listing the important conclusions, which were that surveillance and reporting must be improved, the future PARC programme would be concentrating on rinderpest control so CBPP should be included in a regional project. Wild life should be taken into consideration when planning disease control programmes. He concluded by saying that any regional programme should be well co-ordinated.

(ii) Vaccine development production and quality control (Dr. Risto Heinonen, OAU/IBAR/PARC)

Dr. Heinonen's presentation was focused on vaccine development and production in the Greater Horn of Africa (GHA). He noted the high demand for vaccines in Africa due to the high disease incidence and said vaccine development in Africa has depended on subsidies and donor support with very little private sector involvement. Traditional preventive measures have been very costly, government services are inefficient and cost recovery mechanisms are not fully in place to represent true costs.

Dr. Heinonen identified existing vaccine production units in Africa and noted their shortcomings. He also identified the research being done on vaccine development and testing. In particular, he talked of ILRI which has developed the ECF vaccine, Tufts University's thermostable rinderpest vaccine and the transgenic vaccinia vector vaccine developed at the University of California, Davis. OAU/IBAR is fully involved in research and facilitation of the development of vaccines. It is currently collaborating with ILRI to start field trials of the University of California vaccine and is already making use of the Tufts University vaccine in remote pastoral areas.

Dr. Heinonen also talked about the importance of having quality vaccine and that PANVAC, which is established under OAU/IBAR, is an independent unit for vaccine quality control. In addition to quality control, PANVAC also works to establish vaccine strains and cell line banks, which are available upon demand. Currently financed by EU and managed by OAU/IBAR, Japan is also working with PANVAC to strengthen vaccine production and quality control in Africa. Hopefully in the near future PANVAC will be self-sustaining, but will require pan African co-operation in making mandatory quality assurance of all vaccines produced.

IV. ANIMAL PRODUCTION ISSUES (Chairman: Dr. El Zubeir - Sudan)

(i) Indigenous livestock and sustainable development in Africa

Dr. Rege, ILRI

Dr. Rege gave in his introduction a comparative background as a basis for better understanding of the situation concerning various factors related to ruminants in Africa. He stated that 50% of the ruminant biomass is found in East Africa (EA) compared with only 20% in West Africa (WA). Thirty percent of the ruminant biomass is concentrated in arid zones compared with 37% in semi-arid areas. Dr. Rege pointed out that it is estimated that there are 146 breeds of cattle in Africa;

75 of which exist in EA and only 35 in WA. Currently, there is inadequate information about the individual breeds/strains in Africa and there is even less

information on how much they contribute to the national economy. Recognizing that livestock produce food, hides/skins, manure, farm energy, etc., Dr. Rage noted that the is less information on the monetary value of livestock. Dr. Rege underscored the need for research to look at specific needs regarding comparative productivity of livestock, characterisation, conservation and sustainable utilisation of indigenous breeds. An agenda is needed for data collection, analysis and information dissemination to beneficiaries.

(ii) Animal Breeding Services for Countries in the Horn of Africa - M. L. Kyomo

The Horn of Africa is richly endowed with livestock resources. It has more cattle, sheep, goats and camels than any other regions of Africa. Yet animal industries are not well developed to exploit this resource to meet food security needs at household, national and regional levels. The opportunities to exploit this large resource for alleviation poverty in the member states exist. Formulating good policies to guide all stakeholders in animal improvement including implementation plans and regulations to ensure fair play, quality standards and related issues and to guide against damage to the environment should be put in place. The policy guidelines should cover all production systems so that different groups in the society may choose livestock species that can produce good economic returns from related levels of investments. For example, the poor and landless smallholders might invest in commercialisation of poultry which is based on semi-scavenging feeding systems and thus place modest demands on capital, labour and natural resource base. Herd recording for farm management and animal improvement purposes should be introduced and managed by farmers breeding associations, breed societies of farmer livestock production cooperatives. Artificial insemination, embryo transfer are some of the breeding technologies that need to be promoted. Manpower in animal breeding, animal germplasm conservation, development and sustainable utilisation is in short supply and it should be developed. Research and technology transfer in livestock should be strengthened. Funding to strengthen regional cooperation in developing the animal industries in the region should be sought.

V. MARKETING ISSUES (Chairman - Dr. Melewas - Tanzania)

(i) Livestock marketing issues affecting the development of trade in the livestock sector (Dr. Tambi, E. OAU/IBAR/ILRI).

The aim of Dr. Tambi's presentation was to initiate discussion on a number of marketing issues that affect trade in livestock in Africa in general, and to identify those areas that OAU/IBAR/IGAD could begin to focus on to bring about efficiency in livestock trade in the region. He presented a number of facts on

livestock marketing drawn from several countries in Africa that are relevant to the sub-region. This constituted background information for the discussions. First, he looked at livestock trade in Africa within the context of the global market for livestock and livestock products. Next, he looked at those factors that have influenced the pattern of trade in the continent, followed by the effects of trade and marketing policy reforms implemented by some countries. Finally, he identified a number of issues emerging from recent developments in livestock trade and marketing. The issues raised for discussion by the working groups were as follows:

1. How can OAU/IBAR/IGAD harmonise domestic policies so as to improve domestic production and foster trade and marketing of livestock?

2. How can OAU/IBAR/IGAD assist in creating an appropriate policy and institutional environment that is conducive to efficient trade and marketing of livestock?

3. How can OAU/IBAR/IGAD strengthen the capacity of individual countries and regional trade groups to monitor livestock flows and prices and the impact of protective measures on regional market development?

4. What advisory role can OAU/IBAR/IGAD play and what action should individual countries take to individually and jointly reduce livestock marketing costs in the respective countries?

5. What mechanisms should be put into place by national governments and regional trade groups to stimulate private initiative and promote private sector investment in livestock market, transport, processing and storage facilities?

6. What economic, technical and political support can OAU/IIBAR/IGAD provide to foster bilateral negotiations and unilateral reductions in tariff and non-tariff barriers as well as facilitate financial transactions for inter and intra-regional livestock trade?

COMMENTS AND QUESTIONS FROM PRESENTATIONS

(i) Policy analysis

Q. - Dr. Melewas - Tanzania: CBAH looks possible in theory but in practice it is difficult in pastoral areas because there are no basic services in those areas. So what do we do.

R. - Dr. Stem - TUSVM: One way around this problem is to provide services such as education in pastoral areas.

Q. Dr. El Zubeir Abdel Rahman - Sudan: CBAH needs co-ordination of national government, international organisations and NGOs. It has been very successful in Sudan. However, what is there to ensure that the system can be sustainable.

R. - Dr. Stem: The private veterinarian has to have a profit motive.

Q. - Dr. Kajume - Kenya: I would like Dr. Stem to comment on the type of training the **CBAH worker** should have to handle health problems.

R. - Dr. Stem: The training has to be embraced by the community. It is the community to decide who should be trained and the type of training. The training is a slow process which begins with few diseases and then progresses to the other diseases.

(ii) Human capacity building issues

(iii) Animal health issues

C. Dr. Melewas - Tanzania. Reporting figures need to be done accurately. Tanzania reported 375 deaths while there were over 19,000 deaths due to CBPP.

R. - Dr. Thomson. Figures quoted were the ones published in the OIE World Animal Health Report for 1996. Everyone knows the incidence of these diseases was much higher.

Q. - Dr. Heinonen. With new vaccines we need laboratory facilities and quarantine facilities where trials are to be started. Your statement that there is no CBPP reported in Kenya, might not reflect the true situation.

Q. - C. Antoine - Rwanda: Why have there not been vaccine trials with different strains of vaccine for CBPP considering the extensive reactions. They have 5% of vaccinated animals reporting adverse reactions at the site of vaccination.

R. - Dr. Heinonen: The vaccine producers were convinced that the reactions were due to poor vaccination techniques.

R. - Dr. Thomson: Namibia had changed using the T_1 44 strain. Initially they tested it on 1,000 head of cattle with no reactions. This was then increased to 10,000 head under controlled trials, when there were no reactions the full campaign was started. Over 550,000 head had been vaccinated with only 6 adverse reactions. It was important to give the vaccine subcutaniously and to ensure sterility.

(iv) Animal production issues

(v) Marketing issues

C. - Dr. McCarthy - USMD: There is a regional trade study which has been on-going in the region for three years now which raised the same policy issues for the region. This is now a part of ASARECA-ECAPAPA policy network.

Q. - Dr. Rege - ILRI: Livestock numbers in relation to global human population is 15%. The relationship between herd numbers and outputs do not tally. Often hides and skins disappear into the system than meat and thus hides and skins would be a better indicator of trade than meat and milk.

C. - Dr. Mtei - Tanzania: In 1962 the ratio between human and livestock population in Tanzania was 1:1 but now this ratio is 1:0.5 i.e. 27 million people now have a livestock population of less than 15 million.

C. - Dr. James Njau - Kenya: Meat Commission and Tanganyika Packers should be revived as they were useful to pastoralist systems. He proposed that cold stores should be build in strategic areas of the regions to reduce the marketing costs. Diversification already taking place in Kenya as evidenced by some companies in the processing of milk products.

C. - Dr. El Zubeir - Sudan: The issue of marketing is not separate from other livestock issues. It is part of the whole chain of livestock constraints in the region. OAUIIBAR and IGAD need to accelerate marketing and marketing research issues.

R. Dr. Tambi - OAU/IBAR/ILRI: A better picture of marketing issues is got when one looks into these issues at **a** regional of continental level than at a national level. The small range of livestock products being traded in the region is a constraint simply because of inadequate processing and storage facilities for livestock products.

GROUP SESSIONS

WORKING GROUP 1

POLICY ANALYSIS (Chairman: Dr. T.C. Bamusonighe - Uganda).

After a lengthy discussion the group agreed that there was a need for an inventory of existing policies, their contents, relevance and differences across countries and the institutions involved. Particular areas to be addressed included the following:

(1) Marketing of livestock and livestock products

(i) Free trade (What is legal and illegal?)
structure, conduct and performance of output

(ii) markets (formal and informal)
- associated input markets
- consumption preferences by income groups
- Socio-economic characteristics and relative prices
- price determinants

(2) Delivery of livestock services

- delivery pathways (cost recovery - public, private or mixed)
- inputs to be delivered (M, improved genetic materials, extension services, credit, etc.)
- information networks (national and regional)

(3) Reconciling regional priorities and devolution policies

- harmonisation of the implementation of regional policies in the context of the trend of nationals in the region to devolve authority and policy making to sub-national levels.

(4) Nature and determinants of comparative advantage of different production systems

- competitiveness among production systems, agro-ecological zone and competing enterprises
- production scale (large, small)
- degree of market orientation

(5) Impact assessment for setting research priorities

- breeding programs
- animal health
- animal nutrition
- animal husbandry

(6) Inter-regional trade and comparative advantage

- monitor changes in comparative advantage

(7) Impacts of land tenure on productivity and investment

- comparative across zones and countries and over time

(8) Land use and environment

- soil conservation
- environmental sustainability

WORKING GROUP 2

HUMAN CAPACITY BUILDING (Chairman - Eritrea)

The group was of the opinion that since the subject was so wide and diverse, there was a need to carry out an in depth assessment of the needs and priorities for livestock development in the region i.e. a regional livestock development strategy. Therefore this calls for drafting of terms of reference for such an assessment. The following terms of reference were agreed upon:

1. Assessment of training needs for livestock research

The group felt that these needs were well articulated in an ASARECA/ILRI planning workshop held in November 1996 in Kampala - Uganda to identify priorities for the regional livestock collaborative research agenda in the ASARECA member countries. The meeting was attended by representatives of all the 10 ASARECA member countries and its recommendations were approved by the ASARECA Animal Agricultural Research Network Steering Committee as well as by the ASARECA Committee of Directors. The themes recommended and

approved for the Regional Collaborative Research Agenda include a theme on "strengthening NARS capacity to carry out livestock research through training and the provision of technical and specialist information".

The tasks/activities identified under that particular theme include:

- Training for M.Sc. and Ph.D. in a number of areas of specialisation such as animal breeding/genetics; biotechnology/molecular biology; policy and socio-economics; natural resources management; livestock epidemiologists and immunologists; etc.

- Short courses through collaboration with ILRI and other relevant institutions such as on on-farm research; impact assessment; participatory rural appraisal; dairy processing technologies; ruminant nutrition/by-products utilisation; experimental design and data management; diseases management methodologies; diagnostic methodologies for identified diseases; on-farm research techniques; etc.

- Improvement of agricultural information management and delivery systems through collaboration with ILRI and other relevant institutions.

The group felt that the identified activities should be adopted as the basis for capacity building of livestock scientists/research technicians in the region.

2. Training needs assessment for livestock extension

Under this heading the following were recommended:

- Assessment of the current situation of livestock extension - taking inventory
  Identification of demand driven training needs and their related costs

3. Training needs for farmers

Under this heading the terms of reference would be the following;

- Identification of appropriate communication tools to deliver livestock technologies to the farmer
- Assess why the farmers are not taking up the technologies delivered to them.

The team charged with the responsibility of undertaking such a regional livestock development assessment study need to have personnel who are well versed in the

area of operations research, organisation and development and experience in community participatory methods.

WORKING GROUP 3

ANIMAL HEALTH ISSUES (Chairman: Kenya)

This group agreed that for all the priority areas identified it is the responsibility of the OAU/IBAR/I GAD team to facilitate, co-ordinate, and promote in such a manner as to create harmonisation and standardisation within the Greater Horn of Africa. The ultimate goal will be to improve efficiency and competitiveness of the nations of the GHA domestically, regionally, and globally.

The group identified the following areas of importance upon which recommendations will be based:

(1) Research should

a) be conducted with linkages with the field;
b) be demand-driven and farmer oriented;
c) be integrated and co-ordinated regionally and nationally through ASARE CA.
d) place emphasis on important regional diseases. Examples are CBPP and trypanosomiasis vaccine development and diagnostic tools.

(2) Disease Control/Eradication: Priority diseases are

a) Rinderpest - final eradication
b) CBPP - control
c) Tsetse and Trypanosomiasis - control
d) Tick and tick borne diseases
e) Emerging animal diseases including camel diseases (e.g. PPR) -
   i) Preparedness
   ii) Response for control/eradication

(3) Development of a cost-effective Animal Health Information Network,

a) A National and Regional network will be developed that is based on systems of Epidemiology - Surveillance, Monitoring, and Reporting and involving

i) Passive surveillance
That takes advantage of the linkages with private sector veterinarians and community-based health workers for disease identification and initial reporting,

ii) Active surveillance - disease investigation, sero-surveillence, and appropriate techniques including GIS technology.

iii) Laboratory Support that takes advantage of regional, national, and sub-regional linkages and networking; and

iv) Recognises and takes into account the importance and impact of wildlife on diseases and disease control;

(4) Vaccine Production and Quality Control

a) Private sector vaccine production should be fully privatised.

b) Independent government and /or regional quality assurance and regulation.

(5) Farmer's demands vis a vis diverse production systems

a) Guidelines and research methodologies for characterisation of farmer's demands of animal health services in diverse animal production systems in the region shall be developed. Appropriate responses to farmer's needs and demands are to be developed.

(6) Animal Health Delivery should be privatised, but government regulated.

a) In high potential areas -
Private veterinary practices should be the principle vehicle for service delivery.

b) In Pastoral Areas -
Veterinary-supervised community-based / alternative delivery systems should be researched and developed.

c) Government Sanitary mandates should be administered through private sector contract services where appropriate.

(7) Legislation/Policy

a) There should be a review of the national and regional implications of current regulations, laws, and policies with the aim of developing appropriate guidelines to precipitate reforms which increase harmonisation regionally to improve trade and decrease the negative effects of animal diseases. Areas of special emphasis include:

b) Veterinary pharmaceuticals and biologicals

c) The registration of veterinarians.

d) Animal health delivery

e) Enforcement of laws, policies and regulations,
f) Policies relating to tariffs, subsidies, and other barriers to trade, and Export Certification
g) Livestock movement and trans-boundary control

(8) Organisational Structure

The Veterinary Services/establishments should have strong authority with clear policies, effective systems of management and compliance at all levels of government and service provision from the top to grassroots level.

(9) Co-ordination

To achieve a co-ordinated approach to addressing trans-boundary livestock-related issues, a central co-ordination unit and regular and frequent co-ordination/harmonisation meetings shall be necessary.

Recommendations:

OAU/IBAR/IGAD should promote a co-ordinated regional network of national disease surveillance programs. This would define within the region the incidence, distribution and impact of the major livestock diseases, especially those affecting intra-regional and extra-regional trade. These would include those in the OIE list A, the particular regional problems such as trypanosomiasis, TB and zoonosis such as rabies.

WORKING GROUP 4

ANIMAL PRODUCTION ISSUES (Chairman: Dr. El Zubeir - Sudan)

The discussions of the group resulted in the following regional livestock programme:

1. Concept

2. Implementation
   Co-ordination : Global co-ordinator OAU/IBAR Programme execution: Research and development systems of member states at regional and national level

International and regional institutions include: OAU//IBAR, IGAD, ILRI, ICIPE, ASARECA, FAO.

3. Objectives

3.1. Priority areas

A. Characterisation, conservation and sustainable use of indigenous breeds

B. Characterisation of production environment in pastoral and crop-livestock production systems.

3.2. Terms of reference

A. Characterisation, conservation and sustainable use of indigenous breeds:

1. Inventory
   - National figures of different breeds,
   - understanding population trends, understanding production system (see B)

2. On-farm phenotypic characterisation, including production charateristics
   - qualitative
   - quantitative

3. Assessment of genetic diversity at molecular level
   - Within-breed diversity,
   - relationship among breeds,

4. Identification and use of unique/specific attributes.

5. Development of breeding objectives and breeding organisations.
   - Development of productive and adapted animals for stressful environment,
   - Development of delivery systems of appropriate genotypes

6. Systematic comparative evaluation.
   - identification of promising indigenous breeds for specific production environments,
   - evaluation of indigenous and exotic breeds under comparable environments.

7. Economic valuation of the breeds.
   - testing of alternative valuation methods,
   - application of identified methods to estimate the value of indigenous breeds of the region,
   - application of the estimated value to prioritise conservation activities.

B. Characterisation of production and environment in pastoral and crop-livestock production systems.

1. Understanding of physical environment
2. Development of environmentally friendly production technology
3. Improvement of water harvesting techniques and range management
4. Assessment of available feed resources
5. Development of appropriate feeding packages
6. Promotion of utilisation of locally available feeds

8. Co-ordination and harmonisation

1. Responsible person to be availed by OAU/IBAR as full-time co- ordinator
2. An advisory committee consisting of representatives of participating countries and other institutions (stakeholders) involved
3. Advisory committee to meet regularly, in order to follow and co-ordinate various programme components.

WORKING GROUP 5

MARKETING ISSUES (Chairman: Dr. Melewas - Tanzania)

The following priority areas were identified for livestock marketing in the region: OAU/IBAR/IGAD to take measures to:

- Harmonise: Veterinary rules and regulations; permits for animal movement within and across borders; quality standards for livestock products; domestic and international trade policies (licences, import and export quarters, levies, etc.); and tariff and non-tariff barriers.

- Set up livestock marketing information system in each member country and ensure information exchange among member countries and between regions on prices, livestock numbers, quantities of products available, etc.

- Support national systems to link up with early warning systems and co-ordinate information exchange between countries and with countries outside the region.

- Carry out a livestock census at the regional level to account for trans-boundary movement of animals (also wildlife census).

- Establish regional stock routes with health, grazing and water facilities and set up a system that guarantees security in grazing areas to enable better use of available grazing areas and less environmental impact.

- Restore traditional rules and authorities as a measure for conflict resolution and good will.

- Assess pastoral production and marketing strategies to understand pastoralist motivations to market and the incentives they have to adopt new technologies.

- Assess public health hazards associated with informal marketing of livestock products and elaborate appropriate regulations on livestock products that guard public health but do not jeopardise the benefits of liberalisation.

- Institute cost recovery for inspection and certification of livestock products and other services associated with marketing.

- Assess the effects of macro-economic, regional/world market factors on the competitiveness of the region's livestock products (e.g. access to European and middle east markets)

- Provide an enabling environment for private sector provision of information, access to credit, regional groups to compete with traders from other groups, licensing procedures eased to encourage new firms and avoid discrimination

- Set up a mechanism for arbitration of trade disputes.

DISCUSSIONS AND COMMENTS FOLLOWING GROUP DISCUSSIONS

Dr. Denis McArthy Wondered whether the issues of privatisation of veterinary services and community delivery of animal health services have been considered in any of the discussions. Vaccination policy is one area IGAD should look into. There is a need for IGAD to raise the quality of policy. It is necessary to prioritise the issues being discussed. In terms of regional concerns, vaccination is one area that we should set quality since it is a common good that can be provided by either public or private.

Dr. Ndikumana Co-ordinator of ASARECA. Issue of privatisation is one that should be looked into.

Dr. Solomon H.M. Issue of private veterinarians will be discussed this afternoon. This issue was discussed in Mbabane and a recommendation was adopted. A number of private persons have been invited to discuss these issues.

Dr. Brent Swallow (ILRI) The issues raised in his questions were proposed to be included in the TOR

Dr. Kajume (Kenya) There is a need to include gender issues in the TOR.

Dr. Zipp (ICIPE) Supported the proposal on the inclusion of gender issues since the work that ICIPE does deals with training in rural communities.

Dr. Mtei - Tanzania. The retirement age of 55 years creates a problem in the scarcity of human resources.

Dr. Ociba (Uganda) The problem raised by Tanzania is pertinent to Uganda because the structures are not there. Civil service reform also affects the provision of these services.

COMMENTS FROM REPRESENTATIVES

European Union Representative

Dr. Werblow congratulated IGAD and OAU/IBAR for the efficiency in organising the Kampala regional meeting at a very short notice following the Dar-es- Salaam meeting of the National Authorising Officers. After briefly presenting the regional indicative aid program for Eastern Africa and its main objectives in the area of food security and more broadly in the natural resources sector, Dr. Werblow recalled the two major objectives of the Kampala consultation meeting which were (1) making the first steps to provide for a coherent regional framework for livestock development for Eastern Africa which would incorporate a number of priority sub-programs and networks and (2) to identify the broad areas for action, the problems to be addressed and the resources to be mobilised.

Coming to the basic principles for defining activities to be undertaken at regional level, Dr. Werblow outlined the following major points:

- Provide support and advise to the national level which remains the main operational level

- Act directly on issues of common interest for the region
- Co-ordinate and harmonise policy and regulatory frameworks
- Development of a regional livestock strategy

French Co-operation

The French co-operation is fully convinced of the usefulness of regional co-ordination and harmonisation in many issues related to livestock production

and animal health. The comparative advantage of regional approach has been demonstrated in marketing issues. Harmonisation can facilitate the development of exchange within an economic zone. Common measures with regard to imports have been very useful for the livestock sector in West Africa for example.

Marketing issues and trade relations between the regional member states was well articulated by the meeting. Another issue where there is some advantage to a regional approach is the evolution of production of production systems. Population increase brings about intensification and an increase in productivity. Technology and information exchange based on best practices existing in some countries within the zone should be capitalised upon through a regional initiative.

The deliberations in the meeting did not emphasise much on the role of the economic sector in evolution of production systems. Economic operators (farmers, firms, etc.) play a key role in intensification (e.g. dairy and poultry). This should be taken into account in the process of preparation of a regional program.

As a bilateral donor, the French Development Fund can fund national projects related with intensification especially in pen-urban areas. At the regional level the co-operation will support the decisions of the meeting, especially to facilitate the relationship between administrative and private operators.

As an important contributor to the European Development Fund, the process engaged in this meeting will be supported by the French co-operation.

USMD Representatives (Dr. Dennis McCarthy, Chief Office of Agriculture, Environment and Engineering, USMD, East and Southern Africa Regional Office)

Dr. McCarthy gave an example of the process followed by the Global Livestock CRSP to develop proposals for livestock development. This CRSP exercise was a multi-tiered process that had top-down, middle level and grass-roots inputs. Five hundred thousand dollars was spent in the planning phase, that resulted in 4 excellent proposals. The regional NARS and NGO community and private sector in conjunction with ASARECA, identified a series of problem models (problems and best hypothesis about the factors causing the problem), these were prioritised and turned into RFSs to which Assessment Teams (Ats) responded. They chose the best AT proposals and funded them for the assessment phase. They then had 9 months to analyse their problem model,

team build, get grass roots input, modify their model and team as a result of their assessment, and come back with the full proposal. The full proposals were then competitively awarded based on quality.

This was an efficient process which used existing knowledge and a small amount of existing resources to arrive at regional priorities. It provided quality assessment of problems. One clear message that emerged from the work was that problem models, as perceived by middle level managers and scientists, were often very different than those that emerged after on the ground assessment of the problem. The assessment phase was highly productive and very useful for in-depth analysis to set future priorities and understand the constraints on the livestock sector in general.

Dr. Roger Simmons, Senior Co-ordinator - Presidential Initiative for the Greater Horn of Africa (GHA), Washington, D.C.

Dr. Simmons stated that the characteristics of successful intervention include consultations the farmers and providing an enabling environment for the private sector. The role of government is to set legal and regulatory facilities, monitoring, set standards and control. Governments role then should be to set up a level playing field for all the actors concerned. Regional harmonisation of policies is a main objective for the GHA. Improved policies can enhance food security, reduce civil strive, and ultimately improve living standards of the people concerned. USMD supports IGAD to take the findings of the livestock expert, improve development projects, derive recommendation for member states, and facilitate the high level dialogue with policy advisors and key decision makers. In this way the excellent work of livestock scientists,

researchers and social scientist can contribute directly to raising the quality of life of the citizens of this region.

DFID (Department for International Development) Representative

Dr. Freeland said that DFID had limited funding for regional level assistance. DFID has a set of criteria against which assistance is offered. The main thrust being poverty elimination and removal of inequality. This can be achieved through various ways. Assistance should be towards sustainable development. Human resource development is a crucial area towards achieving sustainability. Natural resource sector development is another. Future outcomes of Kampala conference will assist in IGAD member states having harmonised regional policies for coherence and that this coherence at regional level will certainly attract donor funding.

Greece Co-operation

Greece is not a donor for Eastern Africa region. The Greek Ministry of Agriculture is involved in Central and West Africa mainly in bilateral assistance. From 1998, Greek co-operation will widen its activities especially for East Africa. Greek Cooperation has noted that there are well established and functioning fora for discussion in the region and this forms a good basis for future co-operation. Priority areas were well noted and these will be submitted to Greek Cooperation for funding consideration under EC framework.

Austrian Co-operation

Austrian Development Co-operation the field of livestock for East Africa works in six countries in Africa but in Eastern Africa, they are in Uganda, Ethiopia and Rwanda mainly for the dairy sub sector development. Projects are also running in Tanzania, Uganda and Ethiopia.

Italian Co-operation

Italian Co-operation has been supporting the IGAD initiatives. This commitment is genuine. Bilaterally, Italy is involved in various countries in East Africa. Further, it operates under the framework of EC. Livestock is becoming increasingly more important towards achievement of food security,

job opportunities and poverty alleviation. The sub-region is witnessing radical changes and livestock will keep playing an important role in the local economy. Demand for animal commodities will increase. All this will be a challenge for the livestock services. Policy definition and harmonisation is a key role for IGAD mandate. Human capacity building should be towards the farmers needs as well as research should also be farmer focused and more practical-oriented. Under many circumstances, the private sector has proved that it is efficient in the delivery of specific livestock services. Italy confirms its support to the IGAD secretariat.

Netherlands Representative

Poverty alleviation and food security at the rural family level are major objectives for the Dutch government assistance in East Africa. The Netherlands is participating in development activities in East Africa through

FAO and EU. The initial emphasis of Dutch assistance was on sectoral approach but now the current approach is rural development with emphasis on the stakeholders at district level. Some national livestock programs are on-going in Kenya, Uganda and Tanzania in the area of dairy development.

Discussion session

Comment: Donors should have confidence in local manpower as much as possible.

Comment: Concept of unification of livestock services is confusing. When are we ever going to develop the livestock sector if all the emphasis is unification and holistic approach.? The philosophy is that the farmer should be confronted with a total package as he/she is faced with a myriad of constraints.

USMD The ability to alleviate farmers constraints is a function of many factors. Holistic approach **is** just a pragmatic method in which livestock development is important.

EU There is a lot of confusion between sectoral and holistic approaches but at the end of the day, everything boils down to achieving the development objectives.

Uganda Bottom-up or grassroots approach is being implemented in Uganda.

Question to DFID Sustainable development as dealt with by DFID is to reduce those people who are dependent on agriculture? Are you advocating industrialisation? DFID has limited resources yet it says that it wants to alleviate poverty by 2015 AD?

DFID response Personal view that one way to reduce poverty is to reduce people directly dependent on agriculture. This may be through development of agro-based rural industries. DFID has limited resources for regional level

Question Italian Co-operation does not encourage basic research. Dr. Rege was advocating the basic research for indigenous breed characterisation at DNA level which is basic research. What is your response?

Italian co-operation response Most CGMR and NARS are focusing on adaptive research. but this does not preclude some basic research which contributes towards adaptive research results.

Annex 1

DRAFT TERMS OF REFERENCE

Report of OAU/IBAR/IGAD Meeting of Directors of Livestock Production (Kampala, 8-10 December, 1997)

DRAFT TERMS OF REFERENCE

For a formulation and assessment study to establish a regional programme for livestock development in Eastern Africa.

INTRODUCTION

The livestock sub-sector contributes over 25% of agricultural GDP and has enormous potential for improvement. Livestock produce milk, meat, manure, draft power, hides and skins that are vital sources of revenue and food security and inputs for cropping and agro-industries. The wide distribution of livestock in pastoral, crop-livestock smallholder and pen-urban agriculture makes it a prime candidate for development. Yet it has been relatively neglected. Concerted action is required to realise the full potential of livestock to contribute to the development of East African countries.

BACKGROUND

This proposal originated as an IGAD priority area. Following consultations Burundi, Rwanda and Tanzania were included to form a more cohesive East African programme.

These terms of reference were developed during the IGAD/IBAR/EU Meeting on Livestock Development held in Kampala 8 - 10 December 1997. Reference was

also made to the conclusions and recommendations of the 5th meeting of Ministers Responsible for Animal Resources in Africa held in Mbabane 4 - 8 August 1997. These meetings identified the broad areas of intervention, the main problems and constraints to be addressed and the means to be mobilised to assist public and private stakeholders contribute fully to realising the potential of livestock in pastoral and crop-livestock systems.

In the past decade, the region has witnessed radical changes in policies affecting animal agriculture and the marketing of the livestock products including restructuring of state institutions, privatisation of state enterprises and liberalisation of trade. This has been accompanied by a growing awareness of the advantages of regionalisation as evidenced by the revitalisation of IGAD and the expanded mandate of OAU/IBAR.

Objectives of the regional programme

The regional programme is to provide support at the national level, and co-ordination and harmonisation at regional level in addressing problems of common interest.

OBJECTIVES OF THE STUDY

Analyse the problems and formulate a comprehensive support programme for livestock development in the region. This will include:

- formulation of proposals and requirements for implementation;
- identification of the physical and financial means to be mobilised;
- identification of the comparative advantages of potential operators and actors;
- proposing structures and criteria for management, co-ordination, monitoring and evaluation;
- appraising of the technical, economic and financial aspects of the programme; and
- preparing a financing proposal.

Implementation procedures

It is proposed that this study be carried out after a pre-qualification exercise under EDF procedures. It is expected that the study will require between 12 and 18 consultancy person-months over a period of 6 months.

Broad areas and issues to be studied

The following conclusions and recommendations of the Kampala meeting have addressed issues in the following subject areas: policy analysis, human capacity building, animal health, animal production and marketing.

POLICY ANALYSIS

The group was chaired by Dr. T.C. Bamusonighe (Uganda).

It was agreed that there was a need for an inventory of existing policies, their contents, relevance and differences across countries and the institutions involved. Particular areas to be addressed by the study include the following:

Report of OAU/IBAR/IGAD Meeting of Directors of Livestock Production (Kampala, 8-10 December, 1997)

1. Marketing of livestock and livestock products

- affects of trade liberalisation;
- structure, conduct and performance of output markets (formal and informal);
- associated input markets;
- consumption preferences by income groups;
- socio-economic characteristics and relative prices; and
- price determinants.

2. Delivery of livestock services

- delivery pathways (cost recovery - public, private or mixed);
- disease control both trans-boundary and national
- inputs to be delivered (M, health services, improved genetic materials; extension services, credit, etc.); and
- information networks (national and regional).
- Veterinary pharmaceuticals and biologicals,
- The registration of veterinarians.
- Enforcement of laws, policies and regulations,
- Export Certification
- Livestock Movement and trans-boundary disease control

3. Reconciling regional priorities and devolution policies

- harmonisation of the implementation of regional policies in the context of the trend of nations in the region to devolve authority and policy making to sub-national levels.
- Review of the effects of decentralisation upon functional chains of command and the need to strengthen linkages (in both directions) between the different levels of devolved administrations (e.g. local - district - provincial - national - regional)

4. Nature and determinants of comparative advantage of different production systems

- competitiveness among production systems, agro-ecological zone and competing enterprises;
- production scale (large, small); and
- degree of market orientation.

5. Impact assessment for setting research priorities

- breeding programs;
- animal health;
- animal nutrition; and
- animal husbandry.

6. **Intra-regional trade in livestock and livestock products -comparative advantage**
   - monitor changes in comparative advantage

7. **Impacts of land tenure on productivity and investment**
   - comparative land tenure and land use arrangements across zones and countries and over time
   - impact on the environment (soil conservation environmental sustainability)

HUMAN CAPACITY BUILDING

The meeting came up with the following terms of reference for carrying out such an assessment of human capacity needs.

1. **Assessment of training needs for livestock research**

   It was agreed that the training needs for livestock research needs were well articulated in an ASARECA/ILRI planning workshop held in November 1996 in Kampala - Uganda to identify priorities for the regional livestock collaborative research in the ASARECA member countries.

   The themes recommended and approved for the Regional Collaborative Research Agenda include a theme on "*Strengthening NARS capacity to carry out livestock research through training and the provision of technical and specialist information*". It was agreed that the identified activities should be the basis for capacity building of livestock scientists/research technicians in the region. These include:

   - Training for M.Sc. and Ph.D. in a number of areas of specialisation such as animal breeding/genetics; biotechnology/molecular biology; policy and socio-economics; natural resources management; livestock epidemiologists and immunologists; etc.

   - Short courses through collaboration with ILRI and other relevant institutions such as on on-farm research; impact assessment; participatory rural appraisal; dairy processing technologies; ruminant nutrition/by-products utilisation; experimental design and data management; diseases management methodologies; diagnostic methodologies for identified diseases; on-farm research techniques; etc.

   - Improvement of agricultural information management and delivery systems through collaboration with ILRI and other relevant institutions.

2. Training needs assessment for livestock extension

Under this heading the study would:

- taking inventory of the current situation of livestock extension;
- identify demand driven training needs and their related costs; and
- identify the institutions that train extension workers and review their curricula against identified needs.

3. Training needs for farmers

Under these heading then some terms of reference would be the following;

- identify the appropriate communication tools to deliver livestock technologies to the farmer;
- assess why the farmers are not taking up the technologies delivered to them; and
- identify the institutions that train farmers and review their curricula against identified needs.

The study team will need to have personnel who are well versed in the area of human capacity building, organization and development and experience in community participatory research and extension methods.

ANIMAL HEALTH

The areas of importance upon which recommendations will be based include:

1. Disease Control/Eradication

Priority diseases issues to be reviewed are:

- rinderpest (eradication);
- CBPP , FMD, and PPR (control);
- tse tse and Trypanosomiasis (control);
- tick and tick borne diseases (control);
- emerging animal diseases including camel diseases; and
- emergency response for control/eradication.

2. Development of a cost-effective Animal Health Information Network.

The study will review:

- the need and prospects for a national and regional network for epidemiology, disease surveillance, monitoring, and reporting. This will include linkages with private sector veterinarians and community-based health workers for disease identification and initial reporting;
- development of modern technologies including GIS for surveillance and monitoring of diseases;
- the collection of data for animal health impact assessment.
- laboratory support that takes advantage of regional, national, and sub-regional linkages and networking; and
- the comparative importance and control of diseases shared between livestock and wildlife.

3. Vaccine Production and Quality Control

The Study Team will review privatisation of vaccine production with Independent government and /or regional quality assurance and regulation. Also a review of the availability and delivery of vaccines in the region.

4. Farmer's demands vis a vis diverse production systems

The need for guidelines and research methodologies for characterisation of farmer's demands of animal health services in diverse animal production systems in the region shall be reviewed.

5. Delivery of Animal Health Services

The Study Team will review privatised animal health delivery services and attendant government regulations. The accomplishment of government sanitary mandates should be considered with a view to delivering them through private sector contracts where justifiable.

In high potential areas

- private veterinary practices should be assessed for efficacy as the principle vehicle for service delivery
- In Pastoral Areas
- recommendations will be made for the development and regulation of veterinary-supervised community-based / alternative delivery systems.

6. Research

Research should be:

- conducted with linkages with field;
- demand-driven and farmer oriented; and

- integrated and co-ordinated regionally and nationally through ASARECA.

Special emphasis shall be placed on important regional diseases. The study team will review CBPP and trypanosomiasis vaccine development and diagnostic tools.

7. Organisational Structure

The study shall review the various existing veterinary services/establishments to determine the effectiveness of linkages between local, district, national, and regional authorities with the aim of assuring clear and effective implementation of policy, administration of services, and two-way flow of information.

Animal production

Priority areas were:

1. Characterisation, conservation and sustainable use of indigenous breeds

The study will undertake a review of the status of the following:

- A breed Inventory
- On-farm phenotypic quantitative and qualitative characterisation
- Genetic diversity at the molecular level within and among breeds
- Identification and use of unique/specific attributes.
- Development of breeding objectives and breeding organisations.
- Development of productive and adapted animals for stressful environment,
- Development of delivery systems of appropriate genotypes
- Systematic comparative evaluation of promising indigenous breeds for specific production environments and an evaluation of indigenous and exotic breeds under comparable environments.
- Economic valuation of the breeds including testing of alternative valuation methods, application of identified methods to estimate the value of indigenous breeds of the region, application of the estimated value to prioritise conservation activities.

2. Characterisation of production and environment in pastoral and crop-livestock production systems

- Understanding of physical environment
- Understanding of the production purposes of livestock in the different farming/livelihood systems

- Development of environmentally friendly production technology
- Improvement of water harvesting techniques and range management
- Assessment of available feed resources
- Development of appropriate feeding packages
- Promotion of utilisation of locally available feeds.

MARKETING

Priority areas for livestock marketing

The Study will evaluate the need and feasibility for the establishment of a livestock marketing information system in each member country and ensure information exchange among member countries and between regions on prices, livestock numbers, quantities of products available The study will evaluate the need and feasibility for the establishment of a livestock, etc.

The study will consider:

- approaches to standardisation of animal product description
- the need, purpose, and costs of alternative means of conducting livestock censuses at the regional level. The census will account for trans-boundary movement of animals including wildlife;
- establishment of regional stock routes with health, grazing and water facilities;
- systems that guarantee security in grazing areas to enable better use of available grazing areas and reduces adverse environmental impact; measures to restore traditional rules and authorities for conflict mitigation;
- pastoral production and marketing strategies to understand pastoralist motivations and incentives to adopt new technologies;
- public health hazards associated with informal marketing of livestock products;
- appropriate regulations on livestock products that protect public health without jeopardising the benefits of liberalisation;
- cost recovery for inspection and certification of livestock products and other services associated with marketing;
- the effects of macro-economic, regional/world market factors on the competitiveness of the region's livestock products (e.g. access to European and middle east markets). This will include the effects of "dumping" of cheap products on regional markets.
- the establishment of enabling environment for private sector provision of information, access to credit, regional groups, and mechanism for arbitration of trade disputes.

The study team should consult with all stakeholders including the private sector to ensure relevance of reforms

Annex 2

AGENDA

KAMPALA 8 – 10 DECEMBER 1997

Monday 8th:	
08.30-09.0	Registration Chairman OAU/IBAR
09 00-09.15	Recommendations of the 5th Meeting of Ministers Responsible for Animal Resources and orientation on expected outcome for the present meeting– Dr Solomon H.M.
09.15-1100	Country Reports
11.00-11.30	**COFFEE BREAK**
11.30.12.25	Opening ceremony Chairman – IGAD. - Executive Secretary IGAD - Director OAU/IBAR - USAID Representative - EU Representative - Minister of Agriculture – Uganda
12.25-12.30	Election of Bureau and Adoption of Agenda
12.30-13.00	Ongoing and planned operation in the Livestock Sector in Eastern Africa – Dr. W. N. Masiga (OUA/IBAR)
13.00-14.30	**LUNCH BREAK**
14.30-15.30	Policy analysis Issues – Chairman, Uganda. - Policy analysis and harmonisation, land use access and risk with respect to livestock services – Dr. Swallow, ILRI - Public and private sector reform – Dr. Stem, TUSVM. - Data required and information management - Dr. Van de Zipp, ICIPE
15.30-16.00	Human Capacity Building Issues – Chairman, Eritrea Capacity for extension, development and research activities including organisation incentives and community participation – Dr. J. T. Musiime, (OAU/IBAR).
16.00-16.30	**COFFEE BREAK**
16.30-18.0	Working Groups Group I – Policy Analysis (Chairman – Uganda) Group II – Human Capacity Building. (Eriterea).
19-20.30	Reception

Tuesday 9th:

08.30-09.00	Presentation Group I
09.00-09.30	Presentation Group II
09.30-10.0	Discussion.
10.00-10.30	**COFFEE BREAK.**
10.30-11.30	Animal Health Issues Chairman – Kenya - Transboundary diseases of importance and Regional Cooperation for their control – Dr. J. W. Thomson, OAU/IBAR/PARC. - Vaccine development production and quality control – Dr. Heinonen, OAU/IBAR/PARC.
11.30-12.30	Animal Production – Chairman, Sudan. - Indigenous Livestock and Sustainable development in Africa – Dr. Rege, ILRI. - Animal feed distribution and comparative advantages of feed and seed production, Prof. Kiomo – Ministry of Agriculture, Uganda.
12.30-13.00	Discussions.
13.00-14.30	**LUNCH BREAK**
14.30-15.30	Marketing Issues - Chairman, Tanzania. - Marketing issues affecting the development of trade in livestock sector products for the region – Dr. E. Tambi, OAU/IBAR/PARC/ILRI
15:30 16.00-16.00	Discussions
16.00-16.30	**TEA BREAK**
16.30-18.30	Working Group Group I, Animal Health Issues (Chairman – Kenya) Group II, Livestock Production Issues (Chairman - Sudan Group III, Marketing Issues (chairman – Tanzania).

Wednesday 10th.

08.30-09.00	Group I presentation
09.00-09.30	Group I discussion
09.30-10.00	Group II presentation
10.00-10.30	Group II discussion
10.00-10.30	**COFFEE BREAK**

11.00-11.30	Group III presentation
11.30-12.0	Group III discussion
12.00-13.0	Donor comments and discussions
13.00-14.30	**LUNCH BREAK**
14.30-17.30	Presentation of recommendations (Chairman – Director OAU/IBAR)
17.30-18.0	Closing ceremony (Executive Secretary of IGAD)

SPEAKERS SUMMARY FOR IGAD MEETING KAMPALA 8TH TO 10TH DECEMBER

Program coordinators and moderators = 1) Dr. Zziwa IGAD Food Security Officer,
2) Dr. Solomon Haile Mariam - Chief Livestock Projects Officer

PLAN OF WORK TOPICS FOR DISCUSSION	NAME OF SPEAKER	ORG. MEETING SPEAKERS	Time allocated to whole topic	Rapporteur for session
TRODUCTORY TOPICS				
ew of recommendations made by the 5th OAU Ministers nsible for Livestock Production, Swaziland, Aug. 1997 and ition to objectives and modalities of this IGAD Livestock meeting	Dr. Solomon Haile Mariam	OAU / IBAR	20	Dr. E. Tambi, OAU / IBAR / PARC
LICY ANALYSIS ISSUES:				
analysis and the harmonisation of policies and legislation, with to livestock services	Dr. Brent Swallow, ILRI		60	
and private sector reform	Dr. Chip Stem, TUSVM	OAU / IBAR / PARC-VAC		
se access and risk	Dr. Brent Swallow, ILRI	ILRI		
quired and information management	Akke van de Zipp, ICIPE	ICIPE		
MAN CAPACITY BUILDING ISSUES:				
y for extension, development and research activities including ation, incentives and community participation, with reference to needs	Dr. J. Musime, IBAR	OAU / IBAR	30	Mr. Maina, OAU / IBAR / PARC
MAL PRODUCTION				
ous livestock and sustainable development in Africa	Dr. E. Rege, ILRI	—	60	Dr. R. Heinonen, OAU / IBAR / PARC
feed distribution and comparative advantages of feed and seed ion	Prof. M.L. Kiomo, Min of Ag. Uganda			
MAL HEALTH ISSUES:				
oundary diseases of importance to the region with reference to emiological and diagnostic needs to bring about their control	Dr. Thompson, PARC	OAU / IBAR / PARC	60	Dr. C. Stem, OAU / IBAR / PARC-VAC
development, production and quality control	Dr. Heinonen, PARC	OAU / IBAR / PARC		
RKETING ISSUES:				
ng issues affecting the development of trade in livestock sector for the region	Dr. E. Tambi, PARC	ILRI/PARC	45	Mr. Maina, OAU / IBAR / PARC

File = Summary of speakers 12-02-97
02/12/97

Annex 3

STATEMENTS MADE AT CLOSING CEREMONY

ADDRESS OF MR. OPIKA OPOKA H.S.,
THE PERMANENT SECRETARY OF THE MINISTRY OF AGRICULTURE, ANIMAL INDUSTRY AND FISHERIES. UGANDA AT THE CLOSING CEREMONY OF THE MEETING OF DIRECTORS OF LIVESTOCK SERVICES IN THE EASTERN AFRICA REGION, KAMPALA, 8 - 10 DECEMBER. 1997.

The Executive Secretary, IGAD
Representatives of EU. USAID. Italy. France. Britain. Netherlands. Austria and Greece
Distinguished Delegates
Ladies and Gentlemen,

It is with great pleasure that I address you at the closing of this important meeting of Directors of Livestock Services of the Eastern Africa Region. The livestock sector is important for Africa and this sub-region in particular since agriculture is the back bone of the economies of these countries and also, a major source of food.

It is gratifying to learn that after a hectic three days of deliberations the meeting of Directors of Livestock services of the Eastern Africa countries has successfully achieved its objective. I believe in this type of bottom up approach as it enables stakeholders to put in place what the experts want to see done for the farmers and other players in the livestock sector. IGAD and its partners can now go away from Kampala with a clear vision of the way forward. As the rapporteur has presented to us, we now have in place terms of reference (TOR) for formulating the regional livestock development programme. The terms of reference are detailed enough to enable the programme formulation team to draw up an effective sub-regional programme that will address the identified areas of concern namely:- Policy analysis. Human capacity building, Animal health. Animal production and Marketing. We would appreciate if the formulation of the programme starts early 1998.

Distinguished delegates, ladies and gentlemen,

I wish to express our gratitude to the partners who have tirelessly worked with us during the course of this meeting. namely. EU. USAID. Italy. France. Britain. Netherlands, Austria and Greece. You will agree with me that this type of consultative and participatory approach is the most effective and efficient way for partnership building. I believe that while the directors were drawing up the TOR. the partners were also having their own consultations on this programme. It is important for partners to work in a coordinated manner in streamlining support for our development efforts.

I would like in particular to thank the EU for funding this meeting. thanks are also due to ILRI, ICIPE and IBAR for their support and contributions as speakers on specific topics of animal resource development.

I would like to thank the Organizers of this meeting. The short notice of the meeting may have inconvenienced some of the participants but you will agree with me that this has been offset by the success attained by this meeting.

And indeed to all the participants, the Chairpersons and Rapporteurs of the different sessions, I congratulate you all for the hard work that has enabled us to come up with concrete TOR for the development of the regional livestock programme for Eastern Africa. This is only the beginning, I hope there will be other meetings to ensure the Regional programme is in place and operational. This will go a long way to alleviate poverty and food insecurity among our populations.
I hope you have enjoyed your stay in Uganda.
I wish you all safe journey back.

I declare the meeting closed.

COUNTRY REPORTS

RWANDA

Le Rwanda est un pays de longue tradition de l'élevage. Il est parmi les pays de la planète où l'élevage bovin se rencontre dans la vie quotidienne de la population malgré tous les efforts fait par des personnes mal intentionnees pour l'inniber.

Depuis plus de soixante ans, l'éffectif bovin varie entre 600-700000, le cheptel caprin et ovin lui variant au cours de la même periode entre 1500000 à 1700000 têtes.
la volaille entre 1.700.000 à 2.200.000 têtes.

L'élevage a subi un coup dur lors de la dernière crise Rwandaise qui a importé 80% du cheptel bovins, 85-90% de petit betail et 95 de la volaille.

Alors que le secteur agricole dans son ensemble a beneficie de l'appui pour tenter de se redresser, l'élevage quant à lui est resté à l'ecart des préoccupations de bailleures de fonds.

Contrairement à la population bovine qui a profité de l'arrivée des animaux acompagnant leurs propriétaire de retour au pays, les autres speculations animales ne connaissent que des interventions timides et l'état de pauvreté avancée suite aux effets de la guerre ne permet pas de combler le trou en terme de repeuplement.

Les grands objectifs de la politique nationale agricole ont été adoptés au cadre particulier des productions animales. C'est ainsi que l'élevage doit:

- Participer à la sécurité alimentaire
- Participer à l'amélioration des revenues monetaires des ruraux en favorisant la régularité des revenus et la conservation d'une certaine sécurité à l'épagne representee par les animaux.
- Participer à la protection de l'environnement et a la conservation des ressources renouvellables par l'adaption de nouvelles normes d'élevage et d'exploitation.

La mise en oeuvre de cette politique ne sera effective que par la levée d un certain nombre de contraintes (structurelles, socio-culturelles. constitutionnelles. et économiques) et de l'adoption des stratégies d'ordres technique et organisationelles qui définissent les niveaux a des priorités accordée aux différentes filières ainsi que la relation de tous les intervenants qui participent à leur développement.

La redéfinition des rôles entre les différents intervenants a fait que l'Etat qui autrefois était l'unique interlocuteur est devenu aujourd'hui un élement de l'ensemble à côté des prooducteurs et des préstataires des services. Ces derniers devront desormais avoir de plus en plus un rôle primordial dans le cadre d'une professionnalisation des activités en rapport avec l'élevage. C'est ainsi que l'etat est en train de créer un environnement favorable à la privatisation de la médecine vétériniare. à la libéralisation de la distribution des intrants, et à la privatisation des services de collecte et de transformation.

Privatisation de la médecine vétérinaire

Sur 62 médecins vétérinaires fonctionnels, 12 sont utilisés par le service public et para-étatique, 40 médecins vétérinaires dans le secteur privé et 8 installés en privé et travaillent à leur propore comptes. La distribution des intrants est liberalisée: 10 pharmacies vétérinaires sont fonctionnelles. Les unités de tranaformations (Laiteries. charcuteries,etc..) jadis gérées par l'état sont actuellement privatisées.

MEETING OF DIRECTORS OF LIVESTOCK SERVICES OF THE COUNTRIES OF EASTERN AFRICA, HELD AT THE NILE HOTEL KAMPALA, UGANDA, 8-10 DECEMBER, 1997

ADDRESS OF DR. TEKESTE GHEBRAY, EXECUTIVE SECRETARY OF IGAD, AT THE OPENING CEREMONY

Honourable Minister of State for Agriculture, Animal Industry and Fisheries

Your Excellencies the Ambassadors, High Commissioners, and Members of the Diplomatic Corps,

Distinguished Participants, Ladies and Gentlemen

It gives me great pleasure to welcome you to this meeting of the Directors of Livestock Services, the first to be convened under the auspices of IGAD. As you might already know, the IGAD sub-region covers seven countries of the Horn of Africa, namely Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda. On behalf of IGAD, I extend our warm welcome to our brothers and sisters from the non-IGAD countries of Burundi, Rwanda and Tanzania. Over the course of the next three days, the Directors will be discussing jointly with our Partners the way forward in developing the livestock sector for the eastern Africa sub-region.

Hon. Minister, distinguished delegates

It is lamentable that the livestock sector has all along been neglected by policy planners, as this was evidenced in many previous fora and in the recently concluded meeting on livestock policies in Eastern and Southern Africa held in Swaziland. The policy environment in the sub-region has changed dramatically over the last 7-10 years, particularly the paradigm shift toward the promotion of the private sector as the engine for economic development. Indeed the policy environment at the international level has also changed drastically with new international agreements, treaties, declarations and other undertakings including:

- new approaches to development cooperation
- the Convention to Combat Desertification (CCD)
- theWorld Trade Organization (WTO)
- the Population Conference in Cairo
- the 1996 World Food Summit.

Added to the above are climatic changes which indicate that the sub-region is getting drier and drier. All these have implications for our food security strategies. Our sub-region is one of the most food insecure parts of the world. We need to quickly embark on programmes that will improve food security while taking into account the changing policy environment nationally and

globally. The Eastern Africa region has the largest livestock population in Africa. Clearly, the region's livestock sector has an enormous potential for raising economic standards and improving food security, as livestock does not only provide food and employment to a large section of the population, but is also an exportable commodity of high value. We therefore need to address the issue of health standards if our livestock and livestock products are to be competitive on the world market.

Hon. Minister, distinguished delegates

One of IGAD's priority objectives is to promote food security, particularly for the vulnerable pastoral populations in the arid and semi-arid lands (ASALs), while protecting the environment. ASALs constitute more than half of the sub-region's land area and these are the lands where most livestock are kept. IGAD is approaching the food security issue for the ASALs with a 2-pronged medium-term strategy, namely:

- promoting the production of high yielding crop varieties through research and extension, and

- promoting livestock development, particularly the control of trans-boundary livestock diseases and veterinary vaccines production

These are to be complemented with capacity building in water resource management and a Regionally Integrated Information System, the design phase of which is due to start in the next few weeks with the financial and technical assistance of Italy and USA.

Hon. Minister, distinguished delegates

I want to challenge the Directors of the livestock services to meticulously examine and discuss the various issues of livestock development and identify priorities for a solid and action-oriented regional programme that will suit their national and regional interests. One important outcome of this meeting should be a concrete set of Terms of Reference for the elaboration of a livestock development programme for eastern Africa. The Terms of Reference should ensure that the private sector is duly involved in the programme identification and appraisal process.

Hon. Minister, distinguished delegates

The European Union has expressed its interest to support the programme under a co-financing arrangement with other Partners namely, USA, France and Italy, within the framework of the new European Development Fund (the 8th EDF)

IGAD is not an implementing agency, we have requested OAU/IBAR, who have acquired a considerable experience and expertise in coordinating livestock development programmes in Africa, to coordinate the implementation of the programme on behalf of IGAD. IGAD will of course be involved in the monitoring and evaluation of the programme.

At this juncture, Hon. Minister, I would like to express IGAD's gratitude to the European Union and its member states and the USAID for their interest and willingness to support our livestock development initiatives. We are hopeful that this interest will translate into timely commitment of the necessary resources to operationalize our regional livestock development programme. I want to particularly thank the EU for financing this meeting, and OAU/IBAR and CIT for an excellent organisational work that has culminated into a successful holding of this meeting.

Hon. Minister, I thank you personally for accepting IGAD's invitation to officiate at the opening of this meeting. Through you, I would also like to convey our heartfelt thanks and gratitude to the people and Government of the Republic of Uganda for hosting this meeting, and for the hospitality and excellent facilities accorded to our delegations since our arrival in your exceptionally beautiful country, the 'Pearl of Africa'.

May I now take this opportunity to invite ..... to address the meeting.

I thank you all, and wish the participants successful deliberations.

SPEECH DELIVERED BY HER EXCELLENCY, THE VICE PRESIDENT/MINISTER OF AGRICULTURE, ANIMAL INDUSTRY AND FISHERIES ON THE OCCASION OF REGIONAL MEETING OF DIRECTORS OF LIVESTOCK SERVICES OF EASTERN FRICA COUNTRIES - KAMPALA 8TH - 10TH DECEMBER, 1997

- Mr. Chairman,
- Hon. Ministers and Members of Parliament
- The Executive Secretary, IGAD
- The Director OAU/IBAR
- Your Excellencies the Ambassadors/High Commissioners
- Distinguished Delegates from IGAD Member States
- Directors of Livestock Services of Eastern Africa Countries
- Ladies and Gentlemen

It is with great pleasure, that I welcome you to Uganda and to this very important meeting which is going to address development of a coordinated approach to livestock development and marketing in Eastern Africa sub-region.

This is in line with the Uganda Government's policy of modernising Agriculture to ensure food security and eradication of poverty.

Mr. Chairman, nearly half of IGAD sub-region is covered by arid and semi arid areas where severe as well as recurrent droughts hamper agricultural and livestock production. Despite this fact the sub-region holds 60% of the livestock population of Africa. This enormous livestock resources are, however, predominatly under poor health

conditions resulting in high levels of mortality and morbility which in turn cause livestock owners to maximize herd numbers leading to a cycle of over-stocking, overgrazing and poor productivity.

It is gratifying to note that the revitalised IGAD is spear heading the development of the livestock sector focussing on trans-boundary livestock disease control issues which we mandated IGAD to address. The uncontrolled trans-boundary movement of livestock across states of the East African sub-region mainly by pastoralists communities is a critical area with a great impact on health, productivity and marketing of livestock. This is a challenge we have to face and address at a sub-regional level.

We welcome IGAD partnership with OAU and EC to develop a broader and coordinated programme for the Eastern Africa sub-region.

This meeting is particularly important as it brings together member states of the sub-region to identify and prioritise the areas of concern regarding livestock development e.g., animal health, production, and marketing in relationship with sustainable natural resource use and environment protection.

This will require the formulation of sound policies including the promotion of private sector involvement in the livestock industry.

Mr. Chairman, Uganda's medium term strategy for modernisation of the Livestock sector includes among others the establishment of an efficient livestock disease control system based on institutional reforms

achievement of self sufficieny in animal and animal products, promotion and development of industrial linkages for livestock products and by-products, promotion of trade in livestock and livestock products, strengthening of research in the animal health, animal breeding and vaccine production.

It is my hope that the multi-disciplinary presentations at this work shop will generate useful ideas to make concrete recommendations to enable the sub-region come out with implementable programmes.

The meeting must also provide an opportunity to take stock of actions already underway, and to exchange viewc on different substantive aspects of national and regional experiences.

Let me conclude by wishing all of you the best success and express my confidence that this meeting will represent a further step in achieving cooperation in the East African sub-region.

It is my hope that before you leave Uganda, you will take time to explore and enjoy the magnificient sites of historical significance such as the source of the Nile.

Annex 4

COUNTRY REPORTS

BACKGROUND

Overview

Eritrea has emerged as an independent nation in 1991 inheriting an overall negative economic environment.
Ever since, it is in the process of rehabilitation and reconstruction of its institutions and infrastructures aimed to prepare the grounds for development. The country has an area of 124,000km^2 and about 1000km long coastal line along the red sea. It has an estimated population of 3.5 million of which about 85% live in rural areas. Its economy is based largely on traditional mixed agriculture although the current trend is diversification. past records, the ecological factors in most parts of Eritrea and favourable market prospects have brought the attention of government and the private sector to recognize the development potentials of the national animal resources sub-sector.

The Animal resoureces sub-sector

The animal resources sub-sector plays a crucial role in the Agricultural Industry and in stabilizing the rural household economy as a vital, source of cash security, food of high biotic value animal power for cropping and transport, and manure to replenish soil fertility. The importance of livestock to the rural population is almost equal in all parts of the country, albeit its, mode and magnitude of contribution vary. |the sale of livestock and their products constitutes the major, if not the only, source of cash income for rural subsistence economy for the purchse of consumer goods, agricultural inputs, and social festivities. areas with improved livestock development are generally featured with increased crop production and growth of service and consumer industries.

The animal resources sub-sector is predominantly of the traditional system featured by extensive animal movements in search of water and forage. The national animal wealth produced in the rangelands consists of cattle, small ruminamts, equine, and camel with estimated populations of 1.3, 5, 0.8, and 0.9 millions respectively. The small/ medium- scale commercial sector is dominated by dairy production, small-scale ruminant feedlots and small scale poultry farms.

2. OBJECTIVES, STRATEGIES AND POLICIES

2.1 Objectives and Strategies for the Agricultural Sector

2.1.1 Objectives

Since independence, a Government document entitled *"Micro Policy"* was produced in which broad frame work for agricultural policies was outlined. The document set out policies for the agricultural sector. Based on this document but slightly elaborated, the objectives listed below in order of priority given to them are to:

(a) realize regional and natational food security through sustainable production of adequate supplies of essential food commodities as sources of basic diets such as carbohydrates and proteins at economic costs, hence competitive;

(b) promote employment opportunities, diversified income generating programmes for the rural household in particular, and to urban households through supplying raw materials to the agro-industries by maximum utilization of local agricultural resources base and expanding both domestic and export market opportunities;

(c) contribute significantly to agriculture based and export propelled industrial development by producing adequate raw materials with international comparative advantages;

(d) increase considerably the contribution of the sector to the national balance of payments by, inter-alia, expanding agricultural exports of competitive standards and prices;

Objectives strategies & policies of the ARD sub sector

Objectives

The principal objectives of the animal resources sub-sector is to significantly improve its productive efficiency particularly in the traditional sector, to enable it to contribute to the objectives of the agricultural sector defined above.

The specification objectives to be achieved by the animal resources sub-sector with in the main objectives of the agricultural sector are:

(a) Livestock services and supply of Inputs

(i) prevent and control animal diseases of economic and public health importance, or zoonoses through improved quality of services.

(ii) Improve animal production with emphasis on the productivity of individual animal, vis-a-vis, the increase in animal numbers, and upgrade the input supply required for production.

(iii) develop the traditional livestock production system with emphasis in the potential areas of the lowlands where pasturalism of various forms is in practice, through efficient utilization of the natural range lands.

(iv) develop the quality standards of animal products and by-products.

(b) Research and extension

(i) Develop realistic animal health and production research capacity based on actual knowledge of the conceptual setting and with clear aims to solve the problems of livestock farmers.

(ii) establish high quality standards of animal services to meet the needs of farmers in the different production management system such the traditional (pasturalism, agro-pasturalism, sedentary) and the commercial small/medium scale.

(iii) establish effective link with the *Agricultural Research and Extension Department* so that animal research will be carried out based on the constraints identified by the ARD.

(c) Legislation, Land use and Farmers Security

(i) design appropriate legislation aimed to promote animal production, but applicable to the Eritrean conceptual setting.

(ii) promote land and water security for animal production purposes on equal grounds to the land use planning for cropping and revegetation.

(iii) facilitate farmer security from natural causes.

(iv) develop a credit scheme which is easily available to livestock farmers with emphasis on small-holders.

(d) Marketing and Infrastructure

(i) improve marketing system for animals, animal products and by-products.

(ii) improve infrastructure for animal marketing in order to create an atmosphere for animal production.

(iii) develop pricing structure for animal products

To achieve the objectives stated above, a number of strategies have been already identified and will be used for implementing the policies of the sub-sector. Adoption of these series of strategies will strengthen the ability of the sub-sector to attain its maximum productive potential, sustain its viability and improve the productivity of the individual components engaged in the livestock related industry.

Particular attention has been made to the tuning of the strategies against the conceptual setting of the country featured with limited resources and war damaged infrastructures.

2.2.2 Strategies

(a) High Priority

(i) definition and delimitation of grazing land at village level to allow range development with emphasis to the area of pasturalism.

(ii) maximize utilization of industrial by-products for stockfeed.

(iii) introduction of exotic forage development programme.

(iv) improving dairy cattle breeds through breeding programmes.

(v) prevention of transboundury diseases, and improve delivery of animal health services.

(vi) introduction of cost recovery system.

(vii) introduction of legal and regulatory framework.

(viii) provision of training programmes to strengthen the quality of livestock services provided by both the public and private sectors.

(b) Medium Priority

(i) improve marketing infrastructure and market information to create conducive environment for livestock production.

(ii) reassess and formulate research and extension programmes to produce a strong, sustainable applied research network to meet the policy objectives.

(iii) establish credit schemes through appropriate credit institutions.

(c) Low Priority

(i) assist farmers in matters of livestock security.

(ii) develop adequate legal and procedural framework to prevent or minimize economic losses related to natural disasters, calamities and epidemics.

2.2.3 Policies of the Livestock sub-sector

Preamble

The Government of Eritrea is adopting a vastly different approach to economic policies from that of most developing countries. More specifically Government activities are being restructured to support the efforts of the private sector focused on small-holders. While this approach applies, virtually to all sectors of the economy, it is specially crucial for agriculture. As has been demonstrated in many parts of the world the full development of the agricultural sector depends upon private involvement; however, there are some activities which it will not undertake on its own and must receive public support.

Policies

(a) The Government wishes to promote the development of the animal resources sub-sector in order to increase the supply of animal products and improve food security, generate income and employment, contribute

to industrial development and the country's balance of payment and increase the animal draught power.

(b) The involvement of the Government in the animal resources sub-sector will be directed towards increasing productive efficiency, especially among small-holder farmers, in order to achieve the following policy objectives:

(i) to increase the supply of animal origin proteins and nutrients;

(ii) to promote livestock ownership and increase production;

(iii) to stimulate both small and medium-scale processing of livestock products and by-products;

(iv) to encourage export of animal products and by-products; and

(v) to increase supply of draught power.

(c) Government will undertake appropriate animal research programmes aimed at increasing animal productivity and production in various ecological zones. These will include research activities in animal nutrition, breeding, husbandry and health.

(d) Inorder to streamline and improve the effectiveness of the delivery of public livestock services and the implementation of public functions and responsibilities linked to the sub-sector, the existing ARD structure will focus on strengthening of the Regional livestock services capabilities that

allow filtration and monitoring to the village level.

(e) The Government will endeavour to ensure that animal disease prevention and control measures against economically important diseases are carried out throughout the country in order to significantly reduce losses of animals from disease situations, and to enable animal products penetrate the international market without restrictions.

(f) The Government will take the responsibility of controlling nationally important diseases, in particular class 1 scheduled diseases such as *rinderpest, Foot and Mouth, CBPP, CCPP, rabies, PPR* and/or any other disease which may require state intervention in the national interest.

(g) Clinical treatment, vaccination and inoculations against other scheduled diseases such as *haemorrhagic septicaemia, Brucellosis, Newcastle, African horse sickness, Trypanosomiases, Blackleg, Pox, and activities such as Artificial insemination, bull testing, and PD* which have immediate direct benefit to the farmer will be the responsibility of the individual farmer.

(h) The Government will provide facilities for laboratory diagnostic services for all diseases, but farmers have to pay for them except for nationally important diseases or any other declared necessary for the national interest.

(i) Government will be responsible for all aspects of veterinary public health such as the inspection of meat and meat by-products, and milk hygiene and quality control animal origin foodstuffs, and control use of veterinary drugs, and biologocs.

(j) Government will review existing legal and regulatory framework, and introduce new legislation to accommodate privatization of the delivery of services to the animal resources sub-sector.

(k) The Government will encourage private veterinary practice and community based animal health care in order to provide farmers ready access to both animal health and production services.

(l) Fiscal and budgetary constraint hindering the public delivery of livestock services will reduce through the design and implementation of cost recovery systems paid for by the direct beneficiaries.

(m) Government will take the responsibility of researching to evolve livestock breeds suitable for local conditions, and introduction of improved production techniques such as the use of suitable forage species, utilization of by-product.

(n) Government will ensure appropriate land use planning in order to improve animal nutrition through the allocation of adequate grazing lands in the various ecological zones with emphasis in the lowlands.

(o) Government will facilitate to the private sector export and processing of animal products through high standard inspection services.

Ethiopia

Ethiopia is a diverse country with a livestock population of approximately 30,309,000 tropical livestock units of which about 30 million are cattle. This is the largest livestock population in Africa. Although significant, livestock production has not met its potential for a variety of reasons. Ethiopia is still recovering from a prolonged period of instability and the associated drain of resources, policy constraints and diversion of investment. At the present time, Ethiopia is experiencing a profound period of restructuring including a transition to a market-based economy and a federal system of government.

Sector Issues:

A series of policy and strategy conferences were held and Ethiopia now has a draft ruminant livestock development strategy. Subsequently, an extensive livestock development programme was drafted. The Ministry of Agriculture has drafted legislation on issues of animal health modelled after accepted international practices. National and Regional institutions have been invited to comment on the draft legislation and it is hoped that legislation will soon be in place on epidemic disease control, quarantine and meat inspection, and the licensing and regulation of private animal health delivery.

The government of Ethiopia is pursing a policy of privatisation in both livestock production and livestock service provision. Although the agricultural sector is largely characterised by small-scale subsistence framing, a number of state farms and government ranches do exist and are in the process of being privatised. In the animal health sector, private veterinary practice is now permitted. Continued efforts are required to adequately delineate private and public sector functions. Drug importation is now fully liberalised although regional state governments are still procuring and distributing limited quantities of veterinary medicines. In the future, Ethiopia envisions an increasing role for the private sector in the delivery of curative and preventive animal health services as well as in the intensification of production.

Ethiopia is very active in the collection of data on agricultural activities and output. At present, the Ministry of Agriculture has initiated a major programme to create an Agricultural Information System were information on agriculture gathered by the various Ministries and Institutions can be organised in one database for all end users.

Markets, Trade and Processing:

In regard to formal meat and live animal exports, Ethiopia's traditional trading partner has been the Middle East. In recent years, Ethiopia's formal exports have not realised their true potential. The government of Ethiopia has set an objective to stimulate official trade in this sector through strengthening of animal health control and disease surveillance, trade promotion and better communication with potential partners and more user-friendly export procedures.

It is known that a very substantial informal export trade takes place with Ethiopian's neighbours in the region. The main source for these exports is the eastern and southern pastoral lowlands: Afar, Ogaden and Borena.

Hides and skins are a major export earner for Ethiopia and an export quality finished leather product industry is established.

Livestock Production:

Simply stated, Ethiopia can be divided into two main productions zones. These are the agro-pastoral highlands and the pastoral lowlands. In both these regions production is mainly carried out in subsistence systems. There is at present no private land ownership in Ethiopia.

In the highlands, draft power is one of the main outputs of livestock. Each farmer must have access to two oxen in order to remain a viable producer. In addition to milk and meat, manure is also a key product as a source of fuel and fertiliser.

The lowlands tend to be arid to semi-arid and transhumant systems of pastoral production predominant. The pastoralists market animals, particularly excess males, to generate cash for the purchase cereals and to meet other household needs. These animals can enter the highlands system as replacement oxen or the marketing chain for either domestic or export consumption. A nascent fattening industry is developing along both the domestic and export marketing chains.

In the lowlands, camels have traditionally been a sustaining resource. This species has been increasing in importance in recent years as pastoralists have been forced on to more marginal lands by the growth of sedentary agriculture. In recent years, the Borena have adopted the camel as a significant component of their production system.

Animal Health and Genetic Resources:

Ethiopia is affected by a wide range of major epidemic diseases. Rinderpest has had a long history in Ethiopia and can be considered to have been endemic from 1889 until present. In recent years, Ethiopia has made a concerted effort through the Pan African Rinderpest Campaign (PARC) to eradication rinderpest. As of this month, December 1997, it has been two years since the last detection of rinderpest in Ethiopia despite very active surveillance programmes. This was accomplished by categorising the various areas of the country epidemiologically and focusing resources on those areas acting as reservoirs of infection. The government of Ethiopia has ceased vaccination throughout 90% of the country and is planning to declare provisional freedom-from-rinderpest to the Office International des Epizooties in the coming months.

Other diseases of importance in Ethiopia at present are contagious bovine pleuropneumonia, peste des petits ruminants, contagious caprine pleuropneumonia,

trypanosomiasis and the contagious epidemic disease of camels recently sweeping the Horn of Africa.

Ethiopia welcomes regional co-operation in the control and eradication of transboundary diseases. From the experience of PARC, Ethiopia recognises that epidemiologically sound and regionally co-ordinated disease control programmes provide the greatest return on investment. At the national level, the Veterinary Services is emphasising epidemiological surveillance and rational disease control planning as opposed to blanket vaccination. The present initiatives in this area include the national general disease reporting system, an active disease surveillance system for rinderpest (and soon CBPP), a geographic information system and an emergency preparedness programme.

In regard to wildlife, Ethiopia is home to several unique species. Habitats are shrinking and other than some areas of the south-west, populations are small. Ethiopia does have programmes to preserve the remaining breeding populations of endangered species.

In regard to livestock, Ethiopia has a number of breeds with potential as a genetic resource. The Ministry of Agriculture intends to focus on locally available genetic resources as a source of herd improvement in the coming years. The first step will be quantification of potential.

In Ethiopia all veterinary vaccines, except rabies vaccine, are produced at the National Veterinary Institute in Debre Zeit. Rabies vaccine is produced locally by the Pasteur Institute. Ethiopia is the host of the Pan African Veterinary Vaccine Institute, which is also located at Debre Zeit.

At the national level, animal health research is carried-out at the National Animal Health Research Centre in Sebata. At present the research strategy is being reassessed. The nation also has a system of regional laboratories equipped for diagnosis and limited epidemiological research.

DJIBOUTI REPORT

Efforts to alleviate rural and urban proverty and reduce food dependency are among the major priorities of the Republic of Djibouti. These objectives are met through development and strengthening of primary sector whose major natural resources are livestock and fisheries. Concerning livestock development policies, there is a general development legal framework within which livestock development strategy consists of:-

- A more intensive sanitary control
- Increased animal feed supply
- Development and organizing marketing channels for livestock products
- Continued quantity and quality improvement of water supply for livestocks agriculturalists
- Desertification control and improvement of grazed lands.
- Promoting better integration between livestock and agriculture

Major constraints to livestock development include:-

◊ **Water supply**: Djibouti is a hot and dry country (average pluviometry 150mm year. Water supply for human and livestock population is a high priority for the government.

◊ **Animal Feed**: Inadequacy of animal feed as dry weather is an obstacle to animal production.

◊ **Animal health**: Human, material and financial resources available not sufficient.

◊ **Human resources**: There is only three local veterinarians. There is need for training at all levels notably for specialists (zootechnicians, pastoralists, etc).

Research capacity: Almost inexistant in this sector.

In view of the above, the development of the sector should be based on the following priorities:-

<u>At National Levels:</u>

- Improvement of hydric and animal feed resources
- Strengthening sanitary cover
- Organizing markets and market channels
- Promoting associations (co-operatives) and sedentarisation (integrating agriculture with livestock)
- Training

At Regional Level:

* Strengthening co-operation for all development activities mainly in scientific, technical and training fields.
* Co-ordinating trans-boarder activities especially for disease control
* Facilitating trade, communication and information

RWANDA

Le Rwanda est un pays de longue tradition de l'élevage. Il est parmi la pays de la planète où l'élevage bovin se rencontre dans la vie quotidienne de la population malgré tous les efforts fait par des personnes mal intentionnées pour l'inhiber.

Depuis plus de soixante ans, l'éffectif bovin varie entre 600-700000,le cheptel caprin et ovin lui variant au cours de la même periode entre 1500000 à 1700000 têtes ,
la volaille entre 1.700.000 à 2.200.000 têtes.

L'élevage a subi un coup dur lors de la dernière crise Rwandaise qui a importé 80% du cheptel bovins, 85-90% de petit betail et 95 de la volaille.

Alors que le secteur agricole dans son ensemble a bénéficié de l'appui pour tenter de se redresser, l'élevage quant à lui est resté á l'ecart des préoccupations de bailleures de fonds.

Contrairement à la population bovine qui a profité de l'arrivée des animaux acompagnant leurs propriétaire de retour au pays,les autres spéculations animales ne connaissent que des interventions timides et l'état de pauvreté avancée suite aux effets de la guerre ne permet pas de combler le trou en terme de repeuplement.

Les grands objectifs de la politique nationale agricole ont été adoptés au cadre particulier des productions animales. C'est ainsi que l'élevage doit:

- Participer à la sécurité alimentaire
- Participer à l'amélioration des revenues monétaires des ruraux en favorisant la régularité des revenus et la conservation d'une certaine sécurité à l'épagne representée par les animaux.
- Participer à la protection de l'environnement et à la conservation des ressources renouvellables par l'adaption de nouvelles normes d'élevage et d'exploitation.

La mise en oeuvre de cette politique ne sera effective que par la levée d'un certain nombre de contraintes (structurelles. socio-culturelles. constitutionnelles. et économiques) et de l'adoption des stratégies d'ordres technique et organisationelles qui définissent les niveaux a des priorités accordée

aux différentes filières ainsi que la relation de tous les intervenants qui participent á leur développement.

La redéfinition des rôles entre les différents intervenants a fait que l'Etat qui autrefois était l'unique interlocuteur est devenu audjourd'hui un élement de l'ensemble à côté des prooducteurs et des préstataires des services. Ces derniers devront desormais avoir de plus en plus un rôle primordial dans le cadre d'une professionnalisation des activités en rapport avec l'élevage. C'est ainsi que l'etat est en train de créer un environnement favorable

- à la privatisation de la médecine vétériniare
- à la libéralisation de la distribution des intrants
- à la privatisation des services de collecte et de transformation

- **Privatisation de la médecine vétérinaire**

Sur 62 médecins vétérinaires fonctionnels, 12 sont utilisés par le service public et para-étatique, 40 médecins vétérinaires dans le secteur privé et 8 installés en privé et travaillent à leur propore comptes.

La distribution des intrants est libéraalisée: 10 pharmacies vétérinaires sont fonctionnelles.

Les unités de tranaformations (Laiteries ,charcuteries,etc..) jadis gérées par l'état sont actuellement privatisées.

Le Directeur de l'Elevage

Dr Isidore GAFARASI MAPENDO

Livestock Development in Somalia

With not more than 0.83% of the population in Africa in an area only 2.1% of the total, Somalia possess 43% of the camels, 10% of the goats, 5% of the sheep and 2% of the cattle of the entire continent (Janzen, 1993). Livestock distribution in Somalia is shown in **chart 1**.

Pasture based production with domestic ruminants, dromedaries and donkeys has traditionally been the dominant economic activity in Somalia. With a total surface of 638,000 sq. Km, 54.9% was used for rangeland, 12,5% was suitable for cultivation, 13,8% was forestland, while 18,8% was classified as other land (World Bank, 1975). Population estimates for Somalia have always varied considerably, but the most frequently cited figures are between 6 and 7 million, of which 65% are engaged in mobile livestock keeping, while the remaining population is composed of urban dwellers and farmers (World Bank, 1975). Administrative boundaries of Somalia are shown in **map 1**.

On average about 80% of Somali foreign currency earnings, over the past ten years, were generated from livestock exports. The contribution of the livestock sector to the GNP over the same period was consistently just under 50% (Janzen, 1993). Total export form Northern ports of Somalia, Berbera and Bossaso, in 1994 was calculated at US$ 112.181.706 (Stockton, Chema 1995)

Somalia started exporting livestock to Gulf State Countries in the late fifties and aggregated figures on livestock export are provided from 1958 to July 1997 in **charts 2, 3** and **4** . Figures on livestock export from 1991 to present refer only to animals exported from Berbera and Bossaso ports. Data on occasional livestock exports from small ports of Somalia and overland to Kenya are not available or not accurate. The most important ports of Somalia and livestock market places are shown in **map 2.** Occasional export by plane of slaughtered small stock to Abu Dabi is taking place from an airport near Mogadishu.

With the onset of the civil war in 1990, the entire governmental veterinary services collapsed and a number of humanitarian organisations and international aid agencies carried out veterinary intervention between 1991 and 1993.

The ICRC veterinary programme, launched in 1992, was designed as a relief effort, to have country-wide results and aimed at increasing food security, options and income for nomads; reducing mortality and increasing productivity of livestock; reducing the dependence of nomads on international food aid. Other humanitarian organisations, aid agencies and INGOs were involved in the provision of veterinary services and of free drugs to pastoralists in Somalia.

The impact reported by ICRC claims that mortality rates had decreased, while herd sizes had slightly increased. Not only it is unclear how these statements were calculated, but also the reliability of this data is unknown due to lack of other sources of information upon which countercheck can be done.

Only at the end of the civil war, in 1993, a comprehensive development plan for the livestock sector in Somalia was developed with the contribution of the EC, ICRC, FAO, INGOs and Somali professionals.

The re-establishment of a subsidised system for the supply of veterinary services was considered neither feasible given the conditions (lack of a Governmental structure and the market-oriented livestock production system), nor desirable as in other African countries, attempts were being made to introduce privatisation. Thus the approach advocating the establishment of veterinary private practice and full commercialisation of the drug distribution network was born.

The veterinary component of the rehabilitation programme for Somalia, funded by the EC, aimed at providing livestock producers and traders with access to sustainable private clinical veterinary services throughout Somalia whereby animal owners were to pay for the services.

This service was to be delivered by a chain of drug suppliers and distributors, by veterinarians, veterinary assistants and auxiliaries of the former Ministry of Livestock.

A second objective was to enhance the reputation of livestock exported from Somalia and particularly from North East Somalia in order to improve the terms of trade.

The veterinary programme, which was laid out for two years, was implemented by 13 INGOs, one government development agency and three consultants. Coverage of EC funded veterinary programme is shown in **map 3** for the first year programme in **map 4** for the second year. A complete list of EC funded livestock development projects is given in **Annex 1.**

With the planned duration of two years, the programme consisted of the:

- selection of interested Somali veterinary professionals;
- provision of managerial, organisational and veterinary skills for veterinary groups;
- provision of an initial capital in drugs- referred to as a "kick start" - to help the veterinary professionals get started.

From a total of 559 beneficiaries who had been identified by the programme as staff of the former Ministry of Livestock and had received basic training and

"kick start" drugs, 245 of them continued until the end of the Programme.

The main drop-out from the Programme occurred immediately after the veterinary professionals had received the"Kick start" .

The professional level of the participants in the Programme turned out to be much lower than expected and longer training had to be offered to Somali veterinary professionals not only on business management but also on clinical diagnosis and drug administration.

At the end of the second year programme, a country-wide follow-up training programme was developed to provide additional training to motivated and active veterinary professionals, to foster the establishment of regional professional veterinary associations, to support local authorities in their regulatory role of veterinary services, and to monitor drug supplies and diseases out breaks.

A specific programme for North East Somalia was developed to support livestock export through the Bossaso port. The programme aims to provide technical assistance to parties involved in the export process (livestock traders, Animal Health Professionals, Regional Administrations and Port Authority). Specialised training to Animal Health Professionals engaged in servicing the livestock export sector will be delivered in order to establish a Health Inspection Certification System for livestock export which will include an internationally recognised Brucella Testing system.

Problematic issues for Livestock development Programmes in Somalia

- **Security and political instability in Somalia and absence of long term commitment from the donor community**

- **unclear administrative set up in most places of the country and limited competence of administrators in the livestock sector**

Most local administrative structures are controlled either by traditional leaders, or by religious authorities or by former army people. Only recently a veterinarian has been nominated the Minister of Livestock in the self proclaimed Republic of Somaliland. General level of technical competence among traditional leaders is very low.

- **scarcity of trained veterinary professionals in veterinary public health**

Only a few veterinary professionals with long experience in veterinary public health are still engaged in the "veterinary businesses". Most of the former senior veterinary officials have left Somalia.

- **Isolation of veterinary professionals from the scientific world and the international political arena**

Communication problems and absence of libraries in Somalia are hindering the betterment of scientific knowledge among Somali veterinary professionals and their understanding of the evolution of the international sociopolitical scene.

- **absence of Somali representatives at regional and international fora and in international agencies**

- **absence of Somali institutions safeguarding national interests at regional and international levels.**

Livestock exporters, for example, are left in the hands of importing countries authorities without any support from national institutions.

- **difficult provision of curative veterinary services to pastoral communities**

Low individual animal economic value, absence of exotic high yielding animals, low prevalence of contagious animal diseases, continuous movement of livestock, and difficult movements in the rangeland are rendering the provision of curative clinical services in the rangeland uneconomical for private veterinary professionals.

- **supply and distribution of quality veterinary drugs**

Importation and distribution of veterinary drugs is mostly controlled by unspecialised and often opportunistic merchants who are aiming at fast turn over of cheap drugs rather than at establishing good and long lasting commercial links with reliable pharmaceutical companies. This is resulting in irregular supply of quality veterinary drugs, in a great variety of drugs in the market and in continuous changes of prices.

- **limited or absent exposure of Somali veterinary professionals to private veterinary business**

Only in the late '80s the government of Somalia accepted to liberalise the importation of veterinary drugs and to establish private veterinary practices.

- **absence of veterinary laboratories for epidemiological investigative work**

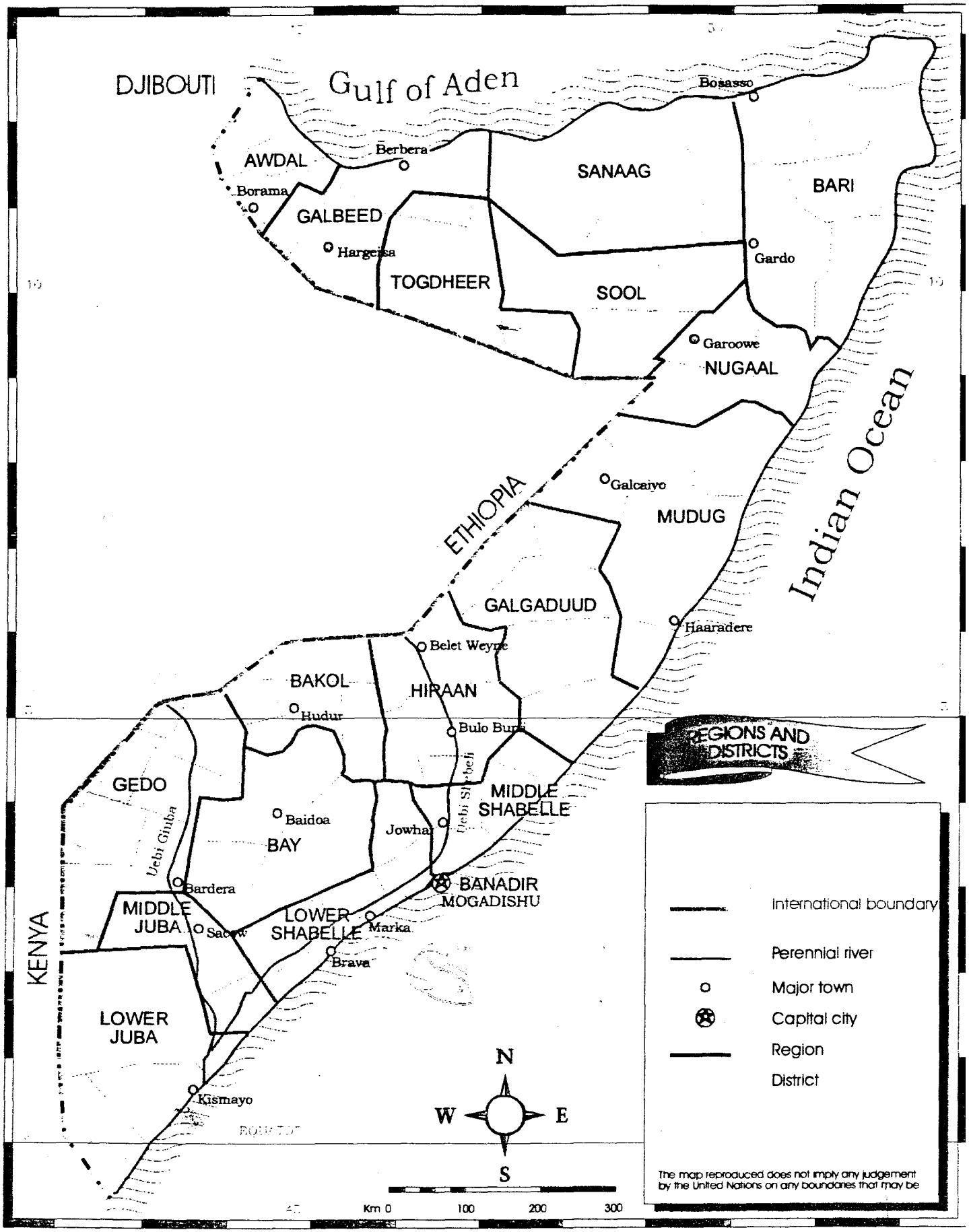
- **absence of young trained veterinary professionals**

Since 1990 no new Somali veterinarians have been graduated in Somalia. In a few years, there will not be new veterinary professionals able to replace the old guard.

- extreme competition from veterinary drug importers and petty drug traders and absence of well established drug distribution networks

- absence of institutions regulating the provision of private veterinary services and the importation and distribution of veterinary drugs

- absence of reference laboratories, especially for Brucella testing (external quality control services)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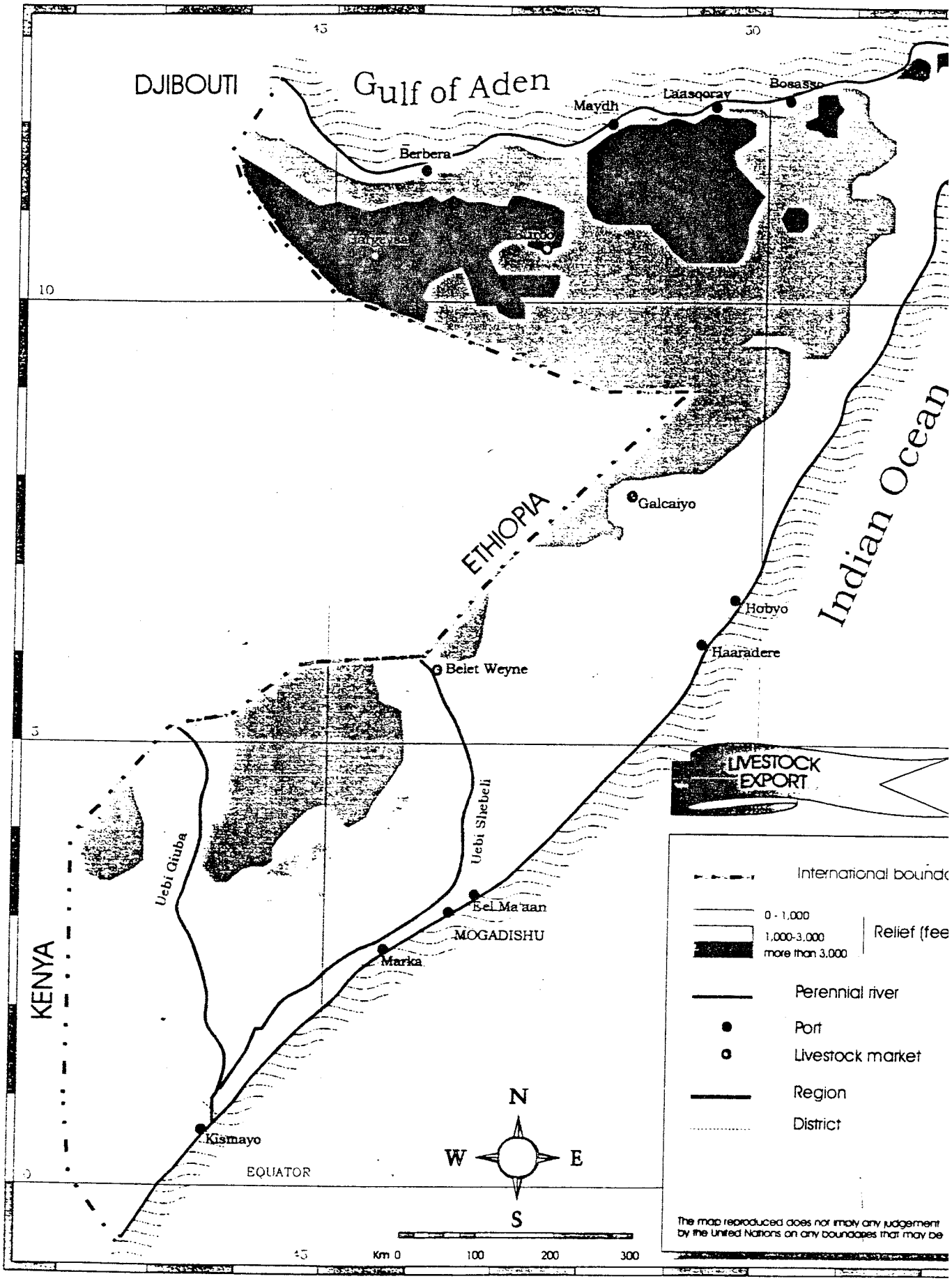
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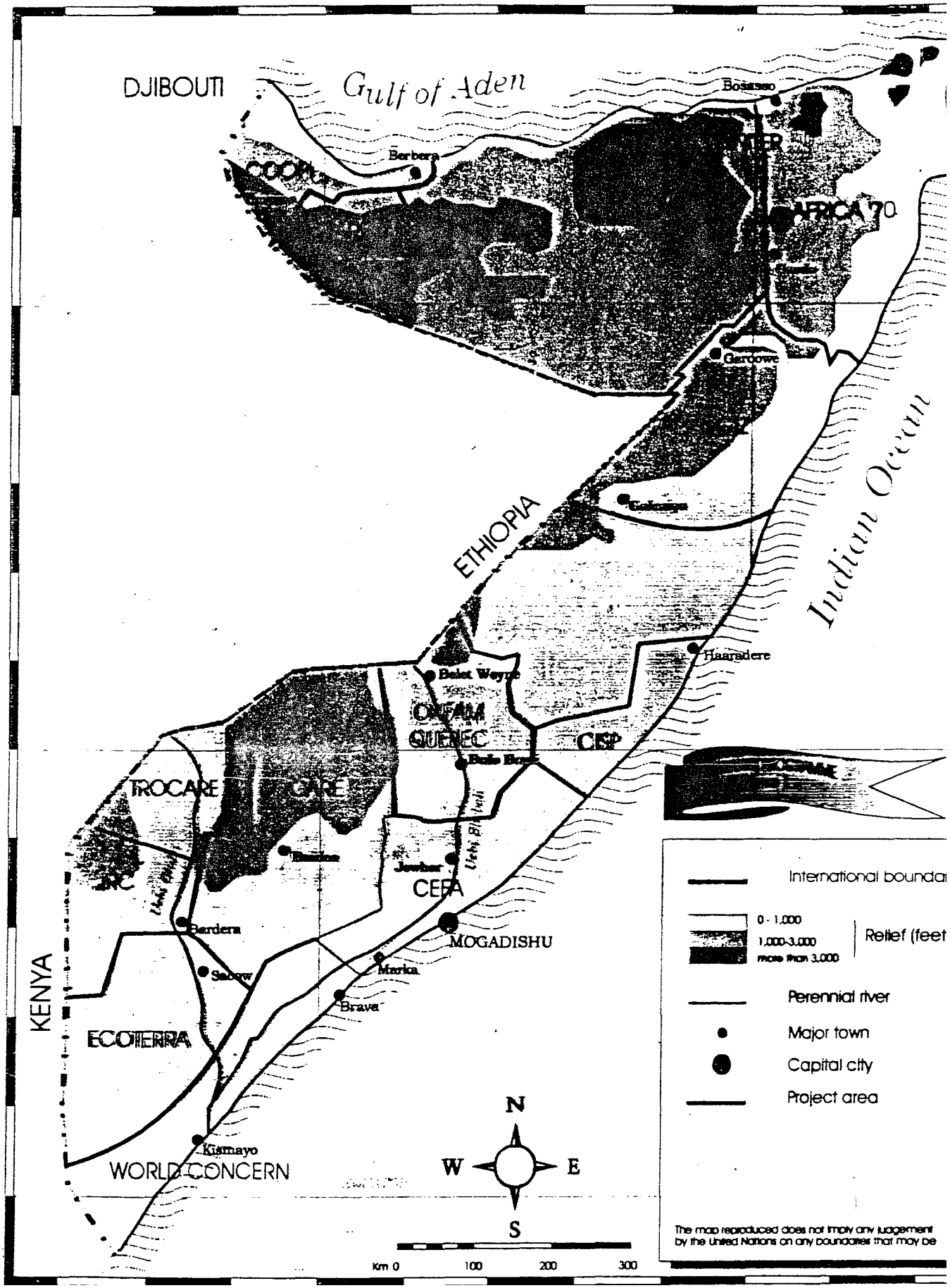
MAP 3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Perennial river
Major town
Capital city
Project area
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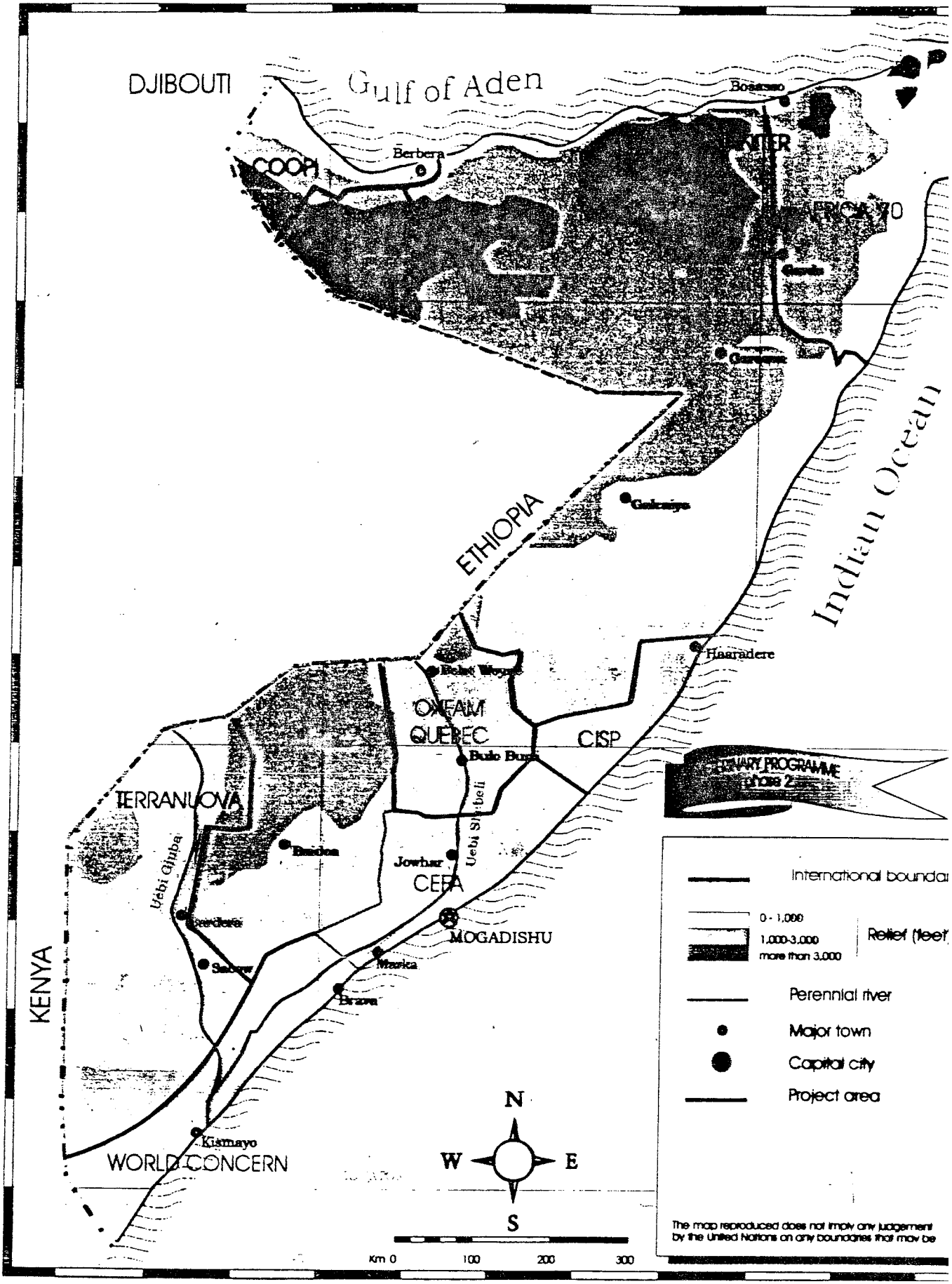
MAP 4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Relief (feet
Perennial river
Major town
Capital city
Project area
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by the United Nations on any boundaries that may be

Annex 1. Livestock Development projects implemented by INGOs in Somalia

Year one

NGO	Area of operation	Main Activities
IRC	Gedo / Middle Jubba region	Establishment of private clinical veterinary services and Rinderpest vaccination
Oxfam Quebec	Hiran region	Establishment of private clinical veterinary services
Terra Nuova	Country wide	Training support programme
COOPI	Awdal region / Berbera	Establishment of private clinical veterinary services
COOPI	Berbera port	Rehabilitation of Berbera Livestock Exporting Centre
Trocaire	Gedo Region	Establishment of private clinical veterinary services and Rinderpest vaccination
World Concern	Jubba valley / Lower Shebelle	Establishment of private clinical veterinary services
GTZ	Nugal Region	Establishment of private clinical veterinary services
Africa '70	Bari Region	Establishment of private clinical veterinary services
CEFA	Middle Shebelle	Promotion of private clinical veterinary services
CARE Inter.	Bay and Bakool Regions	Establishment of private clinical veterinary services
CARE inter.	North West Region	Establishment of private clinical veterinary services
CISP	Galgadud Region	Privatisation of veterinary activities in El Dhere District
ECO^2 TERRA	Lower Jubba	Establishment of private clinical veterinary services
LVIA	Nugal Region	Construction of slaughterhouse and animal watering troughs
Johanniter Int.	Eastern Saanag	Establishment of private clinical veterinary services

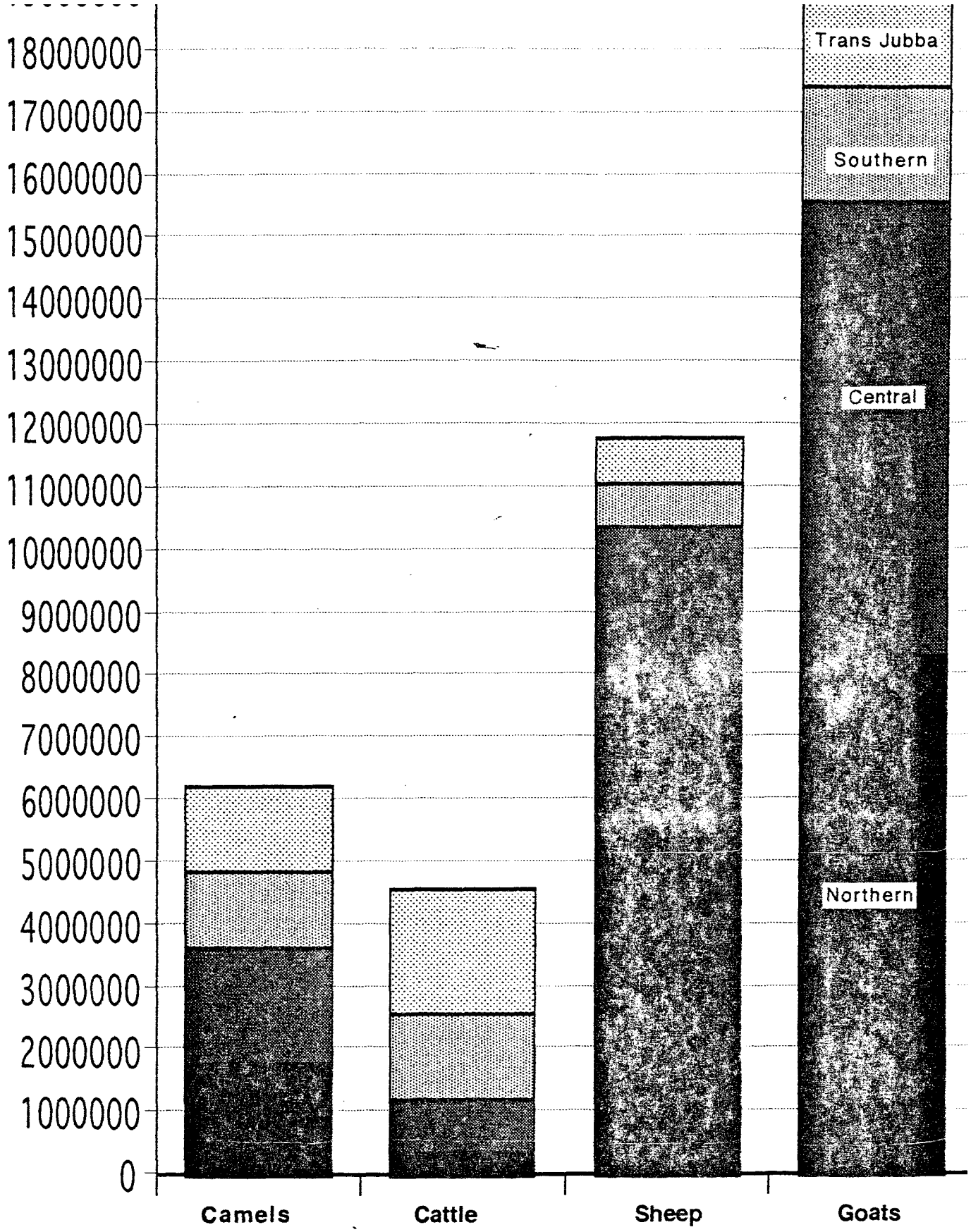
Annex 1. Livestock Development projects implemented by INGOs in Somalia

Year two

Terra Nuova	Gedo/Middle and Lower Jubba	Support to Somali Veterinary professionals, field training and Rinderpest vaccination.
CEFA	Middle Shebelle	Promotion of private clinical veterinary services
Oxfam Quebec	Hiran region	Support to the Livestock sector in Hiran Province
CISP	Galgadud Region	Privatisation of veterinary activities in El Dhere District
COOPI	Awdal region / Berbera	Establishment of private clinical veterinary services
Terra Nuova	Country wide	Training support programme
UNA	North East Somalia	Livestock export related veterinary project in North East Somalia
Terra Nuova	Country wide	Itinerant Training Programme for Somali Veterinary Professionals

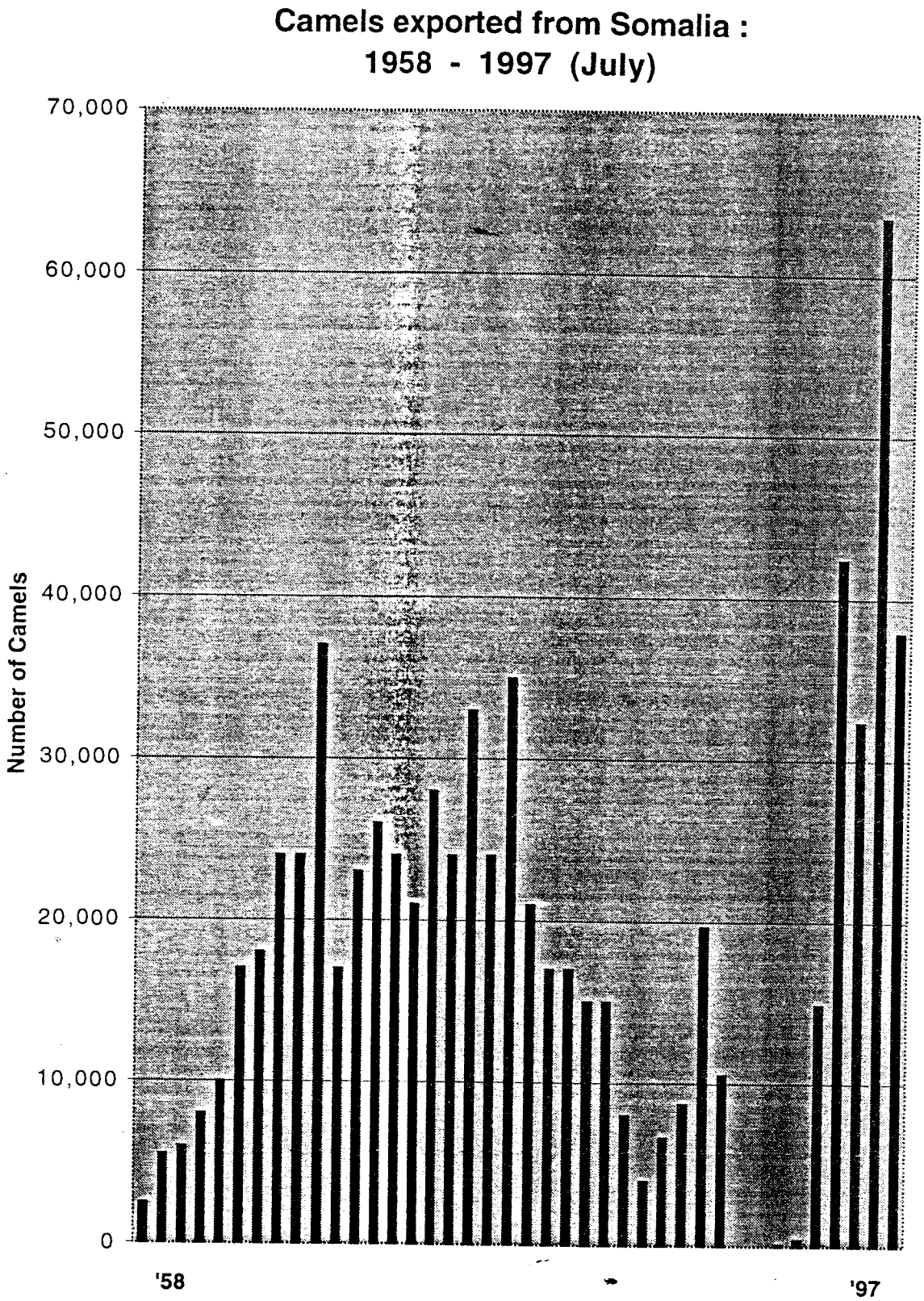
Studies

Authors	Year	Title
G. Stockton - S. Chema	1995	Somali Livestock Export Market Study, Joint EC-FAO Report
G. Stockton	1996	Improvement of Livestock Marketing in the North East Region of Somalia
R. Clark	1996	Study of the Economic Viability of Air Transport of Sheep and Goats from Central and Southern Somalia to the Northern Ports of Bossaso and Berbera with Emphasis on Bossaso.

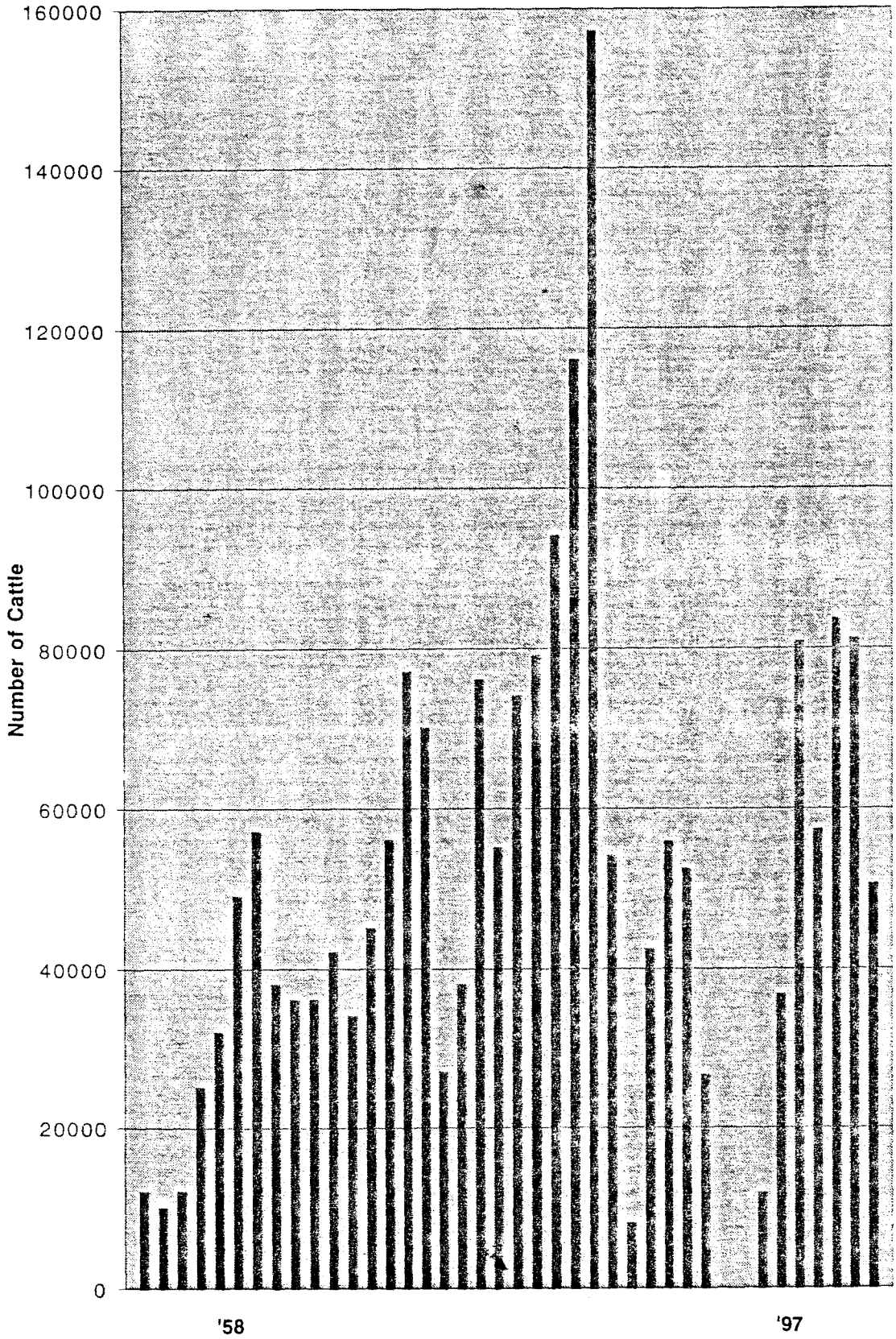


Livestock Distribution in Somalia (1988)

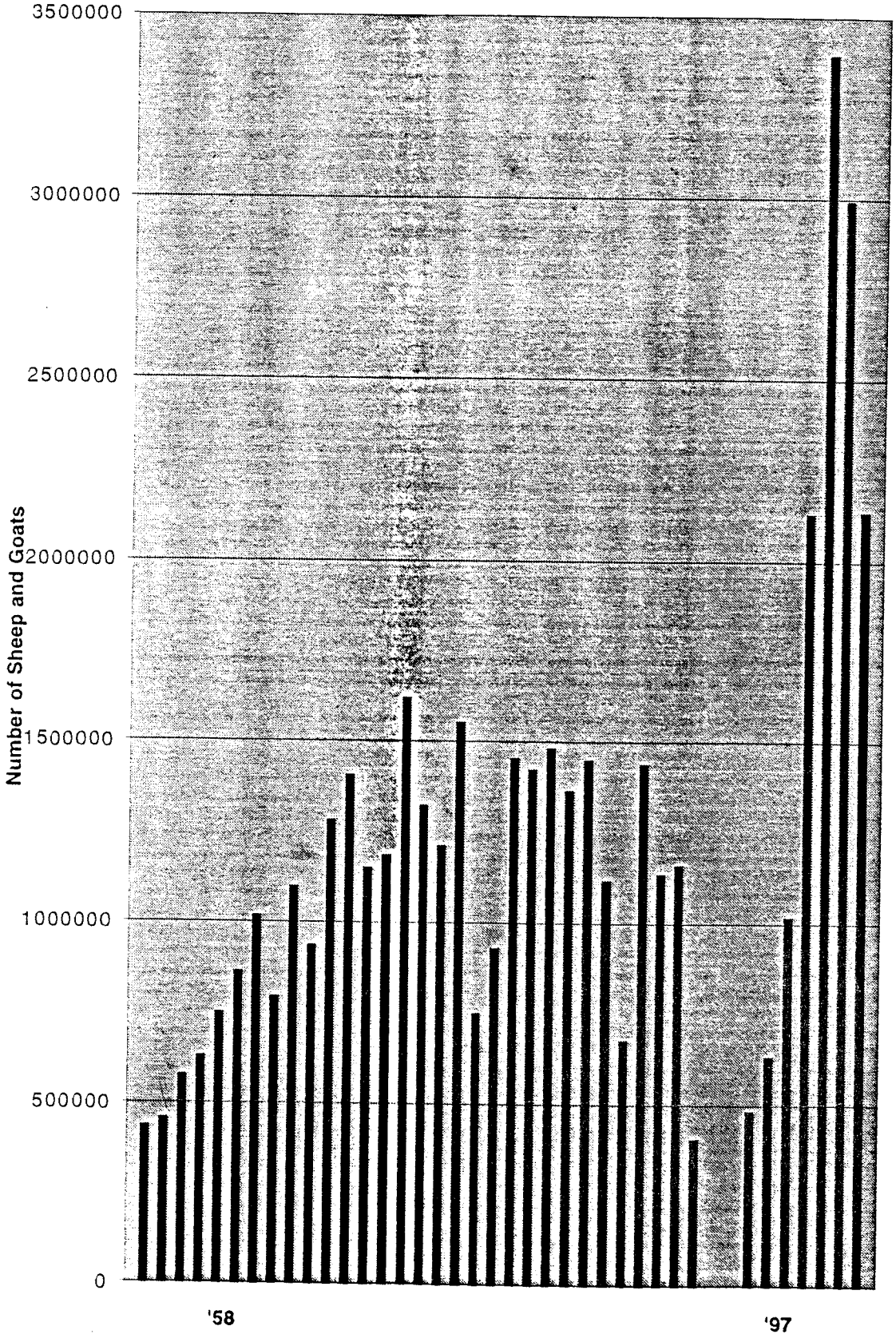
CHART 2


Camels exported from Somalia :
1958 - 1997 (July)
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Number of Camels
'58
'97

Cattle exported from Somalia : 1958 - 1997 (July)



Sheep and Goats exported from Somalia : 1958 - 1997 (July)



JOINT EU/IGAD/OAU/IBAR MEETING ON LIVESTOCK DEVELOPMENT IN EAST AFRICA

KAMPALA, UGANDA 8-10 DECEMBER, 1997

COUNTRY PAPER FOR TANZANIA

By

Dr. J. N. Melewas[1], Dr. B. J. Mtei[2]

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[1] Assistant Commissioner for Livestock Development, Ministry Agriculture and Co-operatives

INTRODUCTION

Tanzania has a large land mass suitable for agricultural production of which 60 mil. hectares are range lands ideal for livestock production. Two thirds of these rangelands are however tse tse infected leaving about 20 million hectares for livestock keeping. The potential carrying capacity in Tanzania is 20 million Tropical Livestock Units (TLU).

According to the 1994/95 National Sample Census in Agriculture (NSCA). Tanzania has a cattle population of 15.6 million, 10.6 million goats, 3.5 million sheep and 27 million poultry. This national herd is made up almost entirely on indigenous breeds of animals owned by traditional livestock keepers who are either agro-pastoralists or pastoralists. There are only about 300,000 improved dairy cattle in the country and these are found in the high potential areas including urban and peri-urban centres. **Map I** shows the cattle distribution in Tanzania.

CONTRIBUTION OF LIVESTOCK TO THE NATIONAL ECONOMY

Livestock is a significant resource in Tanzania. The livestock sector plays a major role on food security, employment, income generation, store of wealth and sustainability in crop agriculture. Animal agriculture contributes 18% to the Gross Domestic Product, an equivalent to 30% of the Agricultural GDP. Tanzania is not officially open to international livestock trade because of her inability to promote livestock exports. There is evidence that over the years per capital domestic consumption of livestock products has outpaced production and this is necessitating increased imports of livestock products.

LIVESTOCK POLICY

Tanzania is undergoing gradual transformation towards a market-oriented economy (MOE). Major players in the development of livestock are the stock owners/producers, traders, manufacturers, professionals and paraprofessionals, non-governmental organisations and donor agencies.

New approaches are being undertaken to address the constraints facing the livestock industry. The overall strategy is to hive off most of the production, processing and marketing functions to the private sector while the government endeavours to provide goods and services, which are public in nature. Core government functions for the livestock sector are policy formulation, translation of policies into legal framework, information services, supporting livestock extension, research and training. **Table I** shows some of the responsibilities of public and private sectors for animal health services.

Table I: PUBLIC AND PRIVATE SECTOR FUNCTIONS IN ANIMAL HEALTH SERVICES IN TANZANIA

FUNCTIONS	PUBLIC	PRIVATE
Artificial Insemination	R+	++
Animal Welfare	R+	++
Breeding	+	++
Export Inspection and certification	++	+
Clinical Services	-	+++
Compulsory testing	++	+
Disease surveillance. Diagnosis and Reporting	++	+
Distribution/Production of Drugs and Vaccines	R+	++
Emergency Preparedness	++	+
Livestock/veterinary extension	++	+
Food Hygiene	++	+
Processing and Marketing of Livestock products		+++
Monitoring and Evaluation	+++	-
Control of Notifiable/Transboundary Diseases	++	+
Planning and Policy Formulation	+++	-
Quality control of Drugs and vaccines	+++	-
Quarantine and Zoosanitary Inspection	+++	-
Registration of Veterinarians and Par-veterinarians	+++	-
Livestock/Veterinary Research and Development cum Training	++	+
Vector Control (mainly Tsetse and Ticks)	++	+

R signifies a regulatory role by the Government

Source: Animal Health Strategy Plan for Tanzania 1997

In re-defining the livestock policy, Tanzania appreciates the importance of not only regional trade in livestock and livestock products but also transboundary animal disease problems and information exchange.

VETERINARY SERVICES

In the course of re-organising the Ministry of Agriculture and Co-operatives (MAC), livestock has been assured a fully fledged department and it is hoped that Tanzania will be able to re-establish a central veterinary authority at last, with clearer chain of command from top to bottom.

Rinderpest Eradication

The EU funded Livestock Services Development Project has been instrumental in the control of rinderpest in Tanzania. As a result rinderpest eradication is now accorded the highest priority and plans are underway to cease vaccinations and join the OIE Pathway to freedom. Rinderpest monitoring and animal diseases surveillance system will be established to ensure that all outbreaks of diseases both in domesticated animals and wildlife are thoroughly investigated and confirmed. Disease surveillance capabilities are being developed to incorporate emergency preparedness plans to deal initially with rinderpest eradication.

Thrust of the Animal Health section of the Livestock Department will be to strengthen the diagnostic capabilities of the Central Veterinary Laboratory at Temeke in DSM and the six Veterinary Investigation Centres in the country.

PARC-TZ has also been involved in policy reform in the delivery of animal health care including the provision of credit line for self-employed Veterinarians. So far only seventeen (17) private veterinary practices have been established under this scheme and there is going to be a major revision of the scheme in view of the experiences gained from the just ended pilot initiative on contracting private veterinary practices to conduct rinderpest vaccinations.

Meanwhile the demand for animal health services in the pastoral areas is present and needs to be met. Community Based Animal Health Workers (CBAHWs) approach is being considered to provide rural veterinary services in Tanzania but the biggest challenge is how to overcome the legal implications.

Contagious Bovine Pleuropneumonia

As Tanzania now moves down the OIE Pathway to eradicate rinderpest, efforts are being taken to assess and control CBPP. The disease is spreading to new areas and is threatening neighbouring countries in Southern Africa. Apart from vaccinations with cost recovery, initiatives are being taken to improve livestock movement control by establishing zoosanitary checkpoints and border posts. Tanzania strongly feels the need for a regional approach along the lines of a Pan African CBPP Campaign under the OAU/IBAR to be able to control and eventually eradicate CBPP.

Tsetse and Trypanosomosis

Tsetse and trypanosomoses are probably more important in Tanzania than in any country in Eastern and Southern Africa; yet the two regional projects, FITCA and RTTCP have had little or no activities in the country so far. Tanzania recognises the importance of proper land-use in tsetse controlled areas

There is now a well-defined land use policy in the country, and very soon will be followed by a Land Law to be enacted by the parliament. The need for controlling tsetse and trypanosomoses in Tanzania exceeds the national capabilities in terms of human resources and funds. We therefore request the OAU/ISCTRC and international agencies to provide assist Tanzania in solving the problem of controlling tsetse and trypanosomosis.

Tick and Tick Borne Diseases

The economic importance of tick and TBDs in Tanzania can not be over emphasised. Tick Borne Diseases prevent livestock from realising production potential. Their control will therefore significantly enhance livestock productivity.

The use of acaricides has had inherent problems with subsequent decline in application. Integrated pest management (IPM) approach is being developed in controlling tick and TBDs, combining the use of vaccines and reduced frequency of acaricide application.

Tanzania is participating in a new arrangement for a regional OAU/IBAR programme on ECF immunisation, which was previously being executed by the FAO.

LIVESTOCK/VETERINARY RESEARCH

Lack of prioritisation in livestock research has affected the efficient use of research funds. The National Agricultural Research System is gradually developing priorities in applied rather than basic research to solve the immediate problems of livestock keepers. It is envisaged that livestock research will henceforth be demand driven to ensure that packages developed are appropriate to livestock keepers needs. Emphasis will therefore be laid on On-Farm Livestock Research (OFR).

OAU/IBAR/IGAD MEETING OF DIRECTORS OF LIVESTOCK PRODUCTION KAMPALA 8-10 DECEMBER 1997.

COUNTRY PAPER - UGANDA

BY

DR. P.M.OCIBA/DR.C.BUNOTI

MINISTRY OF AGRICULTURE,ANIMAL INDUSTRY AND FISHERIES

P. O. BOX 102,

ENTEBBE.

1.0 LIVESTOCK SECTOR IN THE ECONOMY

Agriculture is the mainstay of the Ugandan economy where approximately 88% of the population is rural. The agriculture sector accounts for about 50% of the Gross Domestic Products and over 90% of the exports and employs 80% of the household population in Uganda with a population of about 20 million people. Livestock is an integral part of agriculture contributing about 8.4% to the GDP and approximately 17% of the Agriculture GPD.

Main livestock production statistics per species from 1993 to 1995 are summarised in the Table I below:

	'000' 1993	'000' 1994	'000' 1995
A. Cattle Production			
Milk Output (lts	415,421	429,865	445,337
Beef Production (M.tons)	51.08	52.60	54.22
Hides (pieces)	473	487	502
B. Goat Production			
Meat production (m.tons)	14.38	14.98	15.72
Skins (pieces)	1438	1498	1572
C. Sheep Production			
Mutton Production (m.tons)	3.78	3.96	4.17
Skin (pieces)	378	396	417
D. Pig Production			
Pork (m.tons)	15.25	16.08	16.92
E. Poultry Production			
Poultry meat(m.tons)	4.86	5.1	5.36
Eggs (Nos)	301,000	316,000	332,000
F. Apiary			
Honey (tons)	1,800	2,700	4,050
Bee wax (tons)	180	270	405

2.0 IMPORT AND EXPORT STATISTICS

Uganda does not export many livestock internationally except for 2,000 goats which were exported to the Middle East in 1995. There has been however modest export of livestock and livestock products in the region.

Importation of livestock and beef products was temporarily banned in 1996. However before that, about 10,000 h/c had been imported into the country from 1986 to 1995 mainly from Europe and Kenya.

The major livestock items exported are as per table II.

ITEM	QUANTITY (1995 FIGURES)
1. Cattle Hides	2,877,9[illegible]1 Kilograms
2. Goat Skins	1,068,920 pieces
3. Sheep skins	165,643 pieces
4. Horn tips	17,500 Kilograms
5. Gall stones	4,500 grammes
6. Butter	425 Kilograms

3.0 UGANDA LIVESTOCK SITUATION WITHIN THE REGION.

The Ugandan livestock comparative position in the region in terms of population and share of agriculture GDP stand as follows:-

COUNTRY	CATTLE	GOATS	SHEEP	PIGS	CHICKEN	% AGRIC GDP
Uganda	5.300	3.5	1.20	1.0m	22	17
Kenya	9.800	8.50	7.30	0.102	23	38
Tanzania	13.5	6.6	4.700	0.184	30	23
Rwanda	0.645	1.2	0.36	0.09	1	11
Rep.of Congo	1.40	3.04	0.88	0.8	19	5
Sudan	22.500	13.500	18.500	-	29	58

(Population in million).

3.1 DISEASES SITUATION:

Presently the livestock disease of major concern in the country is Contagious Bovine Pleuropneumonia. Rinderpest was last recorded in 1994 although a nation-wide combined Rinderpest and CBPP Vaccination Programme is being implemented. Foot and Mouth Disease is sporadically reported on the border with Tanzania and Rwanda. With tight movement regulation and strategic vaccination, the disease is under control. Tsetse and tick-borne diseases are enzootic and are controlled by an integrated control aimed at vectors and the parasites as well as manipulating the resistance to these diseases. Zoonotic diseases like Brucellosis in cattle and Rabies in dogs are on increase and are addressed through vaccination; and in case of dogs destruction of stray dogs is also carried out. African Swine Fever in pigs is sporadic. In poultry; New Castle Disease, Gumboro, Fowl Typhoid and Fowl Pox are the main diseases.

These animal diseases know no administration boundaries and therefore what is pertaining in Uganda affects the neighbouring countries. The situation is further exacerbated by the civil unrest in the Great Lakes. This has caused a lot of movement of livestock. Cattle from Uganda moved to Rwanda; from Tanzania through Uganda to Rwanda, and cattle from the

Republic of Congo and Sudan enter Uganda. There is the pastoral movement of livestock along Tanzania and Kenya border in research of water and pasture. Control of some of these diseases have therefore entailed regional approach. Presently in place are 3 regional programmes:

1. PARC funded by EU under OAU/IBAR execution aimed at controlling CBPP and Rinderpest.
2. Tsetse and Trypanosomiasis Control funded by EU under OAU/IBAR execution.
3. Integrated Tick and Tick Borne Disease Control funded by DANIDA.

Within the East African Regional Cooperation there is political will for regional disease control. At local level, a mechanism has been developed for regular meetings between the district officials to harmonise livestock movement and disease control across the borders.

3.2 EXPORT IN THE REGION

There is a lot of informal cross-border trade in livestock and their products at local level which is impossible to quantity and control because Ugandan is a landlocked Country. The official export and import of livestock and their products to countries in our region are in Table II:

EXPORT AND IMPORT OF LIVESTOCK AND PRODUCT

COUNTRY	TYPE OF LIVE ANIMALS	NO.	TYPE OF PRODUCTS	QUANTITY IN KGS
Kenya	-	-	Meat	5,000
Tanzania	Chicks	4,800	Eggs	10,000
Rwanda	Cattle Goats	375,423 550	Meat	44,455
Sudan	-	-	-	-
Republic of Congo	H/Cattle	40	Meat	1,157
TOTAL				

Following the BSE concern, the country put a ban on importation of livestock and meat products in 1996. The ban has however been selectively reviewed for livestock of East African origin and for semen of cattle from countries free of BSE. The country imported over 111,000 kg of pork and pork products from Kenya over the last 2 years.

3.3 SCIENTIFIC INFORMATION AND RESEARCH:

National Agricultural Research Organization is a member of the ASERECA which is hosted in Uganda. Through ASERECA, the researchers in Uganda have established network of access to information on livestock research by other researchers in the region.
The research findings are channelled to the field through extension.

4.0 AGRICULTURE SECTOR DEVELOPMENT STRATEGY.

The Government instituted the Economic Policy Reforms which are intended to remove distortions in the Uganda Economy as a foundation for economic growth in all sectors of economy. These reforms involves:-

1. Public Service Reform
2. Liberalization
3. Decentralization.
4. Good Governance

The agricultural sector policy objectives are part of the following Government's macro-policy objectives:

- Security and good governance;
- Economic growth and poverty eradication;
- Maintenance of macro-economic stability; and
- Human resource development, especially basic education and health.

The specific agricultural sector policy objectives are:

* ensuring food security and adequate nutritional levels;
* increasing and diversifying the production of agricultural export commodities;
* provision of adequate agricultural raw materials for development of domestic agro-based industries;
* creation of sufficient employment opportunities in the agricultural sector and thereby improving the socio-economic welfare of rural people.

4.1 LIVESTOCK SUB-SECTOR DEVELOPMENT STRATEGY.

The specific livestock policy objectives have the root from the above agricultural sector policy as:-

* ensuring production of sufficient animal protein to meet the demand of the ever expanding human population.
* increasing and diversifying the production of livestock and livestock products for export market.
* provision of sufficient raw materials from livestock for the domestic agro-based industries.
* creation of employment opportunities in livestock production, processing and marketing sectors and thereby improve the socio-economic welfare of the rural people.

4.2. MODERNIZATION OF AGRICULTURE.

To achieve the above objectives, emphasis has been placed on a plan to modernise Agriculture aimed at eradication of rural poverty. Five priority areas have been identified:

1. Provision of Water for Production
2. Control of pests and diseases
3. Provision of good quality genetic materials
4. Research, Extension, Farmer linkages
5. Targeting Zonal Production.

4.3 ROLE OF GOVERNMENT AND MINISTRY OF AGRICULTURE,ANIMAL INDUSTRY AND FISHERIES IN THE UGANDAN NEW ENVIRONMENT.

The Government has in place a Constitution in which the roles of the Central Government, Local Government and Private Sector are well defined. This has further been entrenched by the Local Government Statutes of 1996. The roles of the Central Government and MAAIF in the post Constitution era therefore remain:

1. Formulating national policies
2. Providing technical guidance
3. Formulating Strategic Plans for the national programmes

4. Monitoring and evaluation to ensure standards are maintained

The decentralised districts in respect to the agriculture have the role of:

* Implementing agriculture sector programmes
* Formulating district specific sector plan in collaboration with the line ministries
* Initiate sector activities
* Planning sector development including resource allocation
* Instituting accountability and reporting system
* Monitoring and evaluating sector programmes
* Implementing Government policies related to agriculture.

The Government introduced liberal economic policy environment giving prominence to market forces and private sector. Liberalization and privatization are the central driving force for the economic growth and the Government is committed to promote their roles in "rowing the boat" in both agricultural an non-agricultural sectors.

5. LIVESTOCK POLICIES:

When the NRM Government came to power in 1986, it was already realised that the Government could no longer sustain provision of all services in the livestock sector. The supply of drugs was identified as one of the areas which the Government could not sustain.

Hence in 1989, a Committee appointed by H.E the President to look into Importation, Distribution and Marketing of Drugs recommended that with the exception of vaccines and trypanocides, trade in drugs should be liberalised. The Government through National Drug Authority and Agricultural Chemical Board put in place the regulatory measures to ensure safety, efficacy and proper use of drugs, and that adequate quantity and range of drugs are available to the farming community.

ii. In 1989, a precursor policy document was produced by MAAIF titled "Livestock and Fisheries Development Programme towards the year 2000". This was revised another document produced in 1992 titled "Way Forward II" in which Livestock Sector was to

* restore adequate disease control
* increase self-sufficiency in meat and milk and milk products
* rehabilitate of extension and research services
* liberalize of pricing and marketing.

iii. In 1992/93 Dairy Master Plan was formulated with objective of assisting small scale dairy farmers to raise their incomes through increased returns in dairy farming; and the nation to attain self-sufficiency in milk and milk products.

iv. In 1995/96 Animal Breading Policy was formulated with the overall aim to attain sustainable productivity of farm animals in order to ensure national food security and socio-economic while conserving the natural resource.

v. In 1996/97 the Meat Master Plan is being formulated with the aim of providing comprehensive plan for sustainable development of meat industry and respond to areas of shortfall in national demand and export of meat for a period of over 20 years.

vi. A study was conducted with GTZ funding and a document titled " National Vaccination Programme" was produced in 1994 detailing routine diseases to vaccinate against.

6. NATIONAL LIVESTOCK RESEARCH POLICY

Research in all agriculture related matters are placed under National Agriculture Research Organization. The Livestock research aims at increased and sustainable animal production through improved genetic potential, feeding, health and natural resource management; and development of appropriate post-harvest technologies for animal products.

The research in livestock sector and production were formulated on commodity basis.

- Dairy
- Beef
- Small ruminants
- Poultry
- Pigs.

7. POLICIES AS A POSITIVE ENVIRONMENT FOR LIVESTOCK DEVELOPMENT

Good policies are very essential for livestock development; for examples:

- Up grading by Artificial Insemination Improved productivity of our indigenous cattle while retaining adequate disease resistance in them to continue serving under the harsh tropical environment.

- Liberalisation of marketing has greatly boosted the price of livestock and livestock products to the farmers.

- Disease Control Act - has checked on uncontrolled livestock movements and reduced on transmissible diseases.

- Research Policies - have identified the beneficial traits and feed problems for livestock.

8. THE FUTURE OF THE LIVESTOCK SECTOR:

8.1: National:

The future of the Livestock Sector in Uganda is very bright as streamlined under the Master Plans and the Breeding Policy.

The following growth rates may be achieved in the next 10 years:-

-	Cattle	3%
-	Goats	5%
-	Sheep	5%
-	Pigs	7%
-	Poultry	10%

There is likely to be high demand for Goats and Poultry.

8.2: **Regional**

Livestock production will develop may be at different pace but as region we can still work out comparative advantages for each commodity in each and promote what other neighbours cannot produce and substitute for what our neighbours can supply. As a region we are capable of harmonising our disease control programmes and possibly eradicate the devastating disease such as FMD, Bovine Contagious Pleuropneumonia, Rinderpest and Trypanosomiasis (or its vector the tsetse fly).

Milk - this commodity already is becoming excess in Uganda because of poor preservation and marketing systems whereby we have contrasting areas of excess as against areas of deficit. Production cost is above the selling price.

Beef - Beef will continue to be marketed profitably in the country and in the region because much of it is produced on natural pastures.

Eggs - will remain high on the tables of the urban community and increasingly become consumed in the rural areas of the region and hence has an increasing role to play in narrowing protein gap.

Leather - Hides and Skins have unlimited market in Uganda and in the region if the quality of acceptable standard. Horns/Hoofs and Gallstones - still have unlimited application.

Honey and Beeswax - are not fully exploited here and production is still very low in Uganda. Uganda can afford to produce clean honey for international market because of its unpolluted environment.

9. THE MAIN TECHNICAL CONSTRAINTS TO LIVESTOCK DEVELOPMENT

(a) Animal Health

Devastating diseases still exist especially against the high producing exotic breeds of animals. Such diseases include the tick-borne diseases especially East Coast Fever. Contagious Bovine Pleuropneumonia is prevalent in the country. African Swine Fever remains as threat to that Swine Population. Tsetse flies still occupy quite a large expanse of the cattle grazing areas. Diagnostic facilities are still limited.

We have not developed capacity for production of a variety of animal vaccines. Except for Newcastle disease vaccine, most vaccines are still being imported.

(b) Animal Genetic Resource

- Importation of exotic breeds is very expensive and risky
- Technologies of embryo transfer have not been readily adopted to effect multiplication of good seed.
- Indigenous breeds which are well adapted to the environment are still slow maturing and of low productivity.

(c) Human Resources

- We still lack adequate number of the animal breeders.
- Breeding research scientists are inadequate
- Labour is becoming expensive to high for any enterprise.

(d) Our research institutes are not adequately equipped for refined research especially on Livestock such electron-microscopy and genetic engineering. Research Scientists in animal breeding are lacking.

(e) **Production Systems-**

Much of our livestock (over 90%) are still kept under traditional systems which includes:

- trans humance, nomardism.
- Communal grazing and to a limited extent tethering.
- Traditional husbandry cannot eliminate most of the diseases and animals spend much of the energy and time looking for pastures and water; also promotes degradation of the environment.
- Another system which is gaining ground in crowded areas of the country in Zero-grazing. This system is quite expensive.
- Water is a major bottleneck to sustainable production in dry areas of the country.

(f) **Research - Extension - Farmer - Linkage:-**

This is still weak and needs strengthening. Until recently much of the research done in the country was not demand driven and therefore much of it remained with researchers; not accessible by extension agents and farmers.

(g) **Information and Communication:-**

- Lack of information including basic data such of statistics.
- Market information is not available to all the people all the time.
- Communication is difficult because of poor infrastructure. Also without single national language, communication to rural areas is localised. Our media centres lack logistics and equipment.

10. THE INSTITUTIONAL SUPPORT TO LIVESTOCK DEVELOPMENT

10.1. The current situations

Research:

Main institutions for Research are:-

i) The National Council of Science and Technology

ii) The National Agriculture Research Organization (NARO).

iii) Universities - Makerere University is the oldest University in the country has the complementary research to NARO.

iv) Non-Government Organizations (NGO) - some of these are running independent experiments.

Extension:

i) Ministry of Agriculture, Animal Industry and Fisheries plays a core role in extension service. Under Agriculture Extension Programme which is being funded by the World Bank and Uganda Government a Unified Extension using Training and Visit methodology is applied.

ii) Non-Government Organisation are sponsoring their own extension to farmers. Sometimes they use Government extension workers. These sometimes are secretive and cannot cover all the commodities. Extension agents under these NGO's are sometimes better motivated.

iii) Uganda National Farmers Association which is an umbrella for various groupings of farmers have piloted some demand driven extension service in some districts of the country. UNFA cannot cover the whole farming community and small holders cannot afford to demand this service.

iv) Processors or Manufactures, especially of milk and leather are making efforts to establish their own extension wings. This is quite limited because our manufactures cannot afford to widen their scope of operation.

v) **Higher Education**

a) Diploma Certificate - this level is being handled at some Government Agriculture Colleges. Originally trained for Government employment but now Government cannot absorb them all.

b) University - for degrees and post-graduate diplomas most of our Veterinarians are trained at Makerere University and other foreign universities. Same as above the majority now being trained will go for private practice and private sector.

Annex 5

PAPER PRESENTATIONS

ONGOING AND PLANNED OPERATIONS IN THE LIVESTOCK SECTOR IN EASTERN AFRICA

Dr. W.N. Masiga
Director OAU/IBAR

1. BACKGROUND

The Interafrican Bureau of Animal Resources (IBAR) is the technical bureau of the Organisation of African Unity responsible for Animal Resources on a continent wide basis. It also works with Regional Organisations where appropriate. We therefore look forward to strengthening our ties with IGAD. This meeting is an example of this cooperation. We must work together to complement each others activities and avoid duplication of efforts.

In pursuing its role of being responsible for livestock, it works closely with International Organisations involved in livestock, these include OIE, FAO and WHO. For example, IBAR was closely involved in the development of the Global Rinderpest Eradication Programme (GREP) coordinated by FAO and is responsible for implementing the African component.

In addition, IBAR works closely with a number of research organisations in the livestock sector. These include ILRI, ICIPE, KETRI etc. and professional and academic institutions. It is now liaising with ASERECA and intend to strengthen these ties.

OAU/IBAR holds a meeting of "Ministers Responsible for Animal Resources" every three years. The last one was held in Mbabane, Swaziland in August of this year.

These meetings are very important in getting firstly the Directors of livestock followed by the Ministers Responsible for Animal Resources to come together and discuss problems and debate policy matters concerning animal resources over the whole continent.

The resolutions passed at these meetings give OAU/IBAR the mandate to pursue certain courses and carry a number of tasks on behalf of Member States.

2. INFORMATION AND DISEASE DISTRIBUTION

IBAR publishes monthly Animal Health Statistics for Africa as well as compiling Annual Animal Health Statistics for Africa.

In addition it produces the quarterly Bulletin of Animal Health and Production in Africa. This is a world recognised publication covering animal health and production research in Africa.

3. ANIMAL PRODUCTION

IBAR is working with ILRI and FAO on a project to identify and preserve indigenous species of livestock in Africa. The continent, particularly East Africa, is rich in species indigenous livestock, especially cattle, sheep and goats. These animals often have very

desirable characteristics, disease resistance, adaption to the tough local environments etc. and must be preserved.

A project working with East African Universities on improving the nutrition of small ruminants by feeding agro industrial by products is now winding down.

We are in the process of starting a project on increasing animal production in the peri urban areas as these are the areas of greatest human population growth. Emphasis will be on pigs, poultry and fish as they are fast growing and can utilise mixed farming products.

There is also a great need to develop better animal feeds and fodder.
We plan to work with existing organisations and institutes such as ASERECA, ILRI etc. to achieve these goals. We will assist mainly by trying to help secure finance.

4. ANIMAL HEALTH

4.1 Pan African Rinderpest Campaign.

This is the largest livestock programme in Africa and has involved components in 35 countries. In the early 1980s when the programme was being formulated, 20 countries were affected by the disease. This year only 3 countries all in East Africa

have reported the disease. The project while concentrating on rinderpest eradication did broaden its activities in a number of countries to include other diseases such as CBPP and some animal production. The project has a coordination unit based in Nairobi with a branch in Bamako. Projects are planned then drafted and implemented in the individual countries.

During the period of implementation, the Coordination Unit has grown and has a wide range of expertise ranging from planners and implementers, epidemiologists, communication experts, economists and the latest addition are experts in developing and implementing community based animal health worker approaches. The Unit has had much experience in coordinating and supervising projects.

The European Commission has been the main donor to the programme contributing over ECU 130 million so far. Other donors have included USAID, ODA, French Cooperation, Belgium, Japan and FAO.

A new phase of the project, phase IV is at present being drafted with the main aim being the final eradication of rinderpest from the continent.

4.2.1 PANVAC which is located in Debre Zeit, Ethiopia is tasked with testing all rinderpest and CBPP vaccine used in the programme, is funded by the EC but run

by FAO. To ensure the continuity of this very very important laboratory, it is being instutilionalised and will be part of the OAU.

4.1.2. Wild life Project.

East Africa has the largest number of variety of large mammals in the world. They are an extremely important resource in the region. A project has been drafted and awaiting funding, which has been promised, to study disease of wild life and their role in maintaining diseases of domestic stock particularly rinderpest.

4.1.3 Special areas projects.

Projects are ongoing to control animal diseases particularly rinderpest in areas of conflict. These projects are being implemented in southern Sudan, Somalia and Rwanda. They are implemented mainly by NGOs and using Community Animal Health Workers (CAHWs). Funding has come from both EC and USAID.

4.1.4 Coordination Meetings.

Every year a Coordination Meeting is held for East Africa, there is another one for Central and West Africa. These meetings are attended by the Directors of Veterinary Services and PARC coordinations. Problems are discussed and policies coordinated. Plans for and timing of the animal vaccination campaigns are made to ensure that vaccinations take place on both sides of borders at the same time.

These meetings are supplemented by cross border meetings at District level.

4.2 Regional Tsetse and Trypanosomiasis Control.

This project "Farming in Tsetse Control Areas" has been approved and will be starting shortly. The project initially will involve 4 countries, Ethiopia, Kenya, Tanzania and Uganda. The project will be coordinated by OAU/IBAR. It is being funded by the EC. We also liaise closely with the Southern African tsetse control programme (RTTCP) and initiating a West African programme.

4.3 Ticks and Tick Borne Diseases.

This programme involves the control of ticks and tick borne diseases and is being implemented by countries in both East and Southern Africa. This programme was run by FAO for a number of years but has recently been handed over to OAU/IBAR to coordinate and implement.

5. CONCLUSION

OAU/IBAR's role in animal production and animal health in Africa is steadily increasing as more programmes are given to the bureau to coordinate and implement. A considerable level and range of expertise has been gathered together in IBAR and the projects it coordinates. The team has also had considerable experience in drafting, supervising and implementing projects.

1

Public and Private Sector Livestock Policy Reform for the Greater Horn of Africa

Presented to: The OAU/IBAR/IGAD Meeting of Directors of Livestock Production. Kampala, December 8-10, 1997

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2

The Past

- **Governments were responsible for** the entire gamut of **free** or highly subsidized services
  - Animal Health delivery
  - Infrastructure
    - Markets
    - Roads
    - Telecommunications
  - Quarantine provisions
  - Slaughter services
  - Regional coordination and policy dialogue
  - Milk
    - Processing and packaging
    - Delivery
    - Quality assurance and inspection
  - Meat inspection
  - Breeding and genetic resources
  - Research
  - Epidemic investigation and disease diagnosis
  - Vaccine production
  - Emergency response
    - Vaccinations
    - Treatments
    - Feed supplies
  - Education and training
    - Veterinarians
    - Animal productionon ists

- Animal nutritionists
- Animal geneticists and breeders
- Animal technicians and health assistants
- Legislation
- Drug use, quality control, standards, and distribution

- **Private sector was responsible for**:
  - Drug manufacture
  - Milk production
  - Meat production
  - Feed and forage production
  - Drugs

3 This situation led to high expectations on the part of citizens and a low delivery quotient on the part of governments. Governments, particularly resource-poor ones without well defined tax bases or revenue generating capacities are unable to provide efficient delivery of such a wide-range of services.

- This resulted in a concentration on urban and peri-urban services
  - Urban and peri-urban populations had the loudest voices
  - Urban and peri-urban populations kept governments in power
- The uneven service distribution led to
  - neglect of rural services
  - punitive policies for agriculture producers (including livestock)
  - overall decline in rural agriculture services
  - defacto encouragement of rural - urban migration

4 **Today, there is a better rationalization of the roles of the public and private sectors**

- Governments are streamlining there roles to encompass what they do best and what only they can efficiently do.
- The private sector is assuming expanded roles and through competition services are improving and remaining price competitive.

→ Specialization of roles: Government agencies are now able to focus, concentrate and specialize on issues and tasks that they can best do. They no longer have to be a "jack of all trades" but can take the leadership role by setting policies and environments which encourage individuals, communities, the private sector and NGOs to be successful specialists in their own areas. Frequently, this requires extensive "re-tooling" and continuing professional

education to provide government staff with the necessary set of tools to accomplish their newly defined tasks.

5 Role of Government

- legislation and regulation
  - provision of legal and policy frameworks which encourage availability of low-cost, quality goods and services for rural and urban sectors
- enforcement of laws and policies
  - ensuring a fair and equitable environment for production, consumption, and service delivery
- Regional coordination and policy dialogue
- Education
  - Degree/certificate training of mid-upper level professionals
  - Continuing Education and Professional Development (CPD)
  - Ensure standardized training at all levels
- Coordination with other departments e.g. range management
- Monitor / supervise provision of clinical and vaccination services
- Assurance of quality and wholesome food
  - Meat hygiene
  - Milk hygiene
- Infrastructure development and maintenance
- Quarantine and animal movement restrictions
- Epidemic Disease investigation and control
- Emergency and Disaster Response
  - establish policies to save lives over the short-term and save livelihoods thereafter
  - stimulate economy through selective short-term subsidization to assist in an emergency, e.g. subsidized transport in Kenya to permit sale of pastoral animals before inverted terms of trade resulted in collapse of the livestock market.
  - Contract vaccination services
  - Contract and undertake disease investigations

6 Role of Private Sector

- Production (meat, milk, feed, and value added products)
- Processing of meat, milk, feed, and value added products)
- Service delivery (health, nutrition, breeding)
- pharmaceutical production
- Marketing

7 Roles that can be Shared by Private Sector and

Governments

- Research
- Education
- Infrastructure maintenance
- Vaccine production

8 ## Production Systems

- High Potential (highly productive) areas
  - many of these changes have occurred and others are well on their way
- Pastoral Ecosystems
  - are the true undeserved areas of the GHA

9 ## The Case for Focusing on Pastoral Land Areas of the GHA

- 2/3 or more of livestock population of the entire GHA region are pastoral (some countries 90%)
- Livestock are the engine of the pastoral economy
- Pastoralists and their animals are highly mobile within and between nations of the region
- Pastoral zones are at ecological risk
- Issues of the impact of livestock on the region's unique wildlife natural heritage
- Weak pastoral economies and poor trading links frequently lead to civil unrest and conflict
- Natural disasters are common (droughts and floods)
- Common link between nations is the opportunities and constraints presented by livestock and pastoral areas
- national boundaries are usually pastoral areas ↔ Trans-boundary disease transmission

10 ## Special Needs and Problems of Pastoral Areas

- remoteness and vast distances preclude a direct transfer of methods and systems that are appropriate for high potential areas
- agropastoral / nomadic production systems
- Success depends on mobility of pastoralists and complex decision making processes to ensure pasture and water resources for their livestock
- Provision of routine animal health care is non-existent outside of key administrative centers
  - pastoral areas are left out of current solution to animal health-care delivery, yet these

areas hold most of the livestock!

- Private vets hesitant to take risk to undertake vehicle-based private practices they can successfully do in high potential areas.
- Veterinary Associations do not want to give up vets responsibility to paraveterinarians
- Governments remain unable to provide any degree of sustained services outside of a few widely dispersed villages where livestock clinics have been established. But, Governments have yet to relinquish their control over service delivery in many areas.

- Marketing infrastructure and transportation systems poorly developed
- Outdated colonial-era laws discourage livestock marketing in some areas
- Liberalized drug policies in some areas have led to sporadic availability of drugs but no expertise in their use resulting in the establishment of "black market" services.

11 ❑ Stationary Government Veterinary Clinical Services in Pastoral Areas (see diagram)

- Vet clinic located in an administrative center
- lack of fuel, vehicles, maintenance leads to the vet providing clinical services for the village and immediate outlying area only. Vast distances lie between adjacent clinics, effectively making sustained clinical services in pastoral areas non-hesitant.
- Vet frequently lacks equipment, materials, and drugs
- Vet is frequently of different ethnic group which creates a language and cultural barrier that contributes to a lack of mutual trust and respect
- Frequently annual vaccination campaigns are the only time that any service is available. One day in 365 is 0.3% of the time!
- Lack of trust and understanding in some areas results in pastoralists refusing to present their animals for vaccinations and other health-care services.

12 ❑ The present situation: *Black market "services"* in pastoral areas (see diagram)

- *Untrained vendors selling vet drugs to unaware livestock owners*
- incorrect administration, dosage and overuse of drugs ➔ drug resistance
- drugs of dubious quality (contents questionable, past expiry date)
- over pricing
- Wrong medicine for the job
- Black market "rackets" develop
- Vet profession looses
- Livestock owner looses
- Government looses

13 ❑ Veterinarian-supervised Community-based Animal Health Care Delivery for Under-served Pastoral Areas

- private sector program to enable pastoralists to provide for their own animal health care
- supervised by veterinarians
- regulated by Government
- responds to a first-line priority of pastoralists helping to ensure their participation and the programme's success.

14 ❑ Priorities of Pastoralists

- Animal Health Care
- Conflict, Security, and Peace
- Water and Pasture
- Market access

15 ❑ Components of Veterinarian-supervised Community-based Animal Health Care Delivery for Under-served Pastoral Areas

- Long-term Community Dialogue (weeks-months-years)
- Community defines its needs and priorities
- Community accepts responsibility to for the development of sustainable and cost-effective services
- Government, NGOs, and others are only there to facilitate outside linkages and provide a supportive policy, legal, and infrastructure framework to enable pastoral comminutes to develop their own sustainable and cost-effective services.
- Responsible livestock-owning community member selected ***by the* community** for training as a community-based animal Health Worker (CAHW)
- Training conducted by private veterinarian or Animal Health Assistant (AHA) with help of others
- Initial stock of drugs and equipment kit provided to CAHW
- CAHW performs primary animal health care services for a fee.
- Full cost-recovery principles used, including profit
- Drugs purchased from vet or AHA supervisor
- Vet or AHA supervisor links with vet. pharmaceutical traders and Government livestock service

16 ❑ Role of Government in Veterinarian-supervised Community-based Animal Health Care Delivery for Under-served Pastoral Areas

- Provides supportive policy and legal framework
  - CAHWS permitted to vaccinate and provide treatments under supervision of private vet (or AHA who is in turn supervised by a vet)
  - Regulated and controlled ethical drug sales limited to vets selling to CAHWs (and AHAs)
  - sale of controlled and ethical drugs permitted only to CAHWs and other professionals (not common pastoralists)
  - review and change (where necessary) of laws and regulations relating to livestock marketing and trade from pastoral areas
- Collects epidemiological information from CAHW-Vet system
- Performs epidemic disease investigations in part through contracts with CAHW-Vet system
- Controls large-scale epidemics through emergency interventions
- Monitors and enforces drug distribution networks
- Provides quality assurance of drugs and vaccines

17 ❑ Role of Veterinary Associations

- As the body responsible for the delivery of animal health-care, veterinary associations should strive to embrace CAHWs as bottom-tier animal health delivery professionals.
  - advocacy
  - protection
  - supportive environment

18 ❑ Advantages Veterinarian-supervised Community-based Animal Health Care Delivery for Under-served Pastoral Areas

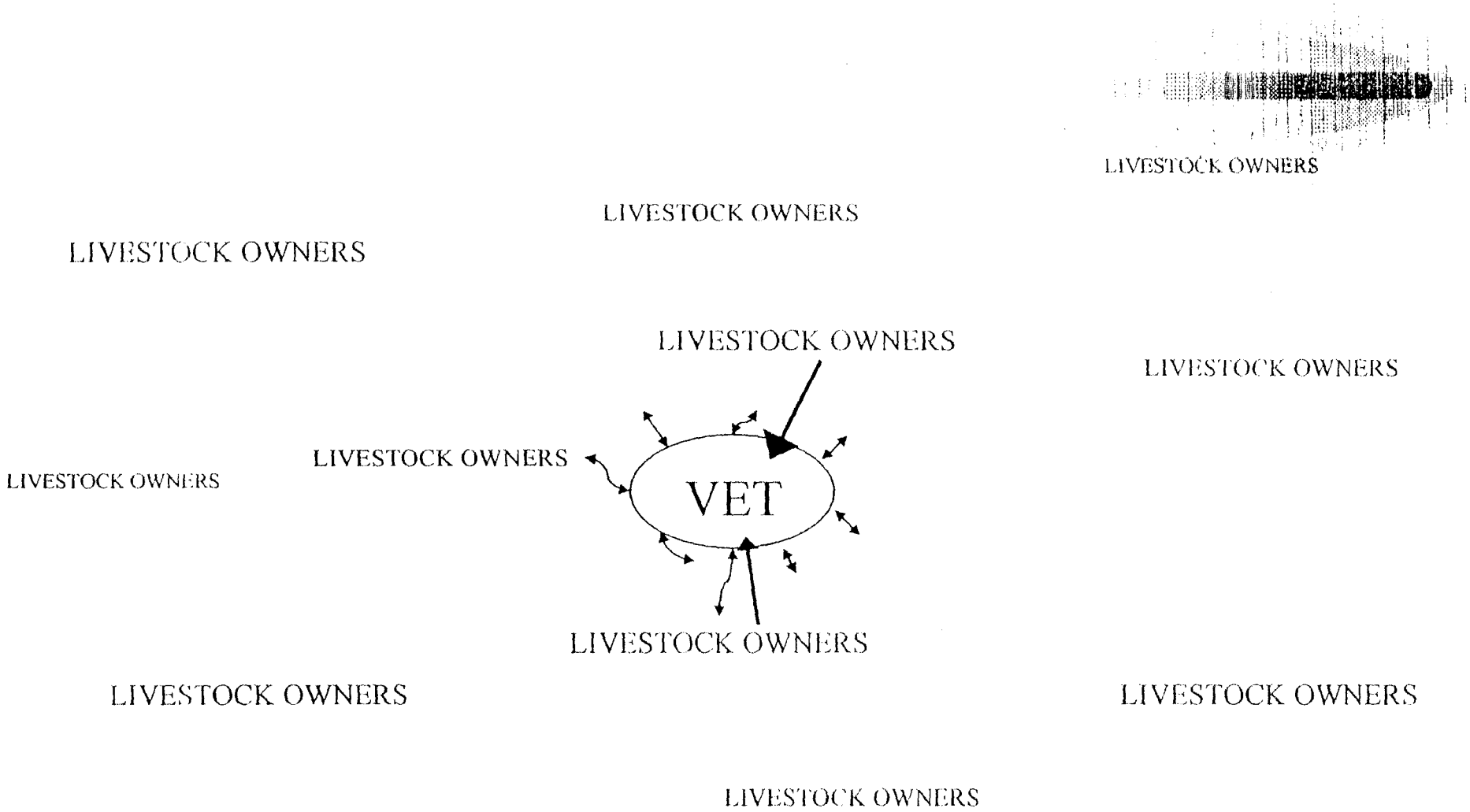
- Cost effective service in pastoral areas
- Finite resources better utilized for public good
- ↓ disease ⇨ ↑ livestock production ⇨ ↑ marketing ⇨ ↑ Capital flow and rural wealth
- Government services are responsive to and supportive of pastoral economy ➸ therefore respected

19 Why begin with Animal Health?

- First-level priority of pastoralists
- Pastoralists are willing to accept responsibility for providing for their own animal health care.
- Pastoralists are extremely knowledgeable about animal disease, therefore little additional education is required to have the system operational.
- Improved animal health results in increased trade and capital flow, effectively taking advantage of large economic potential of livestock in region.
- Increased trade in drugs and livestock results in greater integration into national and regional economies.
- Increased economic participation results in greater dependency on national and regional economies and thus removes one of the key causes of conflict.
- Successes of CAHW-Vet system programs encourage pastoralists to work to solve their other problems including inter-tribal conflicts cattle raiding, health, and education.

Stationary Government Vet's Clinical Service

(successful model for private practice in high potential areas)



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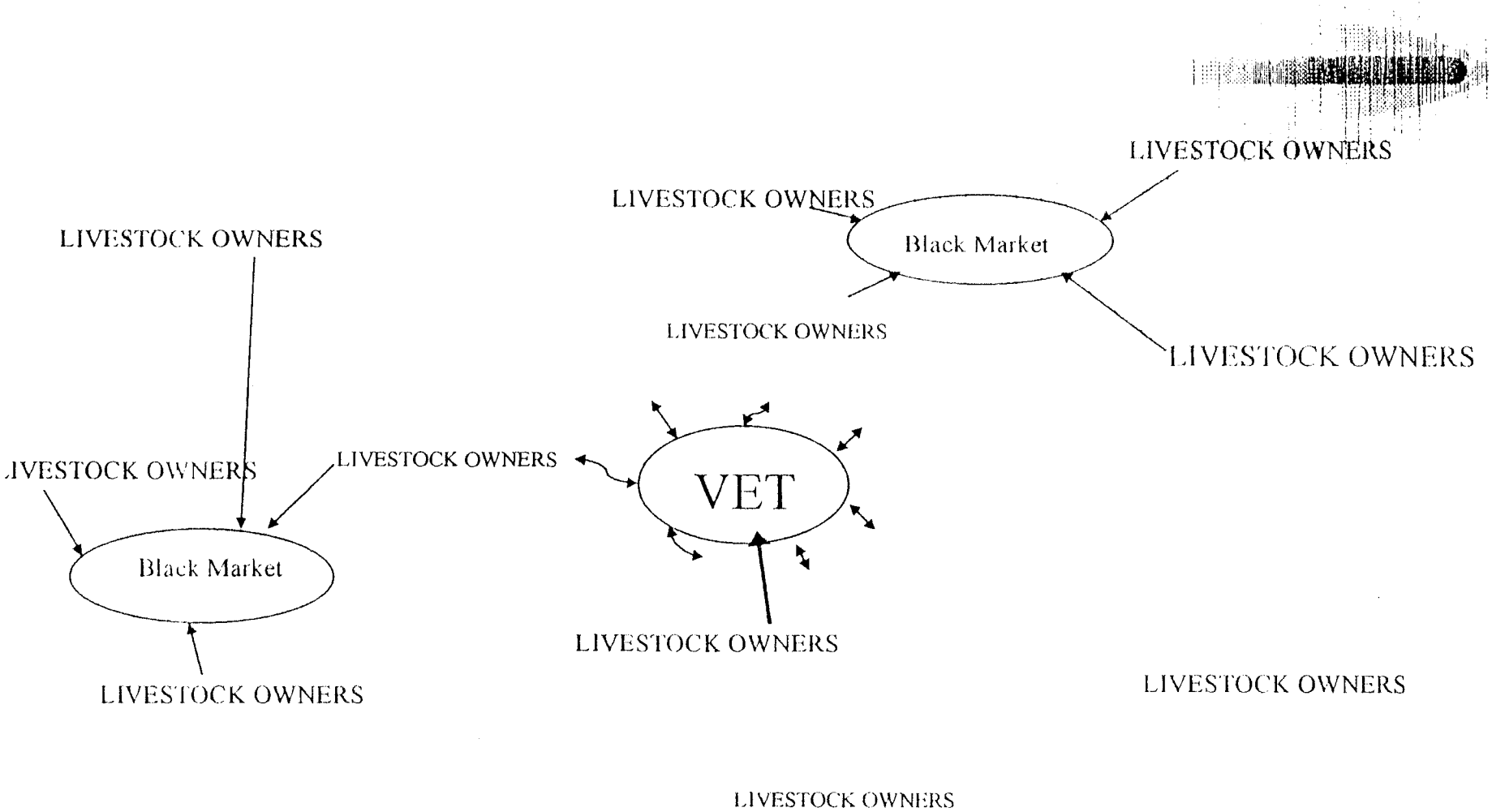
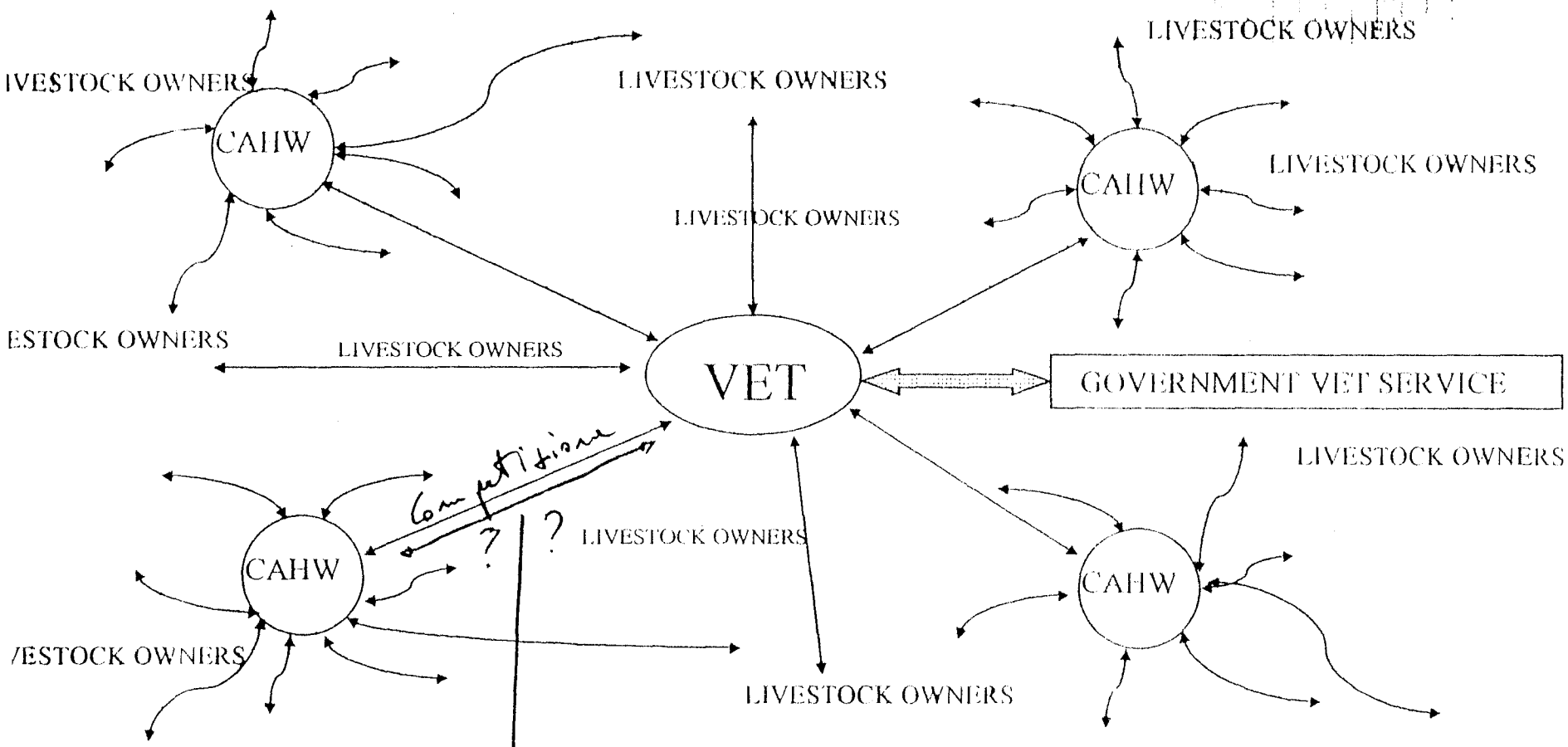
Black Market Service + Government Vet "Service"



Private Pastoral Veterinary Practice



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HUMAN RESOURCES NEEDS IN DEVELOPMENT OF LIVESTOCK SECTOR IN THE GREATER HORN OF AFRICA.

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HUMAN RESOURCES NEEDS IN DEVELOPMENT OF LIVESTOCK IN THE GREATER HORN OF AFRICA.

1.0 INTRODUCTION.

Livestock play an important role in the socio-economic life of the people in sub-saharan Africa in general and in the Greater Horn of Africa (GHA) in particular.

Livestock in the GHA provide a great opportunity to promote development. At the national level, livestock contribute significantly to the Gross National Product (GNP) and at farmer's level, as much as 70% of cash income is generated from Livestock. The people in this sub-region are heavily involved in livestock agriculture and the greater proportion of livestock is owned by the small scale farmers in the rural areas.

The overall productivity of the livestock in the sub-region is low because of a number of constraints, the major one of which is disease. Other constraints include nutrition, low genetic potential, poor management systems and inappropriate policies.

These constraints must be adequately addressed in order to improve livestock productivity. One way of addressing these constraints is to have appropriately trained cadres of personnel running the livestock sector. The overall objective of having appropriately trained cadres of personnel in the sector would be delivery of efficient livestock services to the main client, the farmer.

2.0 DELIVERY OF LIVESTOCK SERVICES

Livestock services consist of two components: animal health and animal production services.

The veterinary services encompasses the control of diseases, clinical services, public health, control of import and export products and extension. The production services encompasses the control of diseases, clinical services, public health, control of import and export products and extension. The production services encompass breeding and nutrition programmes, production systems and extension.

Livestock services often have a strong veterinary bias. Many countries, including those in GHA, have been slow to recognise that animal production science is as important as animal health or crop science.

Livestock services in the GHA sub-region have for a long time been provided by the public sector, the government. Initially, the services provided by the public sector were adequately financed and efficient. Later, there was a progressive deterioration in the quality of the services. The deterioration was caused by organisational weaknesses and increasing limited financial resources allocated to the services.

3.0 PERSONNEL FOR LIVESTOCK SERVICES

The tradition in the sub-region has been for livestock services (Animal Production and health) to be delivered under the National Veterinary Services (NVS) establishment. Under this arrangement all the personnel delivering the livestock services operated under one directorate.

Generally speaking, the personnel delivering the services are of two types, the professionals and the non-professionals. Among the professionals are the specialised veterinarians or animal scientists and the ordinary veterinarians or animals scientists. For the non- professionals, there are the animal Husbandry Officers (Diploma Holders) the veterinary assistants (certificate holders) vaccinators, community Animal Health Workers (CAHWS) and in some cases the farmers themselves who have had some basic training.

3.1 Professional Staff

Looking at the existing establishments, some countries in the sub-region, namely Kenya, Sudan and Uganda, have more veterinarians than they can adequately utilise.

It should be noted that most of the veterinarians are employed by the public sector and the majority of them are deployed in urban centres. This makes it difficult for the remote, low potential areas to access adequate veterinary services through the NVS system.

While organisations like the food and Agriculture Organisation (FAO) of the United Nations regularly updates the data for the veterinarians in each of its member states, similar data is not compiled for animal scientists. It is not therefore easy to tell at a glance which country has a surplus and which country has a deficit of animal scientists in the sub-region.

3.2 Para-professionals

In the present context the term is used in broad terms to include the Animal Husbandry Officers (AHOs), Assistant Agricultural Officers, Agricultural Assistants, Veterinary Assistants, Laboratory Assistants, Meat Inspectors and Animal Nurses etc.

People who successfully undergo formal training for a minimum of three years after High School come out as animal Husbandry Officers or Assistant Agricultural Officers. The rest of the cadres undergo two years of formal training after High School.

The numbers of the personnel in these cadres in the sub-region are adequate.

3.3 Auxiliary personnel.

These are people who receive short and /or in service training. They include stock inspectors, vaccinators, inseminators and community animal Health

Workers (CAHWS).

5.0 TRAINING OF HUMAN RESOURCES FOR LIVESTOCK DEVELOPMENTS IN GHA

In order to have a meaningful development programme for human resources development particularly for the livestock sector, there must be a national training policy. Under such a policy, there would be first and foremost an appraisal of the existing cadres of personnel and then identification of the shortfalls in numbers and most importantly in the requisite skills. Then a training strategy would have to be drawn out to address short term, medium term and long term requirements.

5.1 Types of Training

Four types of training can be identifies:-

- degree training at the professional level;
- post-graduate degrees and diploma training;
- specialised and short-term training;
- training of the para-professionals and auxiliaries.

Degree training at professional level

Training for the professional veterinary degree extends over a five year period for candidates admitted into the University after six years at high school. For the animal scientists, most of them do a degree in agriculture and take the animal science option in their final one or two years. The degree course takes 3 or 4 years, depending on individual University faculties.

Each of the countries in the GHA, except for Djibouti and Eritrea, has at least one faculty of Agriculture to train the animal scientists. Ethiopia, Kenya, sudan, Tanzania and Uganda have each a faculty of Veterinary Medicine.

While there could be justification for the existence of such a number of faculties of agriculture in the sub-region, it is hard to justify the existence of

the current number of veterinary faculties.

Firstly, it is very expensive to establish a veterinary faculty that is adequately equipped and well run . Secondly, the existing numbers of veterinarians in Kenya, sudan, Tanzania and Uganda cannot all be employed in the livestock sector.

It would therefore have made economic sense for several countries to pull resources together and establish one veterinary faculty as used to be the case in the past for Kenya, Tanzania and Uganda.

The courses taught under the present curricula have adopted, with some little modifications, the curricula used in industrial countries. In most cases these courses have no relevance to specific local needs. Also there has been less emphasis on practical training.

There is therefore a need for a strong link between the training institutions and the governments so that the curricula are modified to serve the local needs without compromising the international standards.

Post-graduate training

Training at post-graduate level (M.Sc and Ph.D degrees) allows more specialisation in disciplines and sub- disciplines.

Formal post graduate training in Agriculture and Veterinary Medicine is still underdeveloped in most of the sub-region. This could partly be attributed to lack of adequate financial resources as post-graduate is more expensive than under-graduate training. It could partly also be due to lack of a policy that promotes post-graduate training.

A number of animal scientists and veterinarians in the sub-region wishing to carry out post-graduate training have had to go to industrialised countries

abroad. They gain their qualifications by studying problems which have limited significance to their own countries. This may be an important training exercise but has little or no relevance to the local problems.

There should be a strategy in the sub-region of sharing the available facilities for training of manpower at this level. This would ensure maximum utilisation of such facilities.

Efforts should also be made to train as many people locally within the sub-region as possible. Research undertaken during and after training will be relevant to the local needs.

Short Term and Specialised Training

Some countries in the sub-region have excellent facilities for short courses (One week to several months) to continue the training of their personnel in specific areas related to their work in the livestock sector. These facilities need to be shared in order to optimise their use. This type of training needs to be encouraged in view of the fast pace at which knowledge is being generated and transmitted.

Training of para - professionals and auxiliaries

Para-professionals have an important role in the livestock sector and they should have a niche in any national training programme Most importantly there should be vigorous in-service training schemes in order to broaden or upgrade their skills as they play an important supportive role to the professionals.

Auxiliaries and livestock owners

Community based delivery of animal health services has developed in response to a very real need for improved livestock productions in remote, marginalised pastoral communities.

Prior to their training, the auxiliaries should be selected by the community in which they have to serve. Auxiliaries hand-picked by the livestock authorities prior to their training tend not to fare well in their communities. Also reasonably well educated cadres tend to have high expectations subsequent to their training. They expect promotion opportunities to be made available for them to advance.

The task permitted to various cadres of the auxiliary staff must be clearly defined by the National Livestock services. the course content and the duration of the training for these people must be standardised nationally. Training must be appropriate both in content and in the way it is presented.

Livestock owners, have a role to play both in animal health and production issues. However this role is not always fully recognised. There should be programmes for training livestock owners to carry out interventions like vaccinations and administration of non=-prescribable drugs.

6. EXTENSION DEVELOPMENT AND RESEARCH ACTIVITIES.

6.1 Research

Any development strategies in agriculture in general and livestock in particular will rely on research to generate new technologies to improve the productivity . For any meaningful research to take place there must be criteria for priority setting and these would include:

- assessment of constraints and their impact on production
- available technology to overcome the constraints;
- socio-economic impact.

The priority setting should be done at both National and regional levels with full participation of all stake holders particularly the producers. All the components of the national agricultural research systems, (NARS), NGOs and private organisations should play an active role in identifying research priorities.

Having identified the research issues , each country should avail enough financial and human resources for research. There should also be adequate exchange of research information and resources both at national and regional levels.

In the present context, the countries in the GHA should as much as possible make use of the technologies that are generated within the sub-region.

NARS scientists within the sub-region should exchange visits frequently in order to share their knowledge and experiences.

The sub-region is lucky in that both ICIPE and ILRI are situated in the sub-region. Efforts should be made to establish collaborative research links between NARS and the two institutions.

6.2 Extension

Extension plays an important role in the transfer of technology from shelves to the farmers.

There are no standardized methods of transferring technology to the farmer. The transfer is largely influenced by local circumstances.

However, a number of systems by which technology is normally transferred in sub-saharan Africa can be identified as follows.

- Conventional hierarchial approaches that employ a few number of specialists at the top with a large number of field staff with relatively low level of education and training.

- cooperative organisations that provide advice to farmers, sometimes with inputs and other services.

- profit-orientated agencies that provide integrated specialist services.

- the farming systems research and extension method, a multidisciplinary approach that looks at the total farm unit and family.

The most commonly used method in the GHA is the hierarchial system., and it has always been funded by governments. Because of the limited funding the governments normally allocate to extension, the system has not always performed efficiently. Also there has not been adequate continuous training of extension workers to update their skills. One way of updating the extension workers skills would be by exchanging visits to neighbouring countries to see what other people are doping.

Incentives

A deliberate effort should be made by the governments in the sub-region to adequately fund agricultural research and extension. Very often, young research scientists are very eager to advance in their career but are unable to do meaningful research because of lack of facilities. Research is an expensive undertaking. But there can not be agricultural development without an appropriate research support system.

Deliberate efforts must be made to adequately remunerate researchers in order for them to be motivated and also devote their time to doing research.

For the time being, governments should continue to find extension services. The funding should be adequate in order to revamp the services. Gradually the governments should pull out and let the farmers pay for the services.

7. CONCLUSION

There should be a government policy for training of personnel for livestock development. The training must be target oriented. Research should be accorded the priority it deserves and should be adequately funded. Researchers and extension workers should be adequately remunerated.

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TRANSBOUNDARY DISEASE AND REGIONAL COOPERATION

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INTRODUCTION

It has often been said that animal diseases respect no national boundaries. This statement is very true for Africa particularly for the pastoralist areas. However, with good regional cooperation and strong determination, even the most contagious of diseases can be controlled, but to achieve this, the appropriate strategies must be worked out and the diseases to be tackled prioritised.

There are a number of major contagious diseases such as rinderpest, CBPP and FMD that can only really be tackled on a continental or regional basis. They can be controlled with the implementation of rigorous measures. There are other diseases which are vector borne, such as Rift Valley Fever and African horse sickness which are much more difficult to eradicate as the vector carrying the virus can move over long distances even over 200km. Similarly, trypanosomiasis can only be eradicated by controlling the vector the tsetse fly, so different strategies have to be adopted. Tsetse fly belts generally extend over borders and can only be controlled in the long term by regional cooperation.

Tick borne diseases such as theileria, babesia etc. are dependant on the distribution of the tick vector which in turn are very much restricted by climatic and environmental factors. Their control can benefit from Regional cooperation in developing control strategies vaccines etc.

There are then the other diseases which spread slowly such as tuberculosis, black quarter, nutritional diseases etc. which may be of great importance to the country but are less important regionally. However, their control can benefit from research and control methods developed within the region.

In addition, there are a number of diseases which are relatively new to the region which are spreading such as peste de petite ruminants (PPR), CCPP and the Camel Disease, the etiology of which has still to be worked out.

In order to develop an effective strategy for disease control, the distribution and economic impact of the particular diseases on the livestock industry must be fully understood, as well as the methods of spread. This is of particular importance if a country is requiring assistance from a donor. The epidemiology of the disease must therefore be fully recorded.

EPIDEMIOLOGY

It is extremely important to define the distribution and incidence of the various diseases. Of the ten EG AD countries only six sent reports to the OIE in 1996. The table in annex 1 gives the reported incidence of a number of important list A diseases.

From the table, it would appear that the major OIE list A diseases are not causing much trouble in the region. This certainly is not the case as there is a high incidence of many of these diseases but they are not being reported and recorded.

SURVEILLANCE AND REPORTING

If the major diseases are to be controlled and eventually eradicated then their true incidence, distribution and importance must be accurately recorded. This means that there must be good surveillance and reporting.

Surveillance can be passive where the service waits for reports of diseases and then investigates them. This can work where a disease is causing great losses and the livestock owners have confidence in the veterinary services be they public or private. They must know that if a disease is reported then action will be taken by the veterinary services. Pastoralists in particular, will not travel long distances just to report a disease if they know that no action will be taken. Unfortunately, this is often the case as veterinary services are so poorly funded.

Active surveillance or disease search is necessary on many occasions in order to detect diseases which are endemic or not causing sever losses. This is the case with the lineage 2 rinderpest virus which is only causing a very mild disease in cattle. An active surveillance team go out searching for certain diseases using questionnaires and following up on leads. This active surveillance can also include collecting samples for serology. This surveillance should not restrict itself to just one disease but should cover a whole range of diseases.

All suspected cases of the major diseases should be investigated and considered positive until proved negative.

Abattoir surveillance is also useful particularly for CBPP. Strategic surveillance at markets and or stock routes is useful.

There must be a proper reporting system from the field to District – Region – Headquarters. Then the National Headquarters to OIE and OAU.

Disease	Country												Total	
	Eritrea		Ethiopia		Kenya		Sudan		Tanzania		Uganda			
	O	D	O	D	O	D	O	D	O	D	O	D	O	
FMD	++	-	19	22	3	....	(1990)		105	15	20	4	147	
RP	(1995)		-		3	....	(1991)		?		(1994)		3	
PPR	+		2		0000		(1992)		-		0000		2	
CBPP	(1994)		55	295	3	....	-		41	375	6	47	69	
LSD	-		108	360	1	....	-		....	102	....	....	108+	
RVF	0000		0000		-	(1989)	(1973)		-	102	0000			
NCD	++		++		3	....	0000		225	23,345	....	2,315	228	2

O ⇒ outbreaks
+ ⇒ low sporadic occurrence
0000 ⇒ never recorded

D ⇒ deaths
++ ⇒ enzootic
.... ⇒ no information available

(1990) ⇒ date of last outbreak
- ⇒ not reported

LABORATORY SUPPORT

While a number of diseases can be diagnosed with some degree of accuracy on clinical grounds, many diseases can only be diagnosed or confirmed in a laboratory. It is therefore essential that there is a central diagnostic laboratory capable of carrying out the majority of diagnostic tests. In large countries there should be laboratories situated in the regions which are closer to the people working in the field. Adequately provision must be made to ensure that samples can be forwarded to Regional or World reference laboratories for specialist diagnosis.

CENTRAL EPIDEMIOLOGY UNIT

All this information gathered from field investigations surveillance and laboratories reports should be fed rapidly to a central epidemiology unit who can correlate it and map out the incidence and distribution of the various diseases. From this the economic impact including the threat to human health can be worked out.

PARC EPIDEMIOLOGY UNIT

The information should be available for the PARC epidemiology unit to allow it to correlate the disease incidence and distribution to enable it to assist in developing regional and continental strategies for diseases control. The PARC Epidemiology unit has specialised personnel who can carry out detailed analysis of results, map disease distribution etc. It has close links with the FAO epidemiology experts.

PARC COORDINATION UNIT

This information from the Epidemiology Unit and from the countries is used by the PARC Coordination Unit to assist in planning policies and getting donor support. The success of the rinderpest campaign has been largely due to developing a common control strategy which has been implemented on a coordinated basis.

It has brought countries together to discuss strategies and plan and implement them in a coordinated way. It has initiated research into elucidating the role of wild life in the maintenance of rinderpest, improved the quality of the vaccines through PANVAC, developed thermostable rinderpest vaccine and set up a network of laboratories capable of carrying out ELISA serological testing.

Aware of the need for better tools for the diagnosis and vaccination against CBPP it has initiated a research programme involving 5 African and 6 European Laboratories to try and solve these problems.

The main transboundary diseases which should be tackled at a regional level are rinderpest, CBPP, tryanposomiasis and tsetse control, PPR and Foot and Mouth Disease.

RINDERPEST

During the early 1980s there were 20 countries affected by the disease and it was spreading. With determined efforts from the countries, good coordination of the programmes and massive donor support the incidence of the disease has been reduced greatly. This year only three countries Kenya, Tanzania and southern Sudan have reported the disease. Ethiopia once a hot bed of the disease has not confirmed a case for almost two years.

Because of the civil unrest in southern Sudan, properly planned and implemented vaccination campaigns cannot be carried out. Vaccinations are being carried out using NGOs working in to the area from Khartoum and Lokichoggio in northern Kenya using Community Animal Health Workers (CAHWs) and thermostable vaccine. The disease has been drastically reduced but pockets still remain. Policy is to surround the whole area with a sanitary cordon to prevent the escape of the virus. Unfortunately, there is no cordon on the Zairian border and the vaccination belt in central Sudan is poor as there is no donor support for that area. There is also a sanitary cordon in eastern CAR and Chad. We are trying to increase vaccinations in the west of southern Sudan to increase the western barrier.

In November 1994 large numbers of buffalo died in Tsavo National Park in south east Kenya. Rinderpest was confirmed. The disease was not seen in cattle. Ring vaccinations were carried out and the disease appeared to have been controlled. However, in November 1996, buffalo and eland started dying in Nairobi National Park. This was shown to be rinderpest. The disease got into the Masaai ecosystem and spread into northern Tanzania.

This strain of virus, lineage II, produced very mild or no clinical diseases in cattle. Livestock owners were not reporting the disease as it was, in their opinion, of no clinical significance. Surveillance teams had to go and search for the disease.

Tanzania carried out emergency vaccinations early in the year and more extensive ones in July. It would appear that the disease has been controlled. Kenya did emergency vaccinations in the south and are now in the process of carrying out blanket vaccinations in all pastoralist areas of the country. Limited vaccinations are being carried out in Somalia.

The source of this strain of virus has still to be traced.

The virus has been sequenced and the closest relative was the RGK 1 strain isolated from a giraffe in north east Kenya in the early 1960s.

PARC is determined to eradicate rinderpest from Africa and the new phase will concentrate on this goal.

CONTAGIOUS BOVINE PLEURONEUMONIA

This disease is widespread in the region and is spreading. It is reported from Ethiopia, Kenya, Uganda, Tanzania, Rwanda and Somalia. It is endemic in much of the pastoralist areas of the region, but its extent is not accurately defined. The disease which was only reintroduced into northern Tanzania in 1991 and has now spread south and is now close to Malawi and Zambian borders.

PARC had considered that as rinderpest was controlled and eradicated more emphasis would be put on CBPP. The next phase of PARC will concentrate or rinderpest eradication and setting up surveillance networks to search for rinderpest at the same time determine the prevalence and distribution of other diseases. In addition, it will continue with research into the disease to improve the vaccines and diagnostic tools. Because of limited funds for the continental PARC programme little support will be given for the field control of the disease.

If countries in the Region consider CBPP to be of great importance then some of the funds earmarked for IGAD could be used in its control.

CBPP eradication is much more difficult than for rinderpest. This is because of the long incubation and infective period, the short duration of immunity produced by the existing vaccines and the relatively poor diagnostic tools. Movement control is also essential. Many countries including African ones have however eradicated the disease using good surveillance, movement control and vaccination.

FOOT AND MOUTH DISEASE

This disease is the most infectious disease of livestock. Its control is difficult and expensive. There are a number of problems which should be considered before embarking on any regional campaign against the disease. The major ones are:-

- the exact distribution of the disease and of the various sero types is not fully defined. It is present in most of the pastoralist areas.
- cattle can act as carriers for up to two years and buffalo for life.
- vaccines give a short immunity, about 6 months and then only to the particular type.
- strict movement control is essential.
- disease is relatively mild in pastoralist stock and therefore not considered serious by pastoralist. However, it becomes important in dairy cattle and affects export markets.

The disease at this stage should be treated as a national problem rather than embarking on expensive regional control programmes at present.

It would be useful to include surveillance for FMD in the general surveillance strategy and provide the necessary sampling equipment. The Regional diagnostic laboratory could be strengthened to enable an effective library of strains and their distribution to be built up.

Pest de Petite Ruminants, and CCPP. These are diseases which are spreading slowly and should be considered at national level and could be included in regional programmes at a later stage.

VECTOR BORNE DISEASES

Trypanosmiasis and the control of the vector are extremely important and must be coordinated at the Regional level. There is a regional programme which has been agreed upon and should be started in the near future.

Tick borne diseases can benefit greatly from regional cooperation particularly from research where better methods to control the vector and improved immunizing methods are being developed.

VETERINARY SERVICES

Disease control depends much on the efficiency and motivation of the veterinary services. With the effective delivery of services many of the endemic diseases such as black quarter, anthrax can be controlled. Governments do not have sufficient resources to provide all the services free so there must be an element of cost recovery which should relate to the true cost of the service. The private sector can be used to carry out many of the vaccinations and treatments thus relieving government of the need to do so. If there is a good cover of private practitioners then they can carry out much of the passive surveillance as they tend to be close to the livestock owner.

The effective delivery of veterinary services, be they public or private, is the key to disease control.

WILDLIFE

The East African Region has the greatest concentration and variety of large mammals in the world. They are of great value as most of the tourist industry of the region is built round the game parks, the game is the draw card. In addition wild animals in some areas are an important source of meat and safari hunters pay big prices for hunting. Any disease reducing their numbers will have a knock on effect on the tourist industry and the economy of some countries. Disease, it has been said is the biggest "poacher" of wild life in the region.

As well as their economic and aesthetic importance, wild life can also be an important indicator of a disease in livestock. Lineage 2 rinderpest was first diagnosed in buffalo in Tsavo and again when it spread to Nairobi National park. The disease had not up until then been reported in livestock.

Wild life because they have not been vaccinated against rinderpest have been very useful in tracing the spread and distribution of the virus through serological studies.

Game can however also carry a number of pathogens such as buffalo, being life long carriers of FMDV, gnu carriers of MCF, warthog ASF, jackals and rabies etc. With a better understanding of these diseases and modes of transmission ways of domestic stock and wild life co existing, can be worked out to ensure that this very important resource is protected.

CONCLUSIONS

1. Surveillance and reporting of disease outbreaks throughout the region is poor and will have to be improved in order to define the prevalence distribution and economic importance of the various diseases. This is of particular importance if donor support is needed.

2. The future PARC programme plans to finally eradicate rinderpest from Africa. They will continue to carry out vaccination and control measures in the affected countries and then set up an effective surveillance system to comply with the OIE pathway. This project will only give minimum support for the control of other diseases.

3. CBPP is becoming more important as rinderpest is controlled and it is spreading worryingly to the south. Better diagnostic tools and vaccines are required to make control easier although present tools with good movement control can eradicate the disease. If the Region wishes to get donor assistance this will have to come from funds earmarked for the Region.

4. Regional control of other diseases are important and need to be addressed.

5. Wild life are a very important resource in East Africa, both from the economic point of view, as well as acting as an indicator for certain diseases particularly rinderpest. More work is required to elucidate the problems of their diseases and monitor their occurrence.

6. A project of a Regional nature with a number of countries involved needs to be well coordinated. IBAR has such a unit and it should be utilized in the meantime.

7. There is a need for a in depth study to draft a well planned animal health programme for the EGAD Region.

Vaccine production, development and quality control

1. Introduction.

Preventive disease control makes an essential part of herd health control. On the market, vaccines are available for many viral and bacterial infections, research to develope preventive measures for the control of important protozoan and rickettsial diseases is well in progress. Within the Greater Horn of Africa (GHA), where livestock production plays a significant economic role, there is a lasting demand for effective, quality vaccines. Their development and production within the subregion depends currently on subsidies from national Governments or from donors, limiting expansion and viability of the existing vaccine production laboratories. The involvement of the private sector in vaccine production is very limited.

2. Vaccine Production.

The list of infections affecting livestock in the GHA is very long indeed. Losses caused by disease are significant and would fully justify wide usage of vaccines for their prevention. Application of vaccines has been however limited partly because of unavailability of cheap, quality products. On the other hand the usage is influenced by the willingness of the beneficiaries to pay and by their paying power, because traditionally preventive measures have been cost free government services, and during the current

transitional period the cost recovery does not reflect the true open market economic situation. Additionally Livestock farmers are not well informed about the benefits of preventive measures and do often not understand the difference between "treatment" and "vaccination".

Four countries within the GHA have vaccine production laboratories producing a number of products:

Ethiopia, Debre Zeit, National Veterinary Institute (NVI)

Kenya, Nairobi, Veterinary Vaccine Production Institute (KEVEVAPI)

Sudan, Khartum Soba Laboratory

Tanzania, Dar Es Salaam, Temeke, Ministry of Agriculture & Co-operatives

In the past there was a vaccine production laboratory in Mogadishu (Somalia) and Entebbe Veterinary Centre in Uganda has potential for vaccine production.

Well established vaccine production plants exist in other parts of Africa. Especially to mention are Laboratoire National Veterinaire du Cameroun (LANAVET), Botswana Veterinary Institute (BVI) and Onesteport Vaccine

Institute (OVI), which are all viable competitors at Pan-African level.

There is currently a high demand for rinderpest (RP) and CBPP vaccines through the ongoing PARC programme. In the future a downturn of RP vaccine production will be expected, affecting the current production plants economically. CBPP will remain the priority disease at the continental level and demand for vaccine will remain high.

The increase of commercial livestock production systems including ranching and dairys requires effective control of foot-and-mouth disease. Mono- and polyvalent vaccines with prevailing serotypes are produced in KEVEVAPI.

Concerning other important diseases, vaccines are
available for the control of Rift Valley fever, lumpy skin disease, Newcastle disease, peste de petits ruminants, contagious caprine pleuropneumonia, various pox infections (sheep & goat, camel), and rabies, although all are not produced in sufficient amounts within the GHA.

There is everlasting demand for conventional bacterial vaccines, of which anthrax, blackquarter, enterotoxemia and brucellosis may be the most important infections to be controlled, although justification of regular vaccinations in some areas may be difficult on economic grounds.

The only private company which produces vaccines is found in Kenya. Cooper Kenya Ltd. Has a long tradition in dealing with veterinary products. It is producing and marketing anthrax, blackquarter and enterotoxaemia vaccines, and is supplier of a number of imported products.

3. **Vaccine Development.**

The ongoing vaccine development research is aimed at more potent vaccines with perfect stability under field conditions. New vaccines for the control of diseases caused by protozoa and rickettsia are being developed, out of which theileria vaccine is of outmost importance in the region of the GHA.

A thermostable RP vaccine has been developed in Tufts University with the help of USAID funding. OAU/IBAR/PARC has been fully involved in field testing of the vaccine and is supporting its production in Africa. - NVI Debre Zeit is expected to take up the production of this thermostable RP vaccine in the near future.

A new thermostable vaccinia-vectored RP recombinant vaccine is in advanced stage of development in the University Davis California. In collaboration with the university, PARC shall implement, next year, extensive field trials with the recombinant vaccine in Ethiopia and Kenya. It is hoped that this vaccine will assist during the last

stages of RP eradication and it may be the most suited for RP emergency vaccine banks.

It is planned that the production of the RP recombinant vaccine will be taken up by a well accepted vaccine production plant in Africa as soon as results from field trials become available.

There is wide concern about the continuing spread of CBPP in various parts of the African continent. CBPP is difficult and expensive to control with the available vaccines, which are immunogenetically suboptimal.

A multinational, Euro-African research programme financed by the European Union, has succeeded in developing in laboratories a new immunopotent CBPP vaccine. Field trial programmes have been finalised and will be launched in several African countries, including Ethiopia, Kenya and Uganda in the GHA. - CBPP research programmes are part of OAU/IBAR/PARC activities.

Among the tick-born diseases, East coast fever (ECF) causes the highest cattle mortality in the GHA. Considerable progress in the vaccine development to control ECF has been achieved thanks to the valuable research work at ILRI. In several GHA countries ECF vaccination programmes have been implemented with very promising progress.

OAU/IBAR is the co-ordinator of the regional tick-born diseases control programme in

Eastern and Southern Africa, which has recently been signed for implementation.

4. Quality Control

Internationally, good manufacturing practice and quality assurance are preconditions of the production of vaccines and biologicals. Most countries in Africa have legislation concerning the licensing of veterinary medical products before marketing is allowed, but few countries have implemented and are strictly following such regulations.
High product quality is however extremely important not only for the vaccine production laboratory and the national veterinary services, but especially for the livestock producers themseves as beneficiaries. This was the reason for the creation of The Pan African Veterinary Vaccinne Centre (PANVAC) through the OAU/IBAR/PARC as an independent central system for quality control already in 1984. Quality control to be carried out by PANVAC at the NVI Debre Zeit was also adopted in the resolution of the 3rd Conference of the African Ministries responsible for livestock development in October 1990.

The main objectives of PANVAC were set to be:

- controlling the international quality of vaccines against priority diseases, such as RP and CBPP,
- Promotion of the standardization and quality control of vaccines in general.

PANVAC certification is however not obligatory for RP and CBPP, and many production plants do not let all their batches be tested due to various mostly egoistic reasons. Surprising feature is also, that only 30% of the invoices sent out by PANVAC to recover vaccine testing costs are met by producers.

An additional important activity of PANVAC is the establishment of vaccine strain and cell line banks. The following collection is available:

vaccine strains:
RP, CBPP, PPR, pox (sheep & goat, camel),LSD, RVF, NC, TBD (ILRI recombinant)

cell lines:
sheep and calf kidney cells, chick fibroblasts, verocells.

PANVAC is currently financed by EU and managed through FAO and OAU/IBAR/PARC. Japan is also supporting PANVAC through the programme *"Strengthening of veterinary vaccine production and quality control in Africa"*.

Unfortunately despite its efforts to become economically viable, PANVAC continues to be dependent on financial support. Hopefully in the near future a self sustaining level of 35% could be reached, but future development needs regional and Pan-African cooperation in

making quality assurance of all vaccines produced mandatory. The institution for this purpose is well established. It only needs the full support of veterinary regulatory bodies of all African countries for its important function in preventive animal health.

5. Conclusions

Capacity to produce veterinary vaccines well exists in the GHA and certainly should be able to satisfy demand. The established plants are not fully independent and market orientated. Only one private enterprise is known to produce veterinary vaccines.

Very potent competitors in vaccine production are marketing a number of products. Well known of their quality are production plants in Southern Africa. Competition and private sector free market forces may direct the future development, supported by international research for better products.

There is also a need to approach livestock farmers for better information flow. Increased understanding of the benefits of preventive disease control may significantly enhance the demand for vaccinations.

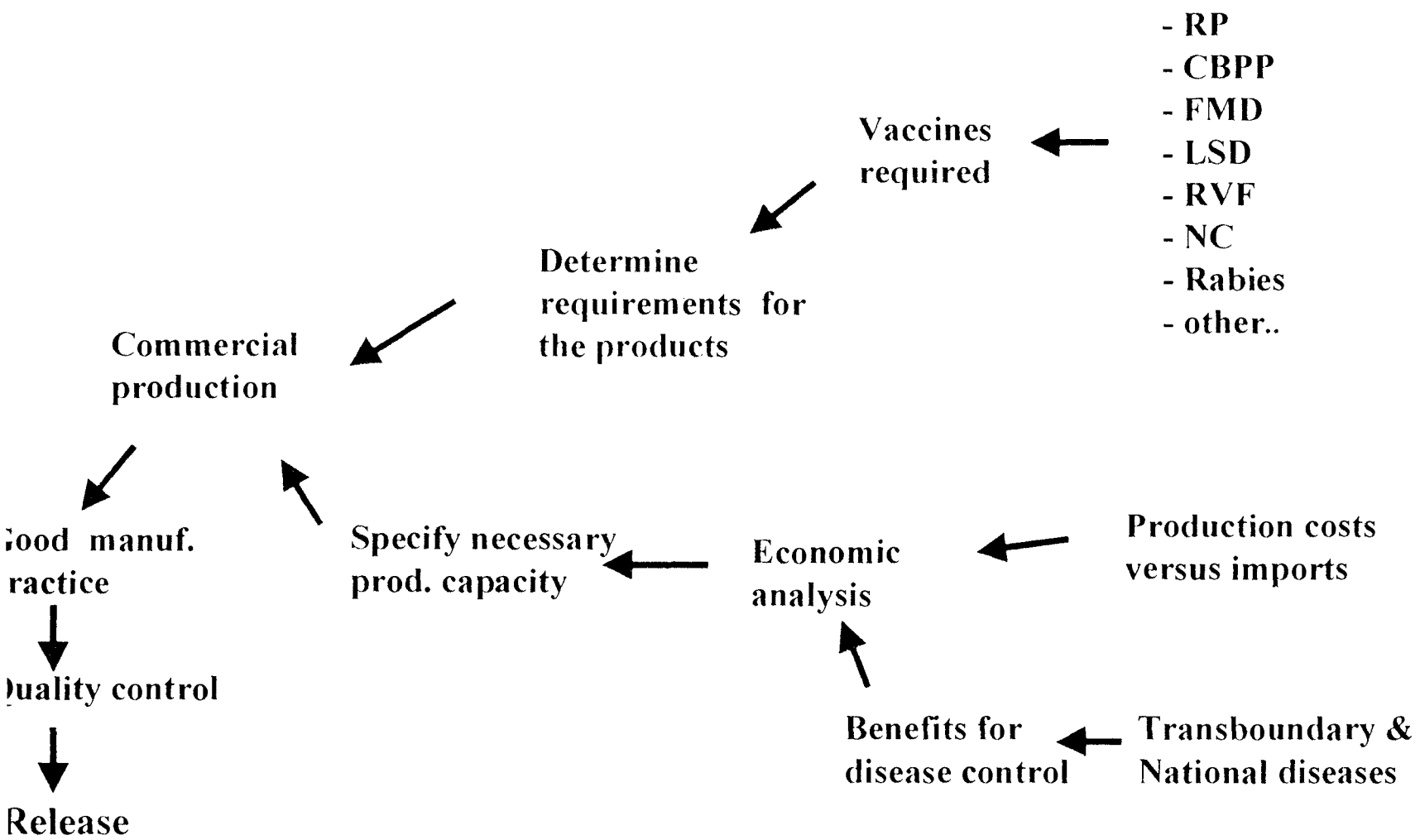
In order to assure good manufacturing practice and quality, independent quality control should be made mandatory and put in force Africa-wide. The institution for this

purpose in form of PANVAC is well established and fully functional.

08/12/97
Dr. Risto Heinonen

OAU/IBAR/PARC

PRODUCTION OF VACCINES



Vaccine production plants in GHA

- Ethiopia, NVI, Debre Zeit
- Kenya, KEVEVAPI, Nairobi
- Sudan, Soba Laboratory, Khartume
- Tanzania, Temeke, Dar Es Salaam

- Somalia, Mogadishu
- Uganda, Entebbe

Private sector:
Cooper Kenya ltd., Nairobi

Pan African Veterinary Vaccine Centre

PANVAC

Main objectives:

- controlling the international quality of vaccines against priority diseases, such as RP and CBPP

- promotion of the standardization and quality control of vaccines in general

ANIMAL BREEDING SERVICES FOR COUNTRIES IN THE HORN OF AFRICA

A PAPER PRESENTED AT THE IGAD/IBAR/EU MEETING ON LIVESTOCK DEVELOPMENT FOR THE HORN OF AFRICAN COUNTRIES, KAMPALA, UGANDA: *8TH TO 10TH DECEMBER, 1997* - *BY M. L. KYOMO**

At the World Food Summit held in Rome in November 1996, the Heads of State and Government reaffirmed the right of everyone to have access to safe and nutritious food and the fundamental right of everyone to be free from hunger. One of the actions agreed upon states "To pursue through participatory means, sustainable, intensified and diversified food production, increasing productivity, efficiency, safety gains, pest control and reduced wastes and losses, taking fully into account the need to sustain natural resources". To implement the Plan of Action, one of the commitments was to share responsibilities in achieving food security for all and to ensure that the World Food Summit Plan of Action takes place at the lowest level, at which its purpose could best be achieved. Regional cooperation was agreed as means of taking advantage of geographical complementalities within regions and economies of scale.

The Horn of Africa is richly endowed with livestock. It has more cattle, sheep, goats and camels than other regions of Africa (Table 1). The variation between and within species and breed types is great. This gives a great opportunity to increased productivity by selection within these population and thus avoiding indiscriminate crossbreeding with exotic breeds of livestock. At the recent seminar on livestock development policies in Eastern and Southern Africa held in Mbabane, Swaziland, which was organised by the Technical Centre for Agricultural and Rural Cooperation (CTA) in collaboration with OAU/IBAR, various recommendations were made and forwarded to the Committee of Ministers of agriculture and Natural Resources. A few that are relevant to this subject will be mentioned and elaborated upon in this paper.

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Table 1. Distribution (%) of domestic ruminant livestock by agroecological zone and geographic region, sub-Saharan Africa

Location	Cattle	Sheep	Goats	Camels	All domestic ruminants
Agroecological zone					
Arid	20.7	33.7	38.2	100	29.8
Semi-arid	30.6	22.9	26.3	0	27.1
Sub-humid	22.7	14.4	16.5	0	19.6
Humid	6.1	8.3	9.4	0	6.1
Highland	19.9	20.8	9.6	0	17.4
Total	**100**	**100**	**100**	**100**	**100**
Geographical region					
West	24.8	34.8	42.3	15.2	26.3
Central	6.6	4.1	6.4	0.0	5.8
East	54.1	59.5	46.2	84.8	56.3
Southern	14.5	7.2	5.2	0.0	11.6
Total	**100**	**100**	**100**	**100**	**100**
Number, millions,					
1979 [a]	144.5	98.4	122.6	11.1	137.3
1986-88 [b]	162.5	123.8	144.9	13.2	153.8

Source: ILCA (1987), after Jahnke (1982) quoted from Winrock International (1992).
[a] Calculated from tropical livestock units, [b] Source: FAO data tapes.

Need for Livestock Development Policies

A clearly defined policy on livestock development is a key to guiding all stakeholders engaged in livestock production, marketing livestock products, processing, suppliers of livestock inputs and those involved in the livestock advisory services. Such policies must be supplemented by clearly defined implementation plans and guided by appropriate regulations.

At the Mbabane seminar, it was realised that some governments have recently developed such polices while others had outdated policies and yet some had no policies at all. It was recommended that the outdated policies be revised and countries without policies be encouraged to formulate them. This area is a prerequisite to having a sustainable livestock production system. Countries in the region that do not have resources to formulate such policies should be assisted to do so by donor agencies.

Formation of Farmers' Breeders' Associations or Cooperatives and Breed Societies

The Mbabane seminar also recognised the fact that where farmers have organised themselves in breeders associations or cooperatives or breed societies, they have been able to develop viable productive livestock industries. This is because it is easier to acquire inputs, advisory services, good prices for their pooled produce and other related services. The breed societies have been custodian of gene pools of livestock breeds and it is from these pools that selection has led to achievements of high outputs of milk, meat, wool, eggs, etc. **There are several outstanding breeds of livestock in the Horn of *Africa for which breed* societies would lead to even higher productivity.** The Ankole, Kenana, Butana, Boran, East African Shorthorn Zebu cattle, the Black Head Somali, the Red Masai sheep; the Nubian, Mubende and Galla goats, numerous types of camels, pigs, poultry, turkey, ostriches, donkeys, etc are some of the types that have unique gene pools from which selection and selective hybridization with other breeds could lead to high adaptation to the environments, found in the region and for increased productivity.

Herd Recording

It is said that to count is modern practice, the ancient method was to guess (***Samuel Johnson***). Several livestock industries that have developed and have been able to register increased productivity are those in which countries have instituted herd recording. This service started as early as 1895 in Denmark and spread quickly to other countries. The service has yet to be organised in some countries in the Horn of Africa. This service is, in most cases, initiated and sustained by governments and later taken over by strong farmers' breeder associations, cooperatives or breed societies. In the Horn of Africa, the International Livestock Research Institute (ILRI) has initiated a programme to encourage all countries to establish national herd recording schemes. These will later be linked together regionally so as to evaluate performance of animals in order to find the better ones for breeding.

This arrangement will be similar to the current Interbull service which is centred in Sweden. It was organised in order to standardise methods of evaluating and ranking bulls especially for artificial insemination. However, still, there is a difficulty of correcting for the genotype-environment interactions. The service was started in 1983 by the International Dairy Federation (IDF), the European Association of Animal Production (EAAP) and the International Committee for

Animal Recording (ICAR). The objectives of the service are to coordinate and assist participating countries in the international evaluation of cattle by:

- Facilitating Communication.
- Documenting Sire Evaluation Systems.
- Facilitating International Genetic Evaluations.
- Providing Advisory Services to Members.
- Coordinating International Research.
- Publication
- Formation of Technical Working Groups.

Interbull is a permanent committee of the ICAR and is managed by ICAR's selected steering committees from among the member states. The Interbull centre was established in Sweden in 1991. The mandate of the centre is to create an international database of bull evaluations and pedigree information, collate sire proof conversion equations, provide technical leadership in the standardisation of information across countries and assist individual and groups of countries implement joint evaluation schemes. Interbull has substantial scope for proving better information and possibility initiating research to establish scientifically sound procedures for not only converting information from one country to another but also establishing economic value of the other functional traits and freedom from genetic defects.

It is hoped that ILRI will if it has not done so already, join ICAR so as to guide the region in animal recording of all species of livestock.

Artificial Insemination (AI) and Embryo Transfer (ET) Technologies

These technologies which have been developed at different periods in history are becoming tools to speed up genetic improvement in livestock. Initially, governments have supported the use of these technologies but later farmers' breeders associations or private individuals have been able to sustain their use. In developing countries, the use of these technologies have in many cases been performed badly. There have been many reasons that have led to poor performance. Monopoly by government to provide the service and later to fail to sustain it, the underdeveloped communication infrastructure, the lack of trained technicians to deliver the services, the lack of knowledge by farmers to recognise the advantages of the services, scattered small herds which are difficult to reach by the technicians, are among the reasons that have led to poor adoption rates and sustainability of the service.

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allow

At present, most governments wish to revive these services and gradually allow private individuals or farmer organisations to run them. There is need in the Horn of Africa to study how each country can develop its AI and Embryo transfer services and later link them to a regional system which can assist in evaluation of data and allow for exchange of good germplasm in any breed of livestock.

The production of liquid nitrogen for semen storage has had chequered history in many countries. The plants have been expensive and difficult to maintain. As a result, liquid nitrogen has been expensive. At present, however, modern and efficient plants that require minimum servicing are being developed and it should be possible to sustain liquid nitrogen production. Room temperature semen is cheap to produce. However, the poor transport infrastructure has made it inaccessible by livestock producers for it has a life period of up to seven days only. It has, however, great potential in cattle improvement under nucleus breeding schemes or in peri- urban areas.

To acquire bulls for semen collection, contract mating system has been used. Farmers with high performing herds enter into contract to supply bull calves to the Artificial Insemination service. Bull calves are performance and progeny tested. Those that perform better than others are recruited for semen collection. The next best group of bulls are used in bull schemes for natural mating areas where AI cannot reach. The schemes require commitment of the users to look after the bulls and to get replacements at a prescribed periods in order to avoid inbreeding. Possible spread by the bull of sexually transmitted diseases make these schemes risky to use. If on the other hand, there is a well organised animal health delivery service to check on the health of the bulls and replace the infected ones, the schemes can benefit farmers with small herds where they are relieved the cost of keeping their own bulls.

Research and Technology Transfer

After formulating a national animal breeding policy which identifies genetic improvement strategies and production systems and enterprises for various agro-ecological zones found in the country, research to generate and assemble technology, extension to transfer it to producers and training to develop basic knowledge and technical skills will be needed to support the development of the livestock industry. It is being recommended that the research process adopts a participatory approach where all stakeholders get involved in problem identification at field level, evaluation of biophysical and socio-economic

constraints and potentials, in establishment of research priorities and on-farm technology development. The basic and strategic research and on-station verification of components that enhance benefits to the stakeholders should also receive attention so as to generate new technologies and inputs into the applied and adaptive research process.

As far as priorities for research in animal breeding in the countries of the region are concerned, the publication entitled; "Animal Agriculture in Sub-Saharan Africa" by Winrock International (1992) has listed them as follows:

- Characterizing adaptive and performance traits
- Breeding for tolerance to climate and diseases
- Breeding for increased milk production
- AI and ET to amplify valuable germplasm
- Use of improved livestock.

To these must be added, the strategy of matching livestock production systems to **available feed resources**. In this way, the aim will be for economic optimisation rather than biological maximisation. The Mbabane seminar referred to earlier, gave priority also to:

- Breeding for genetic resistance to diseases
- Identification, characterisation and documentation of existing animal genetic resources with particular reference to the respective environments in which these genetic resources are found.
- Develop programs for their improvement and increased utilisation without resorting to indiscriminate crossbreeding.
- Undertake comparative evaluation of indigenous and exotic genotypes with particular attention to the respective environments.
- In biotechnology, speed up progress in breed improvement programs in order to facilitate ex-situ cryo-conservation of endangered breeds.

Human Resources Development

Successful development of a livestock industry depends upon improving human capital and establishing the conditions under which knowledge can be used (Winrock International, 1992). the Mbabane seminar referred to earlier, observed that there was an insufficient number of qualified manpower in the area of animal breeding in general and animal genetic resources conservation and development in particular and it therefore, recommended that attention be given to training of personnel in these areas, and in the expansion of curricula at

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undergraduate and graduate levels to better respond to the needs of conservation, development and sustainable utilisation of existing animal genetic resources. Since some animal genetic resources are distributed across national boundaries and therefore, the problems related to conservation and utilisation are common across countries, it was recommended that regional collaboration for greater efficiency be established in the areas of:

- Breed characterisation
- Breed development and improvement
- Regional trade in local animal germ-plasm
- Identification of medium and long term regional livestock development policies and market opportunities.

The Mbabane seminar went further to recognise that animal genetic resources were owned by private bodies and therefore, herd book societies, cooperatives, breeder associations and other similar organisations had an important role in livestock development and therefore, urged governments in the region to create a favourable environment for their functioning and for their creation where they did not exist. It also recognised the mandate of OAU/IBAR as an intergovernmental body of African states responsible for the sustainable development of animal genetic resources and recommended that this organisation should participate in international fora for negotiations on global development issues related to agro-biodiversity including animal genetic resources.

Livestock Advisory Service

The Winrock International study referred to earlier has observed that in most countries in sub-Saharan Africa, livestock and crop technology delivery systems are separate and that where they are combined, there is often a significant crop bias. Because of the declining government funding for this service, there is a move to combine them. In some countries in the region, there is the move by the farmers' associations to run extension service. The advantage of this system is that the extension service will be demand driven. The farmers will demand advice which will solve their identified constraints instead of the extension workers delivering messages which are not needed. In livestock extension suppliers of inputs normally carry out extension to promote their products. This is acceptable but only products that have been passed by the relevant bureau of standards or national testing centre should be promoted. Otherwise, farmers can be duped by salesmen who have better persuasive power. Non governmental organisations are also participating in extension. Their sustainability has often been in question. Very few of them have long

term perspectives. The best compromise is for government to maintain some advisory role while the farmers organise themselves to take over most of the service.

POSSIBLE NATIONAL AND REGIONAL PROGRAMMES AND PROJECTS ON ANIMAL BREEDING SERVICES.

1. Formulation of national animal breeding policies.

This requires studies of the existing breeds or breed types, purpose for keeping them by their owners, state of art on the subject in neighbouring countries; agroecological zones, range of possibilities of production systems, demand and supply of livestock productions by the domestic and export markets, publication of such documents followed by promotion exercise especially to stakeholders policy makers advisory service and the consumers.

They will be need to prepare action plans on how to implement the policies and animal breeding bills on how to regulate various services and transactions connected with production, processing, packaging quality control and export of various animal products.

2. Projects and programmes to encourage the formation of farmers' breeders associations, breed societies, livestock products' cooperatives and others.

Prototype constitutions of the above associations cooperatives should be developed through a participatory process between government and stakeholders in animal production.

3. Herd Recording.

Deserves a concerted effort to organise a herd recording service for each member state and regional components to collate data, analyse and publish them primarily for stakeholders benefits and to a lesser but important client the government(s). The latter requires data on which to develop national statistics for policy formulation and assessing the citizens' welfare. ILRI should be given resources to process and publish data for the region. There will be need for member states to dividually or collectively apply for membership in the International Committee for Animal Recording (ICAR).

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4. **Projects and programs to strengthen the Artificial Insemination (AI) and Embryo Transfer(ET) services in member states.**

An assessment of potential and enstraints in this field for each country should be studied before use of AI and Embryo Transfer technologies. Funding could also be extended to training either in national, regional or international institutions. This is because training is needed at several levels e.g. technician veterinary practictioner and researcher levels. Standardizing the curricular in order to allow for ease of trained persons to move across the region to carry out research and development tasks should be encouraged.

5. **Projects and Programs on research and tehnology transfer.**

Problems to be solved in animal production like in most fields of agriculture and natural resources are location specific. Therefore, national projects and programmes should be directed at solving local issues. Problems of identification and design of methodologies to solve constraints should be formulated in collaboration between national and regional private and public institutions and organisations. ILRI can play a great role in coordinating studies in these areas at regional level.

6. **Human Resource Development in animal breeding and animal genetic resource, conservation, development and sustainable utilisation.**

A programme to assist training institutions in the region to produce manpower in animal breeding and animal germplasm conservation, improvement and sustainable utilization should be developed. This manpower is at present insufficient for planning, organizing and sustanining genetic improvement programmes.

7. **Information generation and dissemination.**

ILRI has had programmes to collect from member states in the region, most of the puplished and unpublished literature on various fields of animal production including breeding and to distribute this information. These efforts require strengthening. Regional journals on animal improvement have been started but not sustained. Ways and means to sustain them should receive priority. Related to this, should be assistance to have a regional association of animal production. This would bring together periodically regional scientists in various fields of animal science to address issues of national and regional concerns.

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CONCLUSION.

The Horn Africa is richly endowed with livestock resources. It has more cattle, sheep, goats and camels than any other regions of Africa. Yet animal industries are not well developed to exploit this resource to meet food security needs at household, national and regional levels. The opportunities to exploit this large resource for alleviation poverty in the member states exist. Formulating good policies to guide all stakeholders in animal improvement including implementation plans and regulations to ensure fair play, quality standards and related issues and to guide against damage to the environment should be put in place. The policy guidelines should cover all production systems so that different groups in the society may choose livestock species that can produce good economic returns from related levels of investments. For example, the poor and landless smallholders might invest in commercialisation of poultry which is based on semi- scavenging feeding systems and thus place modest demands on capital, labour and natural resource base. Herd recording for farm management and animal improvement purposes should be introduced and managed by farmers breeding associations, breed societies of farmer livestock production cooperatives. Artificial insemination, embryo transfer are some of the breeding technologies that need to be promoted. Manpower in animal breeding, animal germplasm conservation, development and sustainable utilisation is in short supply and it should be developed. Research and technology transfer in livestock should be strengthened. Funding to strengthen regional cooperation in developing the animal industries in the region should be sought.

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Marketing issues affecting the development of livestock trade in Africa

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Marketing issues affecting the development of livestock trade in Africa

Introduction

My task here today is to initiate discussion on a number of marketing issues that affect trade in livestock in Africa in general, and to identify those areas that OAU/IBAR/IGAD can begin to focus on to bring about efficiency in livestock trade in the eastern African region. To accomplish this task, I present a number of illustrative facts on livestock marketing drawn from several countries in Africa that are relevant to the sub-region. This should constitute background information for our discussion. I begin by looking at livestock trade in Africa within the context of the global market for livestock and livestock products. Next, I look at those factors that have influenced the pattern of trade in the continent, followed by the effects of trade and marketing policy reforms implemented by some countries. I end by identifying a number of issues that emerge from recent developments in livestock trade and marketing which we should be discussing in our sub-committees. It is my wish therefore, that we concentrate on those issues which are relevant for IGAD member countries and which OAU/IBAR/IGAD should focus on. I also wish that we propose the modalities for tackling the issues.

The global market for livestock and livestock products

Table 1 summarises the value of world trade in livestock and livestock products for 1988 and 1994. World trade in livestock and livestock products has increased by 33%, reaching a value of 132.6 billion dollars in 1994. While imports and exports have both increased, net imports have declined significantly from US$2,304 to US$69 million, indicating that world exports have increased at a faster rate than imports. Total African trade in livestock and livestock products represents a very small part of world trade, averaging 6.0% in 1988. Over time however, this share has declined by more than half to 2.5% in 1994, reflecting the fact that African countries have become less open to trade in livestock and livestock products. Africa's share in world imports is about 5%, four times greater than its share in world exports.

Africa has imported more livestock and livestock products than it has exported. Imports reached 2.7 billion US dollars in 1988 compared to an export value of 0.5 billion US dollars. Over time, imports have declined by 2.4% while exports have risen by 42%. Net imports have remained high, reaching a value of 2.2 billion US dollars in 1988. The large share of imports in total trade notwithstanding, the balance of trade seems to have improved with a 13% reduction in net imports between 1988 and 1994.

Table 1. Value and share of Africa's trade in world trade in livestock and livestock products*, 1988 and 1994 (million US dollars).

	1988				1994			
	Value of imports	Value of exports	Total trade value	Net import value	Value of imports	Value of exports	Total trade value	Net import value
World trade	50,818	48,513	99,331	2,304	66,310	66,241	132,551	69
Africa's trade	2,708	509	3,218	2,199	2,641	724	3,366	1,917
Africa as % of world trade	5.3	1.0	6.0	3.2	4.0	1.1	2.5	2,778.0

* Includes trade in live animals, meat and dairy products only.

While all African countries import one form of livestock product or another, countries vary in the type and quantity of livestock products exported. Major exporters of live animals include Namibia, Chad, Mali, Niger, CAR and Somalia. Those that export significant quantities of meat are Botswana, Egypt, Namibia, South Africa, Sudan, Swaziland and Zimbabwe whereas major exporters of dairy products are South Africa, Zimbabwe, Tunisia, Kenya and Togo. For the other countries, exports of livestock and livestock products are negligible and even zero for some countries. Overall, exports are quite small relative to imports. The factors that account for this include the lack of competitivity in the world market due in part to a low comparative advantage in livestock production and a number of technical, institutional and policy problems.

Trade in livestock and livestock products in Africa

Although livestock make a significant contribution to GDP in some African economies, the overall share of livestock trade in total merchandise trade is quite small, averaging about 5%. Of total agricultural imports, livestock account for 16% with meat and live animal imports representing 9%, dairy and eggs imports 6% and the other livestock products 1%. These proportions vary from one country to another, being as high as 40% in Liberia and less than 0.5% in Chad, Ghana, Kenya, Mauritius, Tanzania, Uganda, Zambia and Zimbabwe. Over time, there has been a noticeable change in the share of livestock trade in total merchandise trade. Between 1988 and 1994 livestock's share in total imports increased from 3.7% to 4.9% whereas the share in agricultural imports declined from 17.8% to 15.6% (Table 2). Except Sierra Leone, the relative share of livestock in total merchandise imports in the other African countries was less than 10% in 1988. By 1994, Liberia, Sierra Leone and the Democratic Republic of Congo (former Zaire) had more than 10% of livestock imports in total merchandise imports.

Table 2. Share of livestock imports in total and agricultural imports Africa, 1988 and 1994

Country	1988				1994			
	Livestock imports as % of imports	Livestock as % of agric. imports	Meat[1] as % of agric. imports	Dairy as % of agric. imports	Livestock imports as % of imports	Livestock as % of agric imports	Meat[1] as % of agric. imports	Dairy as % of agric imports
Algeria	5.9	20.6	2.8	17.8	1.1	3.4	1.7	1.7
Burkina Faso	4.0	19.3	1.5	17.8	1.4	7.6	0.0	7.5
Cameroon	1.9	14.2	6.6	7.5	1.2	9.7	2.1	7.6
Central Africa Rep.	3.5	2.1	15.6	6.5	8.1	27.3	22.1	5.2
Chad	1.1	13.4	5.3	8.1	0.2	4.3	0.9	3.4
Congo	5.7	33.5	22.0	11.4	6.3	33.2	23.5	9.7
Cote d'Ivoire	8.4	42.3	22.4	19.8	5.7	33.3	26.8	6.5
Egypt	4.5	12.1	11.4	0.7	9.3	34.4	11.9	5.3
Ethiopia	1.6	5.8	0.3	5.5	na	na	na	na
Gabon	5.3	34.9	27.2	7.6	5.3	35.9	27.2	8.7
Gambia	5.8	14.7	5.2	9.5	3.7	9.9	3.2	6.7
Ghana	1.1	8.0	2.6	5.3	0.2	21.7	17.8	3.9
Kenya	0.0	0.6	0.5	0.0	0.2	1.3	0.1	1.2
Liberia	3.8	16.9	10.2	6.6	40.1	10.2	6.2	3.9
Madagascar	1.2	11.1	0.3	10.8	0.9	5.7	0.6	5.1
Malawi	0.8	7.4	0.4	7.1	1.2	3.4	0.3	3.1
Mali	2.8	14.6	2.5	12.1	1.9	10.8	0.4	10.4
Mauritius	3.2	25.2	10.1	15.1	0.4	30.8	15.2	15.5
Morocco	1.4	9.3	1.8	7.4	2.1	12.8	5.6	7.2
Nigeria	2.9	26.9	16.4	10.5	4.2	30.3	24.8	5.5
Reunion	6.1	33.5	19.7	13.8	5.7	32.1	19.4	12.6
Sierra Leone	11.0	20.9	16.5	4.5	16.1	25.9	21.0	4.9
Somalia	0.9	4.9	4.9	0.0	1.1	2.4	2.4	0.0
Senegal	6.4	23.4	9.1	14.3	6.7	20.2	10.7	9.5
Seychelles	3.6	21.6	11.2	10.4	3.5	22.4	6.2	16.2
South Africa	1.7	28.2	26.8	1.4	1.5	22.5	21.2	1.3
Sudan	2.7	10.8	0.4	10.4	1.2	5.0	0.1	4.8
Tanzania	0.7	8.4	1.9	6.5	0.3	2.9	1.7	1.2
Togo	3.5	15.4	10.3	5.0	1.4	11.3	4.7	6.5
Tunisia	2.2	12.2	4.6	7.5	1.0	9.5	3.0	6.5
Uganda	1.3	25.3	3.4	21.9	0.0	0.0	1.0	3.1
Zaire	8.3	28.9	18.9	10.1	13.1	28.0	23.9	4.1
Zambia	0.2	2.3	0.7	1.6	0.3	7.2	2.4	4.8
Zimbabwe	0.3	5.8	5.0	0.8	0.0	0.7	0.6	0.0
Total Africa	3.7	17.8	9.1	8.7	4.9	15.6	9.3	5.8

[1] Includes live animal imports

Source: Computed from FAO Trade Yearbook statistics

In 1988, 25 African countries had more than 10% of livestock imports in their total agricultural imports. In 1994, only 18 countries had more than 10%. This reflects either a reduction in imports of livestock and livestock products, majority of which consist of meat and dairy products, or an increase in imports of other agricultural commodities. While the share of meat and live animals in agricultural imports remained at about 9% between 1988 and 1994, the share of dairy and eggs imports dropped from 8.7% to 5.8%.

Countries with more than 20% of meat and live animal imports in their agricultural imports include the Central African Republic (CAR), Congo, Cote d'Ivoire, Gabon, Nigeria, Sierra Leone, South Africa and the Democratic Republic of Congo. Countries that have significantly increased their meat share in agricultural imports are the CAR, Cote d'Ivoire, Ghana, Mauritius, Morocco, Nigeria, Sierra Leone, the Democratic Republic of Congo and Zambia. As far as the share of dairy and eggs imports is concerned, the number of countries with more than 10% of dairy products in their agricultural imports declined from 14 in 1988 to 4 in 1994. In 1994 Mali, Mauritius, Reunion and Seychelles were the only countries having over 10% of dairy products in their agricultural imports.

In terms of exports, livestock and livestock products account for about 10%, with exports of meat and live animals representing 9%, dairy and other livestock products making up the remaining 1%. In the last decade, a major change has also occurred in the relative share of livestock in total and agricultural exports. The share of livestock in total trade decreased from 8.1% to 5.6% whereas the share in agricultural exports remained at about 10% (Table 3). While the share of meat and live animal exports have declined by about 18% to 8.8% in 1994, the share of dairy products exports have doubled from o.2 to 0.4%.

In Chad, Mali and Somalia, exports of livestock and livestock products make up a significant part of total and agricultural exports. In 1988 27% of total merchandise and 35% of agricultural exports in Chad consisted of livestock and livestock products. In Mali, the respective shares were 39% and 48%. In Somalia, over half of total merchandise exports and over 90% of agricultural exports have consisted of livestock and livestock products. While the share of livestock in Somalia's total trade has stagnated at 52% between 1988 and 1994, the share of livestock in total agricultural exports increased from 58% to 91%. This reflects the significant role that livestock trade has and will continue to play in the Somalian economy. It also reflects a decline in exports of other agricultural commodities. For countries such as Cote d'Ivoire, Senegal and Zambia, there have virtually been no exports of livestock and livestock products.

Table 3. Share of livestock exports in total and agricultural exports Africa, 1988 and 1994

Country	1988				1994			
	Livestock exports as % of exports	Livestock as % of agric. exports	Meat[1] as % of agric. exports	Dairy as % of agric. exports	Livestock exports as % of exports	Livestock as % of agric. exports	Meat[1] as % of agric. exports	Dairy as % of agric exports
Burkina Faso	4.0	6.6	6.6	0.0	na	na	na	na
Central Africa Rep.	8.5	20.4	20.4	0.0	na	na	na	na
Chad	27.4	35.3	35.3	0.0	na	na	na	na
Cote d'Ivoire	0.04	0.06	0.0	0.06	0.0	0.0	0.0	0.0
Egypt	0.5	1.9	1.4	0.5	0.5	2.9	1.9	1.1
Ethiopia	4.2	4.4	4.4	0.0	na	na	na	na
Kenya	0.4	0.6	0.3	0.4	0.5	0.8	0.3	0.6
Madagascar	0.4	0.6	0.6	0.0	1.3	2.1	2.1	0.0
Mali	39.2	47.5	47.5	0.0	na	na	na	na
Mauritius	0.04	0.1	0.1	0.0	1.3	4.6	4.6	0.04
Reunion	0.1	0.1	0.1	0.1	0.3	0.5	0.2	0.2
Somalia	51.5	57.8	57.8	0.0	51.6	91.3	91.3	0.0
Senegal	0.1	0.3	0.1	0.1	0.02	0.1	0.01	0.1
South Africa	0.1	1.2	0.9	0.3	0.2	2.5	0.8	1.7
Sudan	6.8	6.8	6.8	0.0	10.9	11.4	1.6	0.0
Tunisia	0.4	4.8	5.7	0.02	0.4	3.4	2.0	1.4
Zambia	0.02	1.4	0.7	0.7	0.0	0.0	0.8	0.4
Zimbabwe	2.7	7.3	6.7	0.6	na	na	na	na
Total Africa	8.1	10.6	10.8	0.2	5.6	10.0	8.8	0.4

[1] Includes exports of live animals

Source: Computed from FAO Trade Yearbook data

Trends in livestock and livestock products trade in Africa

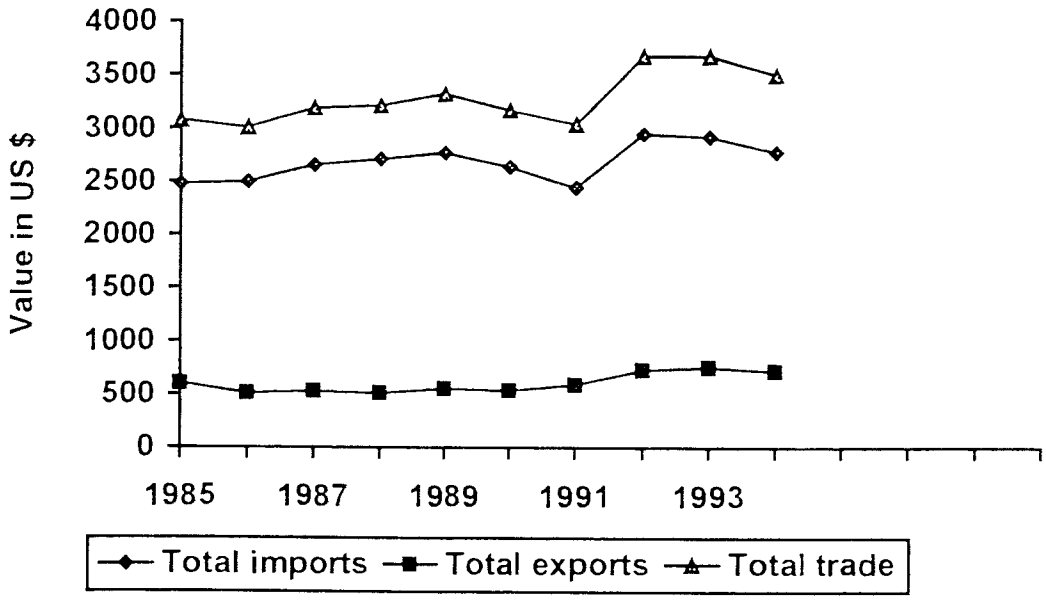
In the last decade, total trade in livestock and livestock products has grown at a rate of 1.7% per year. As shown in Figure 1, imports of livestock and livestock products have dictated the trend in total trade, rising from US$ 2,472 million in 1985 to US$2,768 million in 1989 then dropping to US$2,469 million in 1991 before picking up again. The value of total trade has also increased from US$3,072 million in 1985 to US$3,321 million in 1989. IN 1991 it dropped to US$3,031 million then picked up thereafter. Total exports have increased at 2.6% per year compared to 1.6% for imports. Exports dropped by 11% between 1985 and 1990 but rose by 35% between 1990 and 1994. With about 80% of total trade in livestock and livestock products consisting of imports, majority of which are imports of dairy products, growth in imports have shapped the pace of total trade. Exports of live animals account for more than two thirds of total export value, followed by meat and then dairy exports. For exporting countries, dairy and live animal exports have declined between 1985 and 1990 and only recently have exports picked up again (Figure).

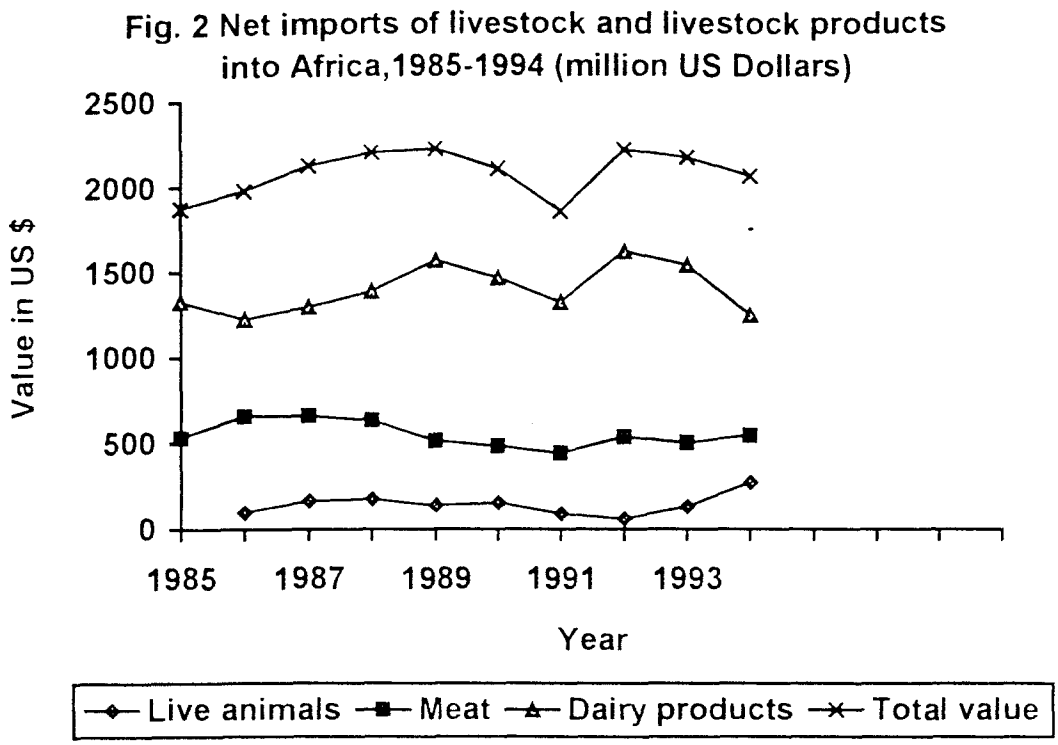
With declining exports and increasing imports, Africa is no doubt a net importer of liveatock and livestock products with dairy imports exceeding imports of meat and live animals combined. Net imports of dairy, meat and live animals increased from US$1,873 million in 1985 to US$2,215 million in 1989 but declined to US$1,848 million. After 1991 net imports trended upwards, reaching US$2,050 million in 1994

(Figure 2). While constituting the largest share, net imports of dairy products increased from US$1,329 million in 1985 to US$1,613 million but declined by 23% to US$1,240 million in 1994. Overall, net imports of dairy products have declined by 0.1%. Net imports of meat increased at 1.7% per year while net imports of live animals increased at a rate of 26% per year and more than doubled between 1985 and 1994.

The evidence presented above on increasing net imports demonstrates the inability of African countries to promote exports. The key factors that have led to this include inadequate domestic production due to a number of structural and institutional weaknesses inherent in the economies; marketing constraints; distortions in domestic prices, production and consumption due to adoption of inappropriate policies, and the inability of regional trade organizations to promote inter and intra-regional livestock trade.

Fig. 1 Trade in livestock and livestock products in Africa,1985-1994 (million US Dollars)





Domestic livestock production

Jaeger (1992) has presented empirical evidence that the decline in Africa's agricultural exports and the growth in food imports and food aid is as a result of slow growth in domestic production resulting from macro-economic policy distortions; deteriorating real prices paid to agricultural producers; changes in the structure of demand; and changes in the ratio of import to domestic food prices. Together with unfavorable climatic conditions, these factors have helped to tilt the internal terms of trade against agriculture, leading to market distortions that have favored imports at the expense of exports. Without exploring further the reasons behind the decline in livestock production in Africa, as this is not the object of this paper, it is quite clear that inadequate domestic livestock production has stifled exports and has fuelled the growth in imports and food aid.

Table 4. Livestock population in Africa and Africa's share in world livestock population, 1989-91 to 1995.

Year	Cattle (million head)			Small ruminants (million head)			Pigs (million head)		
	World	Africa	Africa as % of world	World	Africa	Africa as % of world	World	Africa	Africa as % of world
1989-91	1.284	187	14.6	1.743	370	21.2	854	17	2.0
1993	1.285	190	14.8	1.698	374	22.0	874	21	2.4
1994	1.297	192	14.8	1.703	381	22.4	883	21	2.4
1995	1.306	196	15.0	1.707	386	22.6	900	22	2.4

Source: Compiled from FAO Production Yearbooks

In 1995, Africa produced 15% of the world's cattle, 22% of small ruminants and only 2.4% of pigs, with populations of 196, 386 and 22 million heads respectively (Table 4). In terms of livestock products, Africa produced only 4% of the world's meat, dairy products and eggs and 9% of the world's hides and skins (Table 5). In 1995, 16 and 22 million metric tonnes of meat and dairy products were produced compared to 1.7 and 0.8 million metric tonnes of eggs and hides and skins respectively.

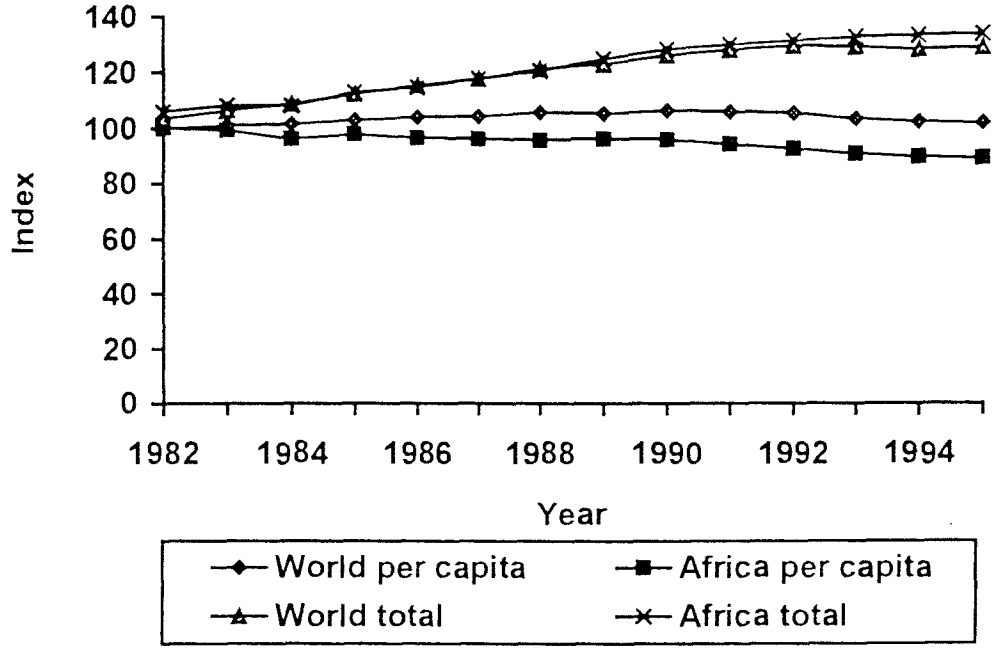
Judging from total production indices, livestock production appeared to have performed quite well in the last one and one half decades. The index of total production has increased by 26% from 105.82 in 1982 to 133.21 in 1995 compared to a 24% increase in the index of total world production (Figure 3 and Table A£ of annex 1). On a per capita basis however, Africa presents quite a different picture. While the world's per capita production index has increased by about 2% between 1982 and 1995, the index of per capita production in Africa has declined by 11% from 98.80 to 88.54. At the same time, domestic consumption has increased, necessitating an increase in imports. In 1993 for example, meat consumption outpaced domestic production by 3%, the difference of which was met from meat imports of 554,000 and 584,000 metric tonnes (Table A1 of annex 1). The evidence of production lagging behind consumption clearly means that exports of livestock products cannot increase even with pursuance of the best trade policies.

Table 5. Production of livestock products in Africa and Africa's share in total world production, 1993 and 1995. (1000 metric tonnes).

Livestock products	1993			1995			% growth in share of world production
	World	Africa	% of world production	World	Africa	% of world production	
MEAT:							
Beef and veal	51,753	3,456	6.7	53,217	3,445	6.5	-3.0
Mutton and lamb	7,047	930	13.2	7,012	950	13.5	2.3
Goat meat	2,954	644	21.8	3,262	662	20.3	-6.9
Pig meat	75,299	736	1.0	83,170	764	1.0	0.0
Poultry meat	190,737	9,147	4.8	207,113	9,348	4.5	-6.2
Beef and buffalo meat	76,085	734	1.0	85,203	759	0.9	-10.0
Horse meat	503	13	2.6	513	13	2.5	-3.8
Total meat	404,378	15,660	3.9	439,490	15,941	3.6	-7.7
EGGS:							
Hen eggs	38,605	1,705	4.4	41,536	1,691	4.1	-6.8
DAIRY:							
Fresh cow milk	463,582	15,176	3.3	465,749	15,779	3.4	3.0
Buffalo milk	45,949	1,556	3.4	49,529	1,590	3.2	-5.9
Sheep and goat milk	17,544	3,283	18.7	17,898	3,466	19.4	3.7
Cheese	14,306	488	3.4	15,109	510	3.4	0.0
Butter and ghee	6,963	174	2.5	6,738	179	2.6	4.0
Dry and evaporated milk	7,050	60	0.8	6,900	64	0.9	12.5
Other dairy products	5,154	33	0.6	5,164	32	0.6	0.0
Total dairy	560,548	20,770	3.7	567,087	21,620	3.8	2.7
HIDES&SKINS:							
Cattle and Buffalo hides	6,835	571	8.3	7,004	575	8.2	-1.2
Sheep & Goat skins	2,346	277	11.8	2,532	283	11.2	-5.1
Total hides and skins	9,181	848	9.2	9,536	858	9.0	-2.2

Source: Compiled from FAO, Production Yearbook, 1995.

Fig. 3 Indices of total and per capita livestock production,1982-1995 (1979-81=100)



Marketing constraints

Attempts by individual countries and regional trade organizations to increase their share in world livestock trade have been hampered by a number of marketing constraints. Two types of constraints can be categorized: (i) Hardware constraints and (ii) software constraints.

Hardware constraints relate to the physical factors which limit livestock trade and marketing such as road and market infrastructure, transport and communication infrastructure, storage and processing facilities.

Software constraints relate to the legal, regulatory, administrative and policy framework that guide trade and marketing of livestock. These include government taxation, licensing and controls; quasi and informal levies; health and sanitary regulations; quality control regulations; pricing and exchange rate policies; lawlessness; and access market information and credit.

The evidence that most African countries have paid inadequate attention to market infrastructure and roads linking urban consumption centers to rural production areas is substantial (Cleaver, 1994). In most Africa countries market infrastructure is absent and when present, they are often in poor condition. In Cote d'Ivoire for example, the Abidjan/Port Bouet market authorities levy high taxes on cattle marketed there but the stockyard is dilapidated and poorly sited (USAID, 1991). In most countries, transport infrastructure is highly deficient as all-weather roads are limited and access to major towns is difficult. Estimates by Cleaver (1994) reveal that in West Africa the rural road density is only 32m/km^2 and 36m/km^2 in Eastern and Southern Africa compared to an

estimate of 730m/km^2 in India. Carapetis *et al.* (1991, cited in Cleaver, 199) report that in 1988 42% of unpaved roads in West Africa and 47% in East Africa were in poor condition compared with 28% and 44% in 1984 respectively. Many countries have focused their limited resources on urban centers, neglecting the essential physical links between production and consumption areas. Transport costs for agricultural products have increased as a result, making food and agricultural inputs more expensive to consumers and producers. Throughout the continent, transport costs are high, representing 40% to 65% of total trade and marketing costs.

Table 6 presents livestock marketing costs in the Mali, Burkina Faso and Cote d'Ivoire central corridor while Table 9 presents similar information for cattle marketing in Ghana. Of the total marketing costs of 21,187 Francs CFA per cattle exported from Segou, Mali to Abidjan Cote d'Ivoire, transport and handling make up 55% (11,586 Francs CFA). Together, formal and informal taxes make up 26% of total marketing costs. In the case of cattle exported from Djibo, Burkina Faso to Abidjan, 60% of the marketing costs comes from transport and handling with official costs representing 24% and export/market taxes between Burkina Faso and Mali representing 16% of total marketing costs. By comparison, transport and handling costs for cattle marketed in Ghana make up 57% of total marketing costs of 58,027 Cedis (Table 7) followed by informal costs (bribes and extortion) making up 13% and losses due to stress in transport (13%). Other studies by Susani *et al* (1995) and Terab (1993) on livestock marketing costs in Chad have reported estimates of transport costs of 41% for meat exports from N'djamena, Chad to Brazzaville, Congo; 49% for exports to Algiers, Algeria; 51% to Djedda, Saudi Arabia; and 63% for exports to Dakar, Senegal.

Table 6. Livestock marketing costs in the Mali, Burkina Faso and Cote d'Ivoire corridor.

Cost category	Segou, Mali to Abidjan by truck			Djibo, Burkina Faso to Abidjan by truck		
	Cost per head (FCFA)	% total cost	% total marketing costs	Cost per head (FCFA)	% total cost	% total marketing costs
Cattle acquisition & herd fattening costs	84,565	80.0		60,000	72.2	
Commissions (purchase/sale)	1,229	1.2	5.8	1,688	2.0	7.3
Official costs[1]	2,740	2.6	12.9	5,556	6.7	24.0
Quasi-official taxes	2,071	2.0	9.8	na	na	na
Transport and handling	11,586	11.0	54.7	13,753	16.5	59.5
Livestock holding & maintenance	457	0.4	2.2	525	0.6	2.3
Informal taxes[2]	2,786	5.2	13.1	1,100	1.3	4.8
Opportunity cost of capital	318	0.3	1.5	500	0.6	2.2
Total costs	105,752	100.0	100.0	83,122	100.0	100.0
Total marketing costs	21,187			23,122		
Gross returns from sales	110,000			85,000		
Net return	4,248	4.0		1,878	2.3	

[1] Includes veterinary fees, export and market taxes in Burkina Faso and Cote d'Ivoire
[2] Includes bribes and extortion in Burkina Faso, Mali and Cote d'Ivoire
Source: USAID (1991).

It is clear from the preceding that high marketing costs have discouraged cross-border trade in livestock as well as deprived low income citizens from animal protein. Proper transport links between urban markets and rural production areas not only stimulate increased agricultural production, but lead to increased consumer gains due to transport cost reductions. Improved road networks encourage trucking of live animals from production to slaughter points, making quality livestock products available to consumers at relatively low prices.

Table 7. Livestock marketing costs Ghana.

Cost category	Cost per head (Cedis)	% total cost	% Total marketing cost
Cattle acquisition and handling	250,500	80.96	
Commissions to buying agents	1,000	0.32	
Official costs[1]	951	0.3	1.63
Quasi-official taxes	na	na	na
Transport and handling	36,200	11.69	62.38
Terminal market costs	2,879	0.93	1.95
Informal taxes[2]	7,576	2.45	13.06
Opportunity cost of capital	2,922	0.94	5.04
Losses due to stress in transport	7,500	2.42	12.92
Total costs	309,527	100.0	100.0
Total marketing costs	58,027		
Gross returns from sales	420,000		
Net return	110,472	35.69	

[1] Includes veterinary fees, export and market taxes
[2] Includes bribes and extortion

Inappropriate domestic policies

Policy instruments adopted by African countries to foster livestock trade have had both positive and negative impacts on livestock trade and marketing. Cross-border trade barriers created by individual countries have greatly undermined the objective of fostering inter and intra-African trade in livestock. The result has been limited trade between regional trade bloc members and between the blocs. While most governments justify import taxation and licensing on grounds of protecting the local industry, government revenue generation has often been the overriding decision factor. As members of the Preferential Trade Area (PTA) of eastern and southern African countries, the Comoros and Djibouti have often argued that they are very small economies that depend on customs duties for government revenue and therefore should be exempt from reductions in tariffs (Nguyuru *et al.*, 1991). Guided by the objective of government revenue generation, most African countries have erected both tariff and non-tariff barriers (quantitative restrictions, export and import licensing, foreign exchange licensing, conditional permission for imports, and special charges for acquiring foreign exchange licences): in effect distorting domestic prices, production and consumption of livestock products.

Cleaver (1994) has shown how foreign exchange shortages in the Franc CFA and non-CFA countries of sub-Saharan Africa has discouraged intra-regional trade in agricultural products because of the imposition of import licensing and foreign exchange allocation by governments. In mid-1989 Cote d'Ivoire imposed a ban on poultry meat to protect the domestic poultry industry and by January 1991 a countervailing levy of 200 Francs CFA was put on beef imports to protect the cattle industry. While protecting the local industry and ostensibly raising government revenues, the levy prevented Mali and Burkina Faso who are ECOWAS members from exporting livestock to Cote d'Ivoire. At the same time the measure raised the price of capa (deboned frezen meat) by 68% - from 325 Francs CFA to 525 Francs CFA/kg (Shapiro, 1993). Capa imports fell as a result, in effect, depriving low income consumers of animal protein. In Ghana, another member of ECOWAS, the government instituted three *ad valorem* tariff rates of 0%, 10% and 25% on imports with livestock and meat imports being subject to the highest rate of 25%. Prior to 1994, Chad imposed a 14.6% levy on cattle exports, in effect, curtailing exports to its major importers Gabon and Congo who are also members of UDEAC (Terab, 1993). As shown in Table 8, export price fixing by the Chadian government has significantly increased the CIF price of beef and live cattle in importing countries. In addition to raising retail market prices, official taxes and duties levied in exporting and importing countries have led to higher livestock marketing costs, discouraging further intra-African livestock trade.

Table 8. FOB and CIF prices for meat and livestock exports from Chad

Cost category	Fresh meat (Francs CFA)	Live animals (Francs CFA)
Domestic taxes and transaction costs	115	
Live weight price	472	
FOB N'djamena	574	
Transport	400 to 1,000	
Insurance	13	
CIF in:		
Congo (Brazzaville)	987	22,500
Gabon (Libreville)	1,027	32,000
Togo (Lome)	1,337	na
Cote d'Ivoire (Abidjan)	1,337	na
Algeria (Algiers)	1,157	na
Senegal (Dakar)	1,587	na
Saudi Arabia (Djedda)	1,187	32,400

Source: Compiled from Susani *et al.* 1995.

Prior to the January 1994 devaluation of the Franc CFA, an overvalued real effective exchange rate in the Francophone Central and West African countries significantly affected trade in livestock and livestock products by putting a downward pressure on real domestic prices, in effect, fuelling the increase in imports of livestock products and discouraging domestic production and trade. As shown in Table 9 the meat imports in the Franc zone reached 103,380 metric tonnes in 1993 prior to devaluation. By the end

a currency should make imported livestock products more expensive and exports cheaper. For countries with overvalued currencies, importing livestock products would be relatively expensive while exporting livestock products would be enhanced through currency devaluation. However, because of distortions in the world the extent to which exporting African countries will realise export opportunities from devaluation is uncertain. In 1994 when the European Union (EU) reduced subsidies on beef exports by over 30% and the Franc CFA was devalued, the EU beef price rose by 50%, causing exports from the Franc CFA countries to non-Franc CFA countries to increase (Mbuza, 1997; Afrique Agriculture, 1994).

Table 9. Meat imports into the Franc zone of Central and West Africa, 1992 -1994 (1000 metric tonnes)

Country	1992	1993	1994
Benin	11,860	20,610	12,930
Burkina Faso	50	30	0
Cameroon	1,380	420	250
Central African Republic	100	150	300
Chad	20	30	20
Congo	39,450	34,080	23,790
Cote d'Ivoire	17,390	14,340	3,700
Equatorial Guinea	1,950	2,600	2,350
Gabon	26,150	27,130	22,340
Niger	180	30	20
Senegal	2,460	2,070	610
Togo	2,150	1,890	2,130
Total Franc zone	103,140	103,380	68,440
Annual change (%)		0.2	-34.0

Source: Compiled from FAO Trade Yearbooks

Failure of regional trade blocs to foster intra-African livestock trade

Judging from the decline in Africa's share in world trade in livestock and livestock products, it has become quite clear that African regional trade groups created with a view to promoting trade have so far not achieved their objectives. Trade in livestock and livestock products has not developed any more than was originally envisaged. Statistics on trade by regional trade groups are presented in Tables 10 and 11. Except SACU, there does not seem to be evidence of an increase in the share of livestock trade by COMESA, ECOWAS and UDEAC. Rather, ECOWAS's total trade share in African trade has dropped by 46% from 41.6% in 1990 to 22.5% in 1994 (Table 11). The respective decline in trade shares are 28% and 4% for UDEAC and COMESA during the same period.

Table 10. Regional trade in meat in Africa, 1990 and 1994 (million US dollars)

	1990				1994			
Trade region	Value of imports	Value of exports	Total value of trade	Net import value	Value of imports	Value of exports	Total value of trade	Net import value
Total Africa	615	133	748	482	737	195	932	542
COMESA	241	53	294	188	230	120	350	110
ECOWAS	311	0.2	311.4	311	209	0.4	209.4	208.6
UDEAC	89	0.0	89	89	78	0.4	78.4	77.6
SACU	105	125	230	-20	281	161	442	120

Source: Compiled from FAO Trade Yearbook statistics.

In terms of the absolute value of trade, while the value of total trade increased for COMESA and SACU by 19% and 92% respectively, total trade value declined for ECOWAS and UDEAC by 33% and 12% respectively between 1990 and 1994. ECOWAS, which commanded the largest share of 42% in regional meat trade in Africa, has significantly decreased meat imports but has made little effort to increase meat exports. COMESA, the second largest trade bloc with 38% of meat trade, has also decreased meat imports by 5% from US$421 million in 1990 to US$230 million and at the same time has more than doubled meat exports from US$53 million to US$120 million (Table 10). Although consisting only of a few countries, SACU has doubled its share in total meat trade to US$442 million in 1994, with most of the increase coming from meat imports. This has also led to a six fold increase in SACU's net imports from US$20 million in 1990 to US$120 million in 1994. UDEAC remains the only regional trade group that has made the least progress in meat trade with imports declining from US$89 million to US$78 million and exports increasing to US$0.4 million. As far as trade within the PTA is concerned, Nguyuru *et al* (1991) found no evidence of an increase in intra-PTA trade arising out of the implementation of the PTA program. The share of intra-PTA trade in total trade has been less than 10%. Overall, regional trade organisations have been less successful in promoting inter and intra-African trade in livestock

Table 11. Regional trade groups' share in meat trade in Africa, 1990 and 1994 (%)

	1990			19994		
Trade region	Share of imports	Share of exports	Share of total trade	Share of imports	Share of exports	Share of total trade
COMESA	39.20	39.97	39.33	13.43	61.69	37.58
ECOWAS	50.59	0.13	41.59	12.20	0.20	22.46
UDEAC	14.41	0.0	11.84	4.58	0.23	8.46
SACU	17.14	93.77	30.80	16.42	82.68	47.45

Source: Computed from FAO Trade Yearbook statistics.

Progress in livestock trade policy reforms

Meeting in Lagos in 1980, African Heads of State adopted the Lagos Plan of Action (LPA), the purpose of which was to promote self-reliance and self-sustained development and economic growth in Africa (OAU, 1980, Preamble, Article 3). Within the spirit of the LPA, a number of regional organisations have emerged with the

common aim of protecting regional and national markets from outside competition. The PTA for example aims to (i) promote growth in intra-PTA trade by removing tariff and non-tariff barriers and (ii) promote regional economic development through planning and mobilising funds for financing regional projects. In 1975, the Economic Community of West African States (ECOWAS) was formed with a membership of 16 countries. The principal motive for the establishment of ECOWAS was the promotion and expansion of intra-community trade through a reduction in tariffs and eventual elimination of quotas and other quantitative restrictions on trade. Harmonisation of external tariffs was also aimed at as a means towards the creation of a customs union (Ademola and Raheem, 1991).

Recognising that non-tariff barriers were the major constraints to the promotion of intra-regional trade, Article 12 of the PTA treaty stipulated (i) a reduction and eventual elimination of customs duties and non-tariff barriers among member states and (ii) a gradual evolution of a common external tariff with respect to all goods from third countries, with a view to the eventual establishment of a common market among member states (Nguyuru *et al.*, 1991). Guided by the provisions of regional trade treaties to which individual African countries belong, a number of policy reforms, some supported by the World Bank Structural Adjustment Program, have been implemented in the last decade with the aim of promoting livestock trade.

So far, the policy adjustment process which has been in existence in some countries in the last half decade is beginning to bear some fruit. In West Africa for example, an integrated approach to reform promoted by the USAID's Implementing Policy Change (IPC) project has led to regional integration of livestock trade among Burkina Faso, Cote d'Ivoire, Ghana, Mali and Togo. Reform measures to improve the efficiency of intra-regional trade in livestock and livestock products among these countries have led to significant progress in trade liberalisation through the simplification of import and export procedures and the elimination of trade barriers. Between 1993 and 1995 a number of policy measures have been implemented. Burkina Faso standardised business license (*patente*) fees, Cote d'Ivoire suppressed quasi-official levies imposed at border crossings by labor unions and reduced the number of road checkpoints, Mali suppressed the "contribution directe" but exporters still have to pay certain other fees (export/import *petente*, shipping and documentation) indirectly through a licenced import-export trader.

In Ghana, the fixed exchange rage which existed from 1957 to 1983 was replaced by a liberalised and flexible exchange rate in 1983 with the onset of the structural adjustment program. Recently, Ghana abolished the value-added tax (VAT) of 17.5% in August 1995. Even though these measures have helped to eliminate the inefficiencies introduced by an overvalued Ghanaian currency, the weak Cedi vis-a-vis the currency of major trading partners, has led to instability in the exchange rate. As a group Ghana, Mali and Cote d'Ivoire have organised means of regularly exchanging market policy information (Wenner and Mooney, 1995; USAID, 1991). In May 1994 Chad reduced the export duty on livestock from 14.6% to 12.6% and abolished the 10% tax on depreciation. Overall, Chad reduced export taxes on livestock by 40% (Susani *et al.*, 1995)

Marketing issues affecting the development of trade in livestock

The marketing issues identified in the preceding sections that affect the development of livestock trade are as follows:

(i) How can OAU/IBAR/IGAD harmonize domestic policies so as to improve domestic production and foster trade and marketing of livestock?

(ii) How can OAU/IBAR/IGAD assist in creating an appropriate policy and institutional environment that is conducive to efficient trade and marketing of livestock?

(iii) How can OAU/IBAR/IGAD strengthen the capacity of individual countries and regional trade groups to monitor livestock flows and prices and the impact of protective measures on regional market development?

(iv) What advisory role can OAU/IBAR/IGAD play and what action should individual countries take to individually or jointly reduce livestock marketing costs in the respective countries?

(v) What mechanisms should be put in place by national governments and regional trade groups to stimulate private initiative and promote private sector investment in livestock market, transport, processing and storage facilities?

(vi) What economic, technical and political support can OAU//IBAR/IGAD provide to foster bilateral negotiations and unilateral reductions in tariff and non-tariff barriers as well as facilitate financial transactions for inter and intra-regional livestock trade?

Possible role for OAU/IBAR/IGAD

As a continental organization charged with livestock development in Africa, OAU/IBAR has through the Pan African Rinderpest Campaign, succeeded in eradicating rinderpest in West and Central Africa and is in the process of doing so in East Africa. This implies that cattle productivity will increase as they become free from disease. To ensure that the increase in productivity is sustainable, and that animal protein is made available to consumers, cattle off-take rate must be increased at levels that are commensurate with a sustainable environment.

To fulfil its continental mandate of livestock development in Africa, OAU/IBAR must, in collaboration with IGAD, undertake measures to ensure that livestock and livestock products resulting from productivity gains are equitably distributed within the region. One way to do this is to promote the trade in livestock. This can be done through a number of actions.

(i) Providing the technical, economic and political leverage to IGAD member countries that is necessary for them to initiate and implement trade and marketing policy reforms that promote inter and intra-regional trade in livestock and livestock products. This means that OAU/IBAR/IGAD will have to provide support to member countries that

engage in bilateral and multilateral negotiations involving unilateral or multilateral reductions in tariff and non-tariff barriers.

(ii) Setting up a mechanism for a region-wide protection from dumping of livestock products. While respecting the objectives of each country, OAU/IBAR/IGAD will need to bring all of them together under one umbrella unit that will coordinate their activities and ensure that they have a stronger bargaining power with other countries and regional organizations.

(iii) Assisting national governments to harmonize livestock production and trade policies. Under the guidance of a coordination unit, OAU/IBAR/IGAD will need to ensure that all protocols and accords related to the promotion of livestock trade are in harmony.

(iv) Providing economic support to member countries to facilitate financial transactions and promote commercial links between countries and between regional trade groups.

(v) Encouraging through incentives, national governments to bring private investors on board through integrated programmes that encourage private and public sector investment in livestock marketing infrastructure.

Summary and Conclusions

As an overall effort to provide economic input to OAU/IBAR on the impacts of livestock policy reforms, this study evaluates the progress that has occurred in livestock trade and marketing in Africa in the light of recent developments in livestock trade policies adopted by African countries. The evidence provided by the study is that although several African countries and regional trade groups have adopted policy reforms aimed at promoting inter and intra-African livestock trade, Africa's share in total world trade in livestock and livestock products has not only remained small, but has declined by more than half in the last half decade. Thus, Africa has become less open to livestock trade despite the policy reforms. Net imports of livestock and livestock products have declined in absolute value, but are higher than world net imports. While the share of livestock in total merchandise and agricultural trade has remained low at about 5% and 16% respectively, the share in total merchandise trade has increased while the share in agricultural trade has declined; suggesting that general agricultural trade in Africa has decreased over time. Both the share of livestock in agricultural imports and exports have declined as well.

In the last decade, the number of African countries having more than 10% of livestock imports in total agricultural imports declined by 28% from 25 to 18. This implies that (i) the relative share of livestock in agricultural imports has decreased and (ii) the absolute share of other agricultural commodity imports has increased.

Even though growth in total exports of livestock and livestock products is higher than growth in imports, exports constitute only one quarter of imports. This does not only demonstrate the inability of African countries to promote livestock exports, but reveals the structural and institutional weaknesses inherent in the economies of African

countries. The factors identified in this study that support the evidence of high imports and low exports include developments in domestic livestock production and pricing, distortions in domestic and international policies, the inability of regional trade groups to promote inter and intra-African livestock trade, and domestic constraints that lead to high marketing costs.

Historically, total livestock production in Africa has grown at about 2% in the last one and one half decades whereas per capita production has declined by more than 10%. As a consequence, domestic consumption of livestock products has outpaced production, necessitating increased imports and food aid.

The policy reform measures adopted by African countries to promote trade have had both positive and negative impacts on livestock trade and marketing in Africa. Trade promotion measures advocated by regional trade groups on tariff reductions and elimination of quotas and other quantitative restrictions have been less successful in off-setting the detrimental effects of inappropriate trade policies adopted by individual countries. Protective tariff and non-tariff measures have greatly undermined the objective of promoting inter and intra-African trade in livestock. The result has been limited trade between countries within and outside regional trade groups. Except SACU, there does not seem to be evidence of an increase in the share of livestock trade by COMESA, ECOWAS and UDEAC member countries. ECOWAS's total trade share in African livestock trade dropped by 46% between 1990 and 1994. The respective decline in trade shares for UDEAC and COMESA are 28% and 4%. Whereas effective compliance by individual countries to the treaty provisions of regional trade groups is necessary as a prerequisite for livestock trade promotion, new trade policy initiatives must uphold regional objectives above national objectives.

While several domestic constraints have acted in concert to stifle trade in livestock and livestock products, there is general agreement that high livestock marketing costs resulting from inadequate and poor infrastructural facilities (e.g. roads and communication) as well as excessive taxation have significantly reduced intra-African livestock trade. Through out most of Central and West Africa (notably Chad, Mali, Cote d'Ivoire, Burkina Faso and Ghana), transport and handling make up from 41% to 63% of total marketing costs while formal and informal (bribes, extortion) taxes account for 24 to 30% of total marketing costs. This implies that new policy reforms to address trade initiatives must of necessity address issues related to market infrastructure, taxation and lawlessness. The need to tackle these issues is urgent, if Africa must increase its share in world trade in livestock and livestock products.

Further evidence provided by this study is that although the policy reform process that is on-going in some African countries has led to more open and efficient trade regimes today than a decade ago, progress in trade policy reform has been slower than anticipated at the on-set of the reform process. Some countries have reduced or eliminated quantitative restrictions and other non-tariff barriers, but much remains to be done in reducing nominal nad effective protection levels. To foster livestock trade therefore, countries need to be urged to reduce their nominal and effective levels of protection, including lowering tariffs, so as to improve their competitiveness. Continental orgrnisations such as the OAU/IBAR will need play a key role in

supporting countries engaged in trade policy reforms by providing both the technical, economic and political leverage needed to ensure a sustainable trade regime.

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8 – 10 DECEMBER 1997

KAMPALA UGANDA.

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