



**DOCUMENTS PRESENTED TO THE 8TH ADVISORY
COMMITTEE MEETING**

**4-6 November, 2003
*Bamako, Mali***

November 2003

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PACE COORDINATION UNIT



African Union (AU)
Inter African Bureau for Animal Resources (IBAR)
Pan African programme for the Control of Epizootics (PACE)
European Union (EU)

EIGHTH ADVISORY COMMITTEE MEETING OF THE PACE PROGRAMME
4 – 6 NOVEMBER 2003
BAMAKO, MALI

PROVISIONAL AGENDA

MONDAY 03 NOVEMBER 2003		
TIME	TOPIC	REMARKS/OBSERVATIONS
09:00 – 13:00	PACE Coordination unit and Common Services preparatory meeting	<ul style="list-style-type: none">▪ Coordination Unit (PCU)▪ Epidemiology Unit (PEU)▪ Vet. Legislation & Privatization (VLPU)▪ Economic Support Unit (ESU)▪ Data Management Unit (DMU)▪ CAPE Unit▪ Communications Unit (CU)▪ Financial Unit (FU)
13:00 – 14:30	LUNCH BREAK	
15:00 – 17:00	PCU quarterly Coordination Meeting	

TUESDAY 04 NOVEMBER, 2003

TIME	TOPIC	REMARKS/OBSERVATIONS
08:45 – 09:00	Registration	Secretariat
09:00 – 09:20	Opening remarks by: <ul style="list-style-type: none"> ❖ Director, AU-IBAR ❖ Head of EC Delegation in the Republic of Mali ❖ Chairman of the PACE Advisory Committee (<i>Director General, OIE</i>) 	
09:20 – 09:30	Adoption of Agenda	AC Chairman (OIE)
09:30 – 10:00	C O F F E E B R E A K	
10:00 – 11:00	Topic I: Progress report on the recommendations of the 7 th Advisory Committee meeting (Discussions)	PCU
11:00 – 12:00	Topic II: Analysis on PACE implementation and achievements with particular focus on PACE national components (Discussions)	PCU
	<ul style="list-style-type: none"> ▪ Application of WTO standards in Africa (Report of Dr G. Brukner) ▪ Follow up of the Recommendations of the 2003 OIE Regional meeting in Maputo 	OIE
12:00 – 13:00	Topic III: Inception report of the consultant on the extension of PACE Programme (Discussions)	Consultant
13:00 - 14:30	LUNCH BREAK	
14:30 - 15:00	Topic IV: Rinderpest eradication strategy in Eastern Africa including progress on marker vaccines – the use of marker vaccines (Discussions)	PEU
15:00 - 15:30	Discussions on rinderpest eradication strategy in Eastern Africa	
15:30 - 16:00	C O F F E E B R E A K	
16:00 – 17:00	Topic V: Update on the rinderpest alert in Mauritania and implications for certification of freedom from infection in West African countries (Discussions)	PEU
17:00 - 18:00	Topic VI: Serological surveillance strategy for countries seeking recognition of freedom from infection – preemption of probable difficulties. (Discussions)	PEU
18:00	End day one working sessions	

WEDNESDAY 05 NOVEMBER 2003

TIME	TOPIC	REMARKS/OBSERVATIONS
08:30 – 09:30	Topic VII: Export zones-progress and future options (Discussions)	PEU
09:30 – 10:00	C O F F E E B R E A K	
10:00 – 11:00	Topic VIII: Progress on PID implementation and the way forward (Discussions)	DMU
11:00 – 12:00	Topic IX: CBPP Policy, strategy and future activities (Discussions)	PEU
12:00 - 13:00	Topic X: Concept note on PACE support to veterinary schools (Discussions)	PCU
13:00 – 14:30	L U N C H B R E A K	
14:30 – 15:30	Topic XI: Governments' contribution to sustainability of the PACE activities – update Ex ante cost benefit analysis of CBPP control (Discussions)	ESU
15.30 – 16.00	C O F F E E B R E A K	
16.00– 17:00	Topic XII: Update on the financial status of implementation at country level and the addendum to the financing agreement of the PACE programme (Discussions)	FU
17:00 - 18:00	Topic XIII: PACE communication progress report – Discussions	CU
18:00	End of day two working sessions	AC Members

THURSDAY 06 NOVEMBER 2003

TIME	TOPIC	REMARKS/OBSERVATIONS
08:30 - 09:30	Topic XIV: Role of privatization process in reinforcement of National Veterinary Services in PACE member countries: "Success, failures and prospects"	VLPU
09:30 – 10:00	C O F F E E B R E A K	
10:00 - 11:00	Topic XV: <ul style="list-style-type: none">▪ Progress in the development of community based animal health delivery systems in rinderpest areas at risk▪ Progress report for CAPE (Discussions)	CAPE
11:00 - 13:00	General discussions	
13:00 – 14:30	L U N C H B R E A K	
14:30 – 16:00	Topic XVI: Advisory committee close door deliberations	Advisory Committee Members
16.00 – 16:30	C O F F E E B R E A K	
16:30 – 17.30	Topic XVII: Presentation of AC recommendations	Advisory Committee members
17:30 – 18:30	Closing ceremony	<ul style="list-style-type: none">▪ Director, AU-IBAR▪ Director General, OIE



PACE COORDINATION UNIT

IMPLEMENTATION OF THE 7th ACM RECOMMANDATIONS

8th ACM – Bamako

November 2003

Technical tasks

1. Eradication of Rinderpest

The final eradication of Rinderpest is one of the most important challenges of PACE. The presence of the mild strains of the Rinderpest virus in the Somali pastoral ecosystem remains a major cause of concern and every effort should be made to eliminate the maintenance and circulation of this virus in that ecosystem. It is imperative that support for epidemio-surveillance in both domestic animals and wildlife is maintained and activities enhanced. Once available data has been analysed, and significance appropriately investigated, an eradication strategy could be developed. During the 3rd annual coordination meeting in Arusha, a plan of action was developed and agreed by the different stakeholders. The regional epidemiologist is in charge of this dossier. He is caring about the coordination of the transboundary activities in the Somalia ecosystem. A serosurvey is on going in southern part of Somalia. An updated situation will be presented to the 8th ACM.

The emergency RP vaccine stock has been renewed with the laboratory of BVI in Gaborone (Bostwana). The MOU signed between the RAO and the BVI was recently endorsed by the leading delegation.

The TOR and prerequisite for the research programme on the utilisation of the “peste des petits ruminants” (PPR) vaccine in cattle have been prepared by the PEU. The provision for this research has to be added to the new budget annexed to the extension of the financial agreement.

Already 18 countries have an emergency preparedness plan. They are working closely with the PEU in order to improve the efficiency of these plans.

The recent suspicion of Rinderpest from samples collected from hunted warthogs and the confirm Rinderpest outbreak in Garissa along the Kenyan-Somali borders, indicate clearly the need of developing a comprehensive Rinderpest final eradication strategy according to regions and specific situations. The PEU will address this issue during the relevant presentations.

2. Laboratory support for diagnosis and surveillance

The PEU has agreed with the reference laboratories (Pirbright and CIRAD) that they will provide us with their Standard Operating Procedures (SOP) which will be applied within the three regional laboratories.

Regarding the whole quality assurance approach, the PCU would suggest a STC who with the laboratory specialist will visit the three labs and make concrete proposals for an agenda to be implemented by these regional labs in order to reach international standards.

The monitoring of the last six month sample treatment by the regional labs did not show major problems in term of delays, however, the recent developments in Kenya and Mauritania has to be reconsider as regard to MoUs signed with the Reference labs.

Some PACE member countries have forecasted a budget of US\$ 1000 for the support to national laboratories as recommended by the annual coordination meeting held in June in Arusha.

The incident which arose in the management of the RP alert in Mauritania was properly solved in between the concerned labs and the reference laboratory. A proper serosurveillance on wildlife and cattle is currently undergoing in Mauritania around the place the implicated warthog were killed. We should keep in mind that sera coming from hunted and gun-shooted

animal could show abnormal reactions. As a result a boarder harmonisation meeting has been planned by the PCU to come up a detailed action plan for Mauritania to be able to recover her status of country free from the disease (RP)

As the first stage of emergency plans to face unavoidable circumstances, an agreement was find in between PACE and the worldwide and FAO reference laboratories (Pirbright and CIRAD) they would proceed with the sera if the delay fixed in our MOU with the regional labs cannot be respected.

3. Wildlife

PCU has extended the contracts for the two wildlife epidemiologists in order to sustain the critical wildlife surveillance programme in countries where Rinderpest exists or is suspected and in countries following the OIE Pathway for declaration of freedom from diseases. The signature of this contract has been finally concluded despite the delays due to the fact that the CIRAD-EMVT did not provided EC leading delegation with the proper documents in time. PCU has decided to concentrate the human resources of the wildlife team in Nairobi office in order to have a significant task force which could be deployed on the hot spots on request and to revisit the wildlife component strategy in the face of the new development.

4. Contagious Bovine Pleuro-pneumonia

The PEU has finalized the strategies for the CBPP control for all PACE countries. This document will be endorsed by the PACE countries and other stakeholders on a planned workshop in Bamako in late October. The recommendations and plan of action coming out during this workshop will be presented at the CBPP meeting to be held at the FAO headquarter in November.

The 1st year report of the PACE CBPP research has been prepared by the world reference laboratory for CBPP and approved by the PCU

A strategy document for the control of CBPP is still under preparation. It will take into account the national control strategies of PACE national programme received so far. This will be presented and validated during a workshop planned in December 2003 in Guinea.

An alternative strategy to control CBPP by using antibiotics has been prepared by Ethiopia, Mali and Côte-d'Ivoire as a result of the follow up of the recommendations of the CBPP workshop held in Accra in January 2003.

5. Export Zones

As requested by the last ACM, the consultants selected in consultation with the OIE have started their mission and will present their aide-memoire in early October during a seminar which is going to be attended by the representative of East African PACE countries, some others coming from Central and Western Africa, and selected regional economic bodies in West, Central and Eastern Africa.

This consultation should be considered as the first step of a more ambitious programme where interested international bodies could be associated under the leadership of AU-IBAR.

6. PANVAC

The Headquarters Agreement (MOU) in between the Federal Democratic Republic of Ethiopia and AU was signed during the Conference of Ministers of Agriculture of the AU States held in Maputo this early July. This Agreement transfers the responsibilities of the PANVAC to AU.

A mission of the PCU was undertaken to meet the Authorities in charge of the Rural Economy and Agriculture in order to investigate the needs for the re-opening of PANVAC. As a result, the PCU has drawn a MoU in order to resume the activities at PANVAC under the PACE Technical Assistance contract.

7. Communications Unit

PCU has requested the CU to concentrate on the finalisation of the Website, on the publication of the PACE Profile and the production of a leaflet 'PACE for what?'

The website is temporarily hosted by the consultant company in order to get comments and remarks on its design. This phase will be over at the end of September and two STC will be committed to:

- Prepare and edit the country pages,
- Finalize the website and use this STC to train our webmaster.

Proper translation will be done in order to put on line a full bilingual site. PCU wishes strongly recommend an effort could be made in order to provide the different documents published in both language English and French. We got a huge complaint from the francophone countries getting most of the technical documents in English.

Institutional communication will be strengthened using these new outputs.

As regards the assistance to the curriculum of veterinary schools, PCU and CU have planned a meeting with the Deans of the African veterinary schools in order to brainstorm and introduce inside the curriculum:

- the paradigm of the evolution and adaptation of the veterinary profession in order to challenge the new environment (privatization, modernisation of the public veterinary services)
- The epidemio-surveillance concept.

8. Environnent

According to the recommendations of the ACM, new environmental studies are no more supported. Abattoir impact studies will be carried out at the discretion of the national services (Chad and Burkina Faso) the studies on the relationship and interaction with domestic cattle, of the wildlife as an integral part in maintaining and identifying the remaining foci of RP infection in the Somali-Kenya ecosystem are going on under the supervision of the wildlife expert.

Managerial tasks:

9. Logistics and Staff Evaluation

On these two specific issues, PCU has prepared two dossiers which are followed up jointly with the Director of AU-IBAR;

- Improvement of the Internet access: Independent Internet access is investigated allowing PACE HQ to be equipped with its own direct access to the satellite via an

AU-IBAR's dish. As far as the communications in Kenya are still the monopoly of the State, AU-IBAR has applied for derogation to the monopoly due its diplomatic mission privileges. The green light is expected from the GOK. Bamako regional office has already upgraded its link with the main server.

- Staff appraisal: from various meeting in between AU-IBAR/PCU/EC leading delegation it was agreed that a joint-evaluation team (AU HQ human resource officer and EC's one) will perform the appraisal of the PACE professional and support staff.

10. Extension of the PACE Programme

In line with the Mid Term Review (MTR) Report regarding the extension of the PACE Programme and with the recommendation of the ACM, PCU has prepared the TOR for two consultants in order to design a financial and technical extension phase of the programme. The TOR have been forwarded to the leading delegation for comments and endorsement in order to be able to have a draft report available for the next ACM which is going to be held in Bamako early November.

11. Addendum to the current financial agreement

Despite drastic savings done on the last WP for the common service, the PCU is constrained to have recourse of using contingencies of the current FA in order to cover the expenditures planned on the WP4. A proposal is under negotiation with the leading delegation and EC HQ.

12. PCU and Common Services Work plan

A first set of tables allowing monitoring more closely the activities and outputs of the different units is currently used by the PCU. PCU is investigating the tool offered by the company Tom@te which has developed at the request of the main donor agencies a full set of managerial software which is covering:

- Financial and accounting management fields through an integrated software called **TOMPRO** organised in independent modules, which could be programmed in order to fit with the aims of the programme. It has the following budget monitoring modules:
 - Analytical accounting
 - Financial agreement monitoring
 - Investment monitoring
 - Cash financing monitoring
 - Tender monitoring
 - Stock monitoring
 - Human resource monitoring
 - Vehicle fleet monitoring

It has multi-site, multi-annual, multi-currency capacities and a module allowing consolidation of multi site data, consolidated or individual site data could be downloaded to OLAS. A specific module allowed the production of routine weekly, monthly quarterly and annual financial, budget and cash flow reports.

- Monitoring evaluation and planning software called **TECPRO**. This module could be programmed to monitor the technical and financial OVI, the plan of activities at the

week level. The different data files could be exported to the major software (Word, Excel...) the different pages make the data entry easier and more efficient. It has the report edition facilities. All the monitoring data tables could be aggregated at the level defined by the user. (Field action data, regional, national, regional office.) Sub-routines could compare directly the planned activities and the outputs in term of finance, techniques and timeframe.

- Other software units are also available dealing more specifically with the management of the salary of the staff (**TOMPAIE**) and the day to day management of the bids and tenders (**TOMMARCHE**) the last one could be programmed according to the specific need of the donor.

As far as the PCU is concern, he wishes to get support from the ACM, the RAO and the leading delegation to investigate more deeply on these tools and if the first appraisal is confirmed start to install at least TOMPRO and TECPRO on the leading countries and at the PCU level.

13. VLPU and CAPE

Despite the strong warning given to the 2 sub-units leaders the situation is not improved. Unfair and childish behaviour and lousy tricks are still exchanged in between them. The PCU will recommend a very clear separation of the field of activities of CAPE:

- Promotion of CAHW's in the remote area of the HoA.
- CAPE should provide the proper tools for supporting, and controlling the CAHW's.
- PCU would appreciate some cost analysis of this support and control.
- CAPE under PACE should focus on the sustainability of the CAHW's.

VLPU will continue to support to PACE member countries at institutional level in the field of legislation, privatisation of veterinary activities and modernisation of veterinary profession in compliance with OIE standards. As it was suggested the extension of the contract of the VLPU expert should be linked with the recruitment under the same TA contract of an African counterpart more specialized on legislation, regulations and international trade legal aspects.

14. Data Management Unit

PID is now installed in at least 17 PACE member Countries and is fully functional. PACE is reported FAO is still through TCP trying to install its own software TADINFO in the PACE member countries. This appears as an unfair, destabilising and cost ineffective duplication of tools. FAO should carefully consider the facts that PID, written under the last generation of relational database developer software package, is able to accept importation of data from TADINFO, is more flexible and as a wider field coverage and is the official AU-IBAR data management tool.

A data management assistant has been recruited in order to support the head of unit.

15. TOR and contract management of the new team of TA's

PCU is deeply involved in the coordination of the new team of national and regional TA's provided under GTZ service contract. PCU has regular contact with the management unit in GTZ. PCU have also negotiated the TOR and the secondment of a regional epidemiologist based in Bamako provided by the French Ministry of Foreign Affairs.

16. Coordination of various coming meetings

PCU has suggested that in order to reinforce AU-IBAR /PACE visibility at the new AU HQ team level, the coming two meetings should be held using the facilities and under the patronage of AU:

- PACE workshop on the sustaining national epidemio-surveillance systems plan to be held in December 2003 with the concerned NAO
- Veterinary school dean meeting, which will be held in January 2004.

17. PACE assistance in the development of an Action Plan for IBAR

PACE team as the spinal chord of AU-IBAR is of course deeply involved in the development of the four years action plan for IBAR requested by AU-HQ. It could only be unfortunate that on the different preparatory brainstorming of this action plan, the very complete and comprehensive document of IBAR strategy and vision prepared one year ago was not taken fully into consideration. Somewhere the IBAR's four years action plan has lost some strength along the 5 NEPAD's pillars.

18. Situation of the Emergency Fund and the OIE Regional Representation for Africa

Despite the effort of the PACE team to get the requirement of the procedures to access this 500 000 € of the Emergency Fund within OIE, only Tanzania is eligible to this Fund. According to the current new situation in the Somali ecosystem, it would be shame to be unable to use this fund as far as the concerned countries have been enabling to prepare correctly their Emergency plan.

The OIE Regional Representation is facing an imbroglio which seemed very difficult or impossible to be solved. The responsibility of the management of the project has been transferred to the deconcentrated EC Delegation in Bamako. Upon request, OIE has provided an account in Paris. Despite many exchanges it appears that the Delegation in Bamako is unable to proceed with the payment of the advance on WP3.



PACE COORDINATION UNIT

Technical and budgetary monitoring of PACE Countries

8th ACM – Bamako

November 2003

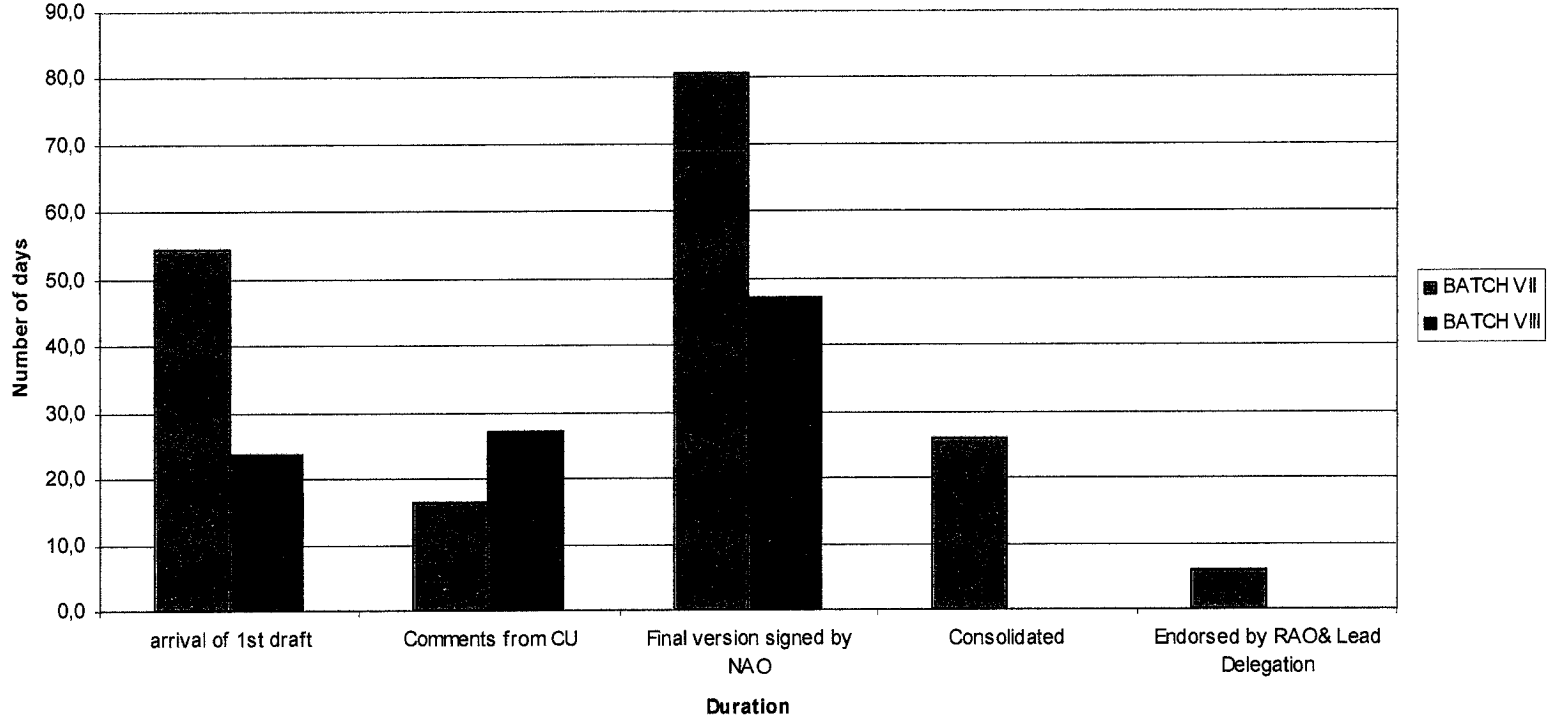
1. Country Work plans

After the PCU mission to Chad related with the misappropriation of funds, the MTA was in charge of the technical audit of PACE Chad and coordination of the financial and administrative audits. Both stakeholders agreed on the proposal done by the MTA and strongly supported by the local EC Delegation.

Following the recommendation of the AC for speeding up the process of consolidation of country work plans, the PCU and Common Services have made special efforts to promote information exchange and regular dialogue and provide appropriate advice to assist countries in preparing proper work plans. The comparative tables of the 2 last batches of consolidated WP are illustrating the progress done. (see graph above)

From the first data, it appears that the proper submission of the request on time and the reminder sent 18 days later have considerably enhance the speed of transmission of the first draft (35 vs. 54 days) It means that the PCU and the CU will have more time to comment and exchange with the countries. Short notice (16.5 days) was allocated on batch VII for comments and at least only one exchange was practically performed. With good dossiers, we could expect a shorter delay to get respectively the approval and the endorsement of the NAO and the national EC delegation. Hopefully the PCU will have less pressure to perform the consolidation within more or less the same time (26 days) at the end at least 4 weeks could be saved.

Consolidation of WP & CE



Nota: In the current graph, at this stage, data are only available for the three first set of data

2. Analysis of monitoring reports

Awaiting a proper monitoring system agreed by all the stakeholders, MTA and PCU has carried out analysis of the progress done by the countries based on:

- the analysis of the BTOR from the PCU, CU and TA's from the various partners involved in PACE,
- The analysis of the country reports,
- The EC internal monitoring systems, up to September 2003, 17 monitoring analyses are available (analyses of these data are shown in the following graphs)

a. Relevance and quality of design

29% of the countries have a very relevant and very good quality of design, meaning the coordination and the Authorities have understood and internalised the concept supported by PACE. 42% have a rather good relevance and design is quite good. The five remaining countries (29 %) are badly designed and most of the time the coordination are trying to come back to PARC Nr X...

b. Efficiency of implementation

This criteria shows the same profile as the former one. The better design and the better understanding of the concept the programme will get the more efficient the implementation will be.

c. Effectiveness to date

A quarter of the countries show a good effectiveness in the implementation of the programme at the date of the monitoring. 60 % have a reasonable implementation of the programme; the remaining countries are ineffective or even completely substandard performing. For this last group, if the situation is remaining at this low standard, action and decision need to be taken, in order to save fund.

d. Impact to date

Like efficiency and relevance, the impact is directly related to the effectiveness and is showing the same profile as it.

e. Sustainability

At the date, 35% of the countries are able to sustain the programme after the external funding. 47% show good probability of doing so. 18% for different reasons will have a huge difficulty to be able to take over the external funding (CAR due to political troubles, Equatorial Guinea where livestock is playing a marginal role, Cameroon is in a more incomprehensible situation, misunderstanding of the programme aims and of EC implementation regulations are the main obstacle to a proper implementation of PACE)

f. Partial synthesis

From these different sources it could be stated that countries could be split in three groups:

- *The first group: (38 %)* these countries have well internalised the PACE concept and the current outputs associated with the effort made by the government to fulfil his obligations are quite encouraging. This batch of countries should be used as example for the other and local expertise could be more appealed to widespread their experiences.

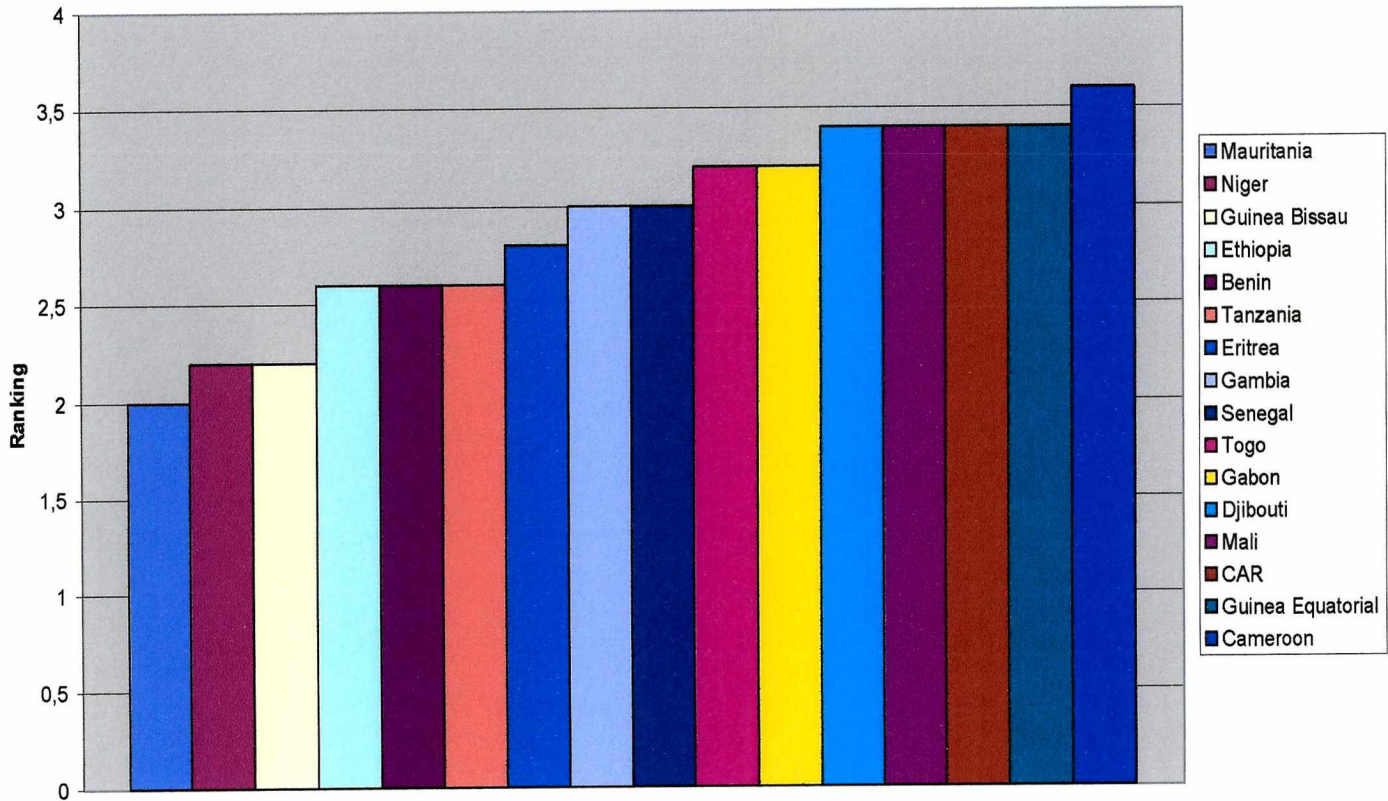
- *The second group: (32%)* These countries represent the main group. PACE implementation has already started but the team are encountering some bottlenecks (improper financial procedures, incomplete knowledge of EC rules, insufficient appropriation of PACE concepts, inappropriate human resources...) which are reducing the impact of the programme. PCU and CU must concentrate their efforts to have a proper and updated situation of each of these countries and with all the stakeholders try to clear the difficulties.

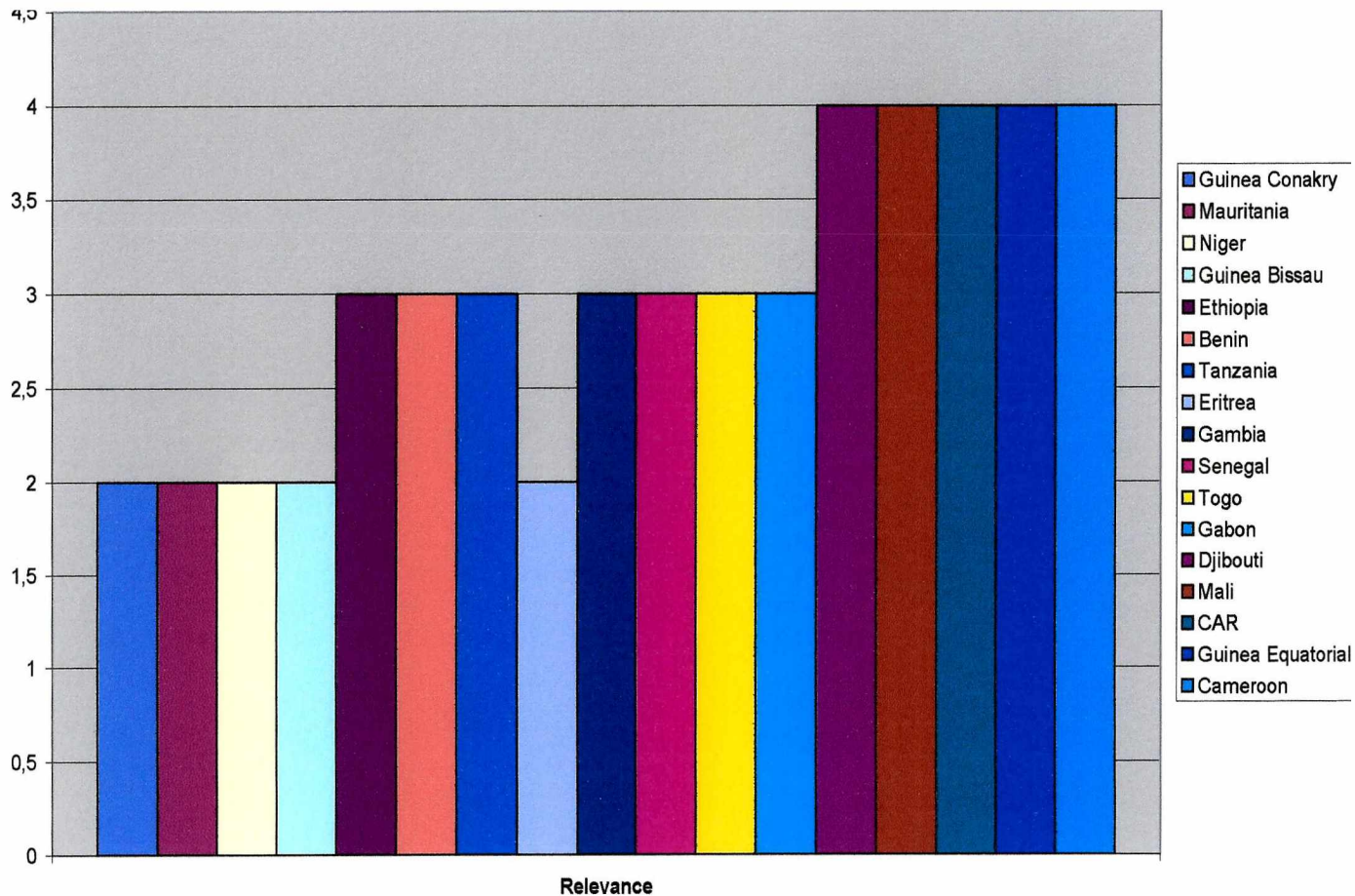
These two first groups represent 70 % of the countries. This percentage should be considered has a good one according to the Pan African mandate of PACE.

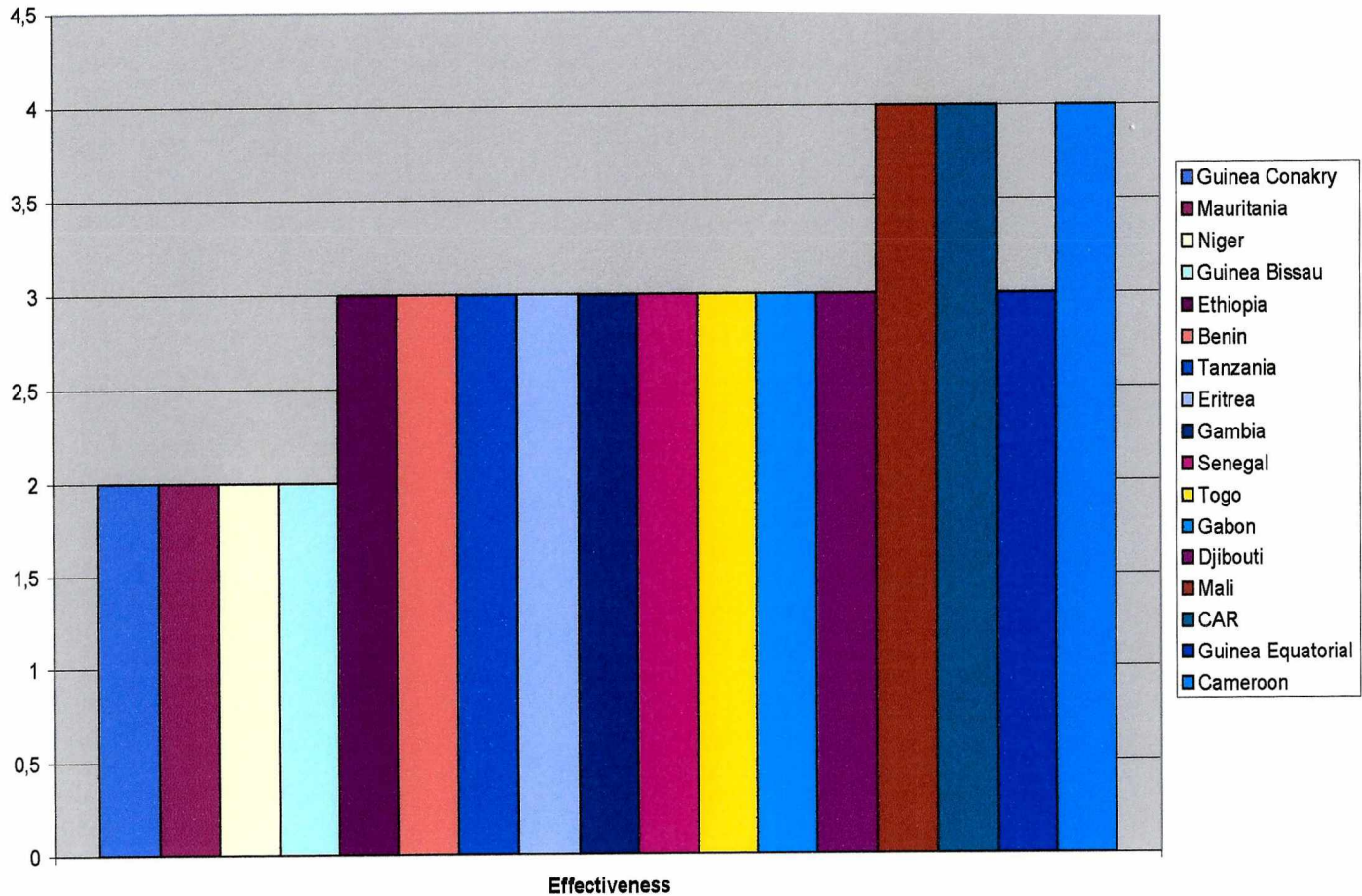
- *The third group: (30%)* these few countries have not yet started the implementation of the programme or if they have started it they have done it on an unacceptable improper manner. In the PCU's view it could be considered two sub-groups in this last group:
 - The countries where livestock are representing a trivial economic sector. The different indicators are showing the sustainability of the programme has no chance to be secured. In this particular case, decision must be made to stop the programme (Guinea Equatorial, Gabon).
 - The countries where livestock is a major sector for the country or for the neighbouring countries. In this case PCU supported by AU-IBAR and by the leading and local EC Delegations must take the proper political action to obtain the immediate starting of the programme. They must obtain the replacement of the weak national coordination team (Cameroon, Nigeria).

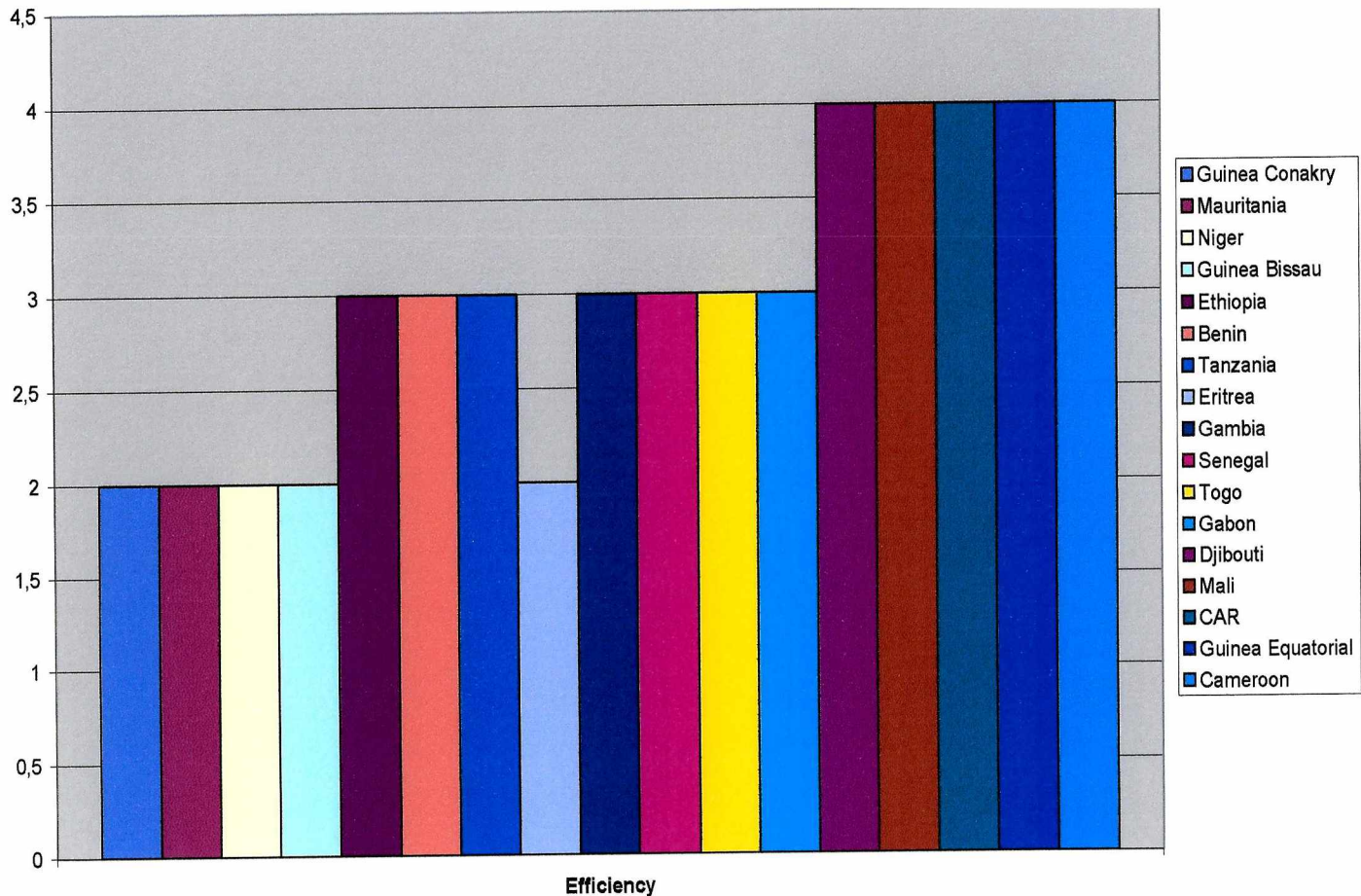
This first rough analysis must be confirmed, reinforced and sharpened by a longitudinal monitoring.

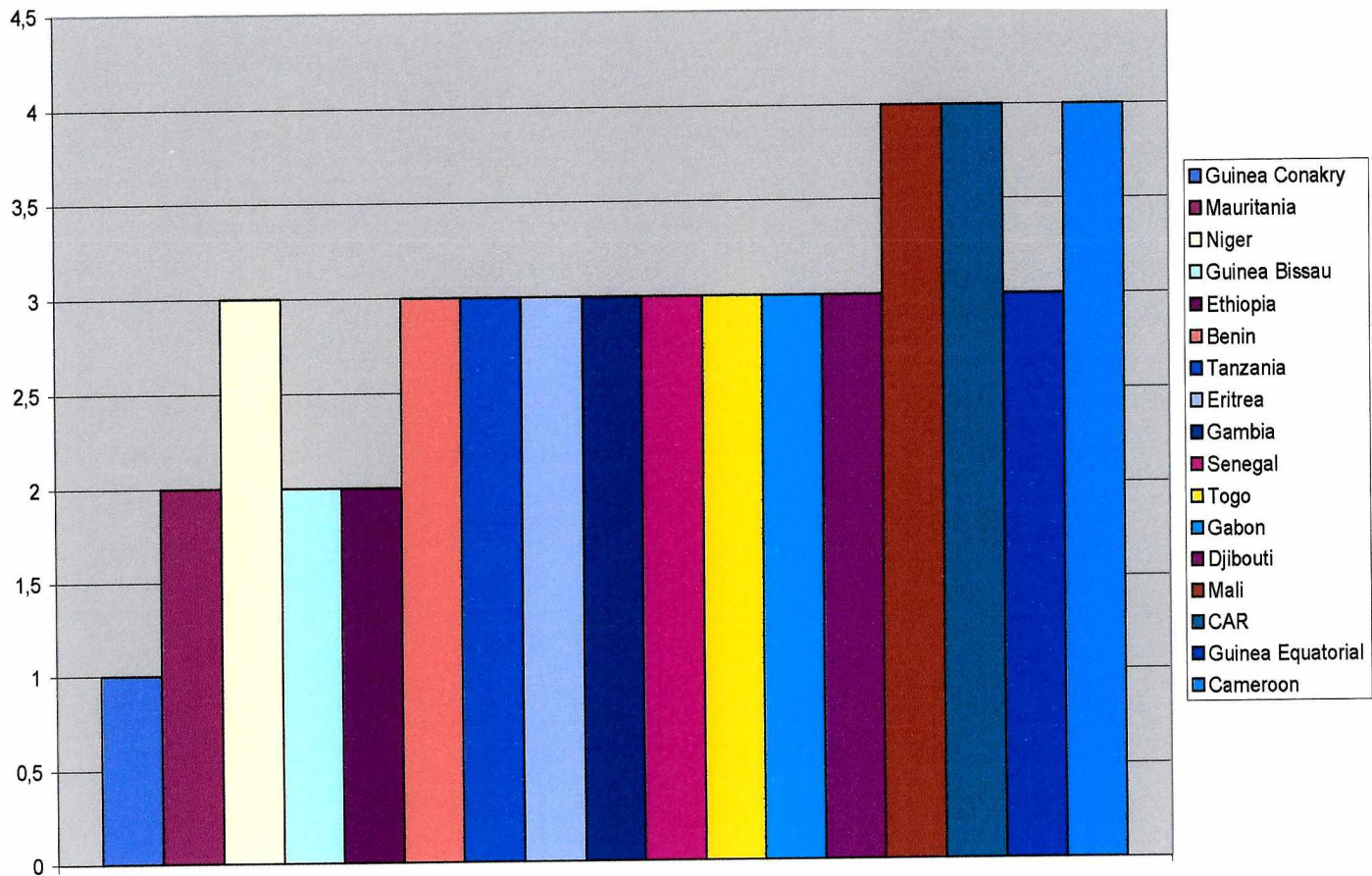
MONITORING ANALYSIS

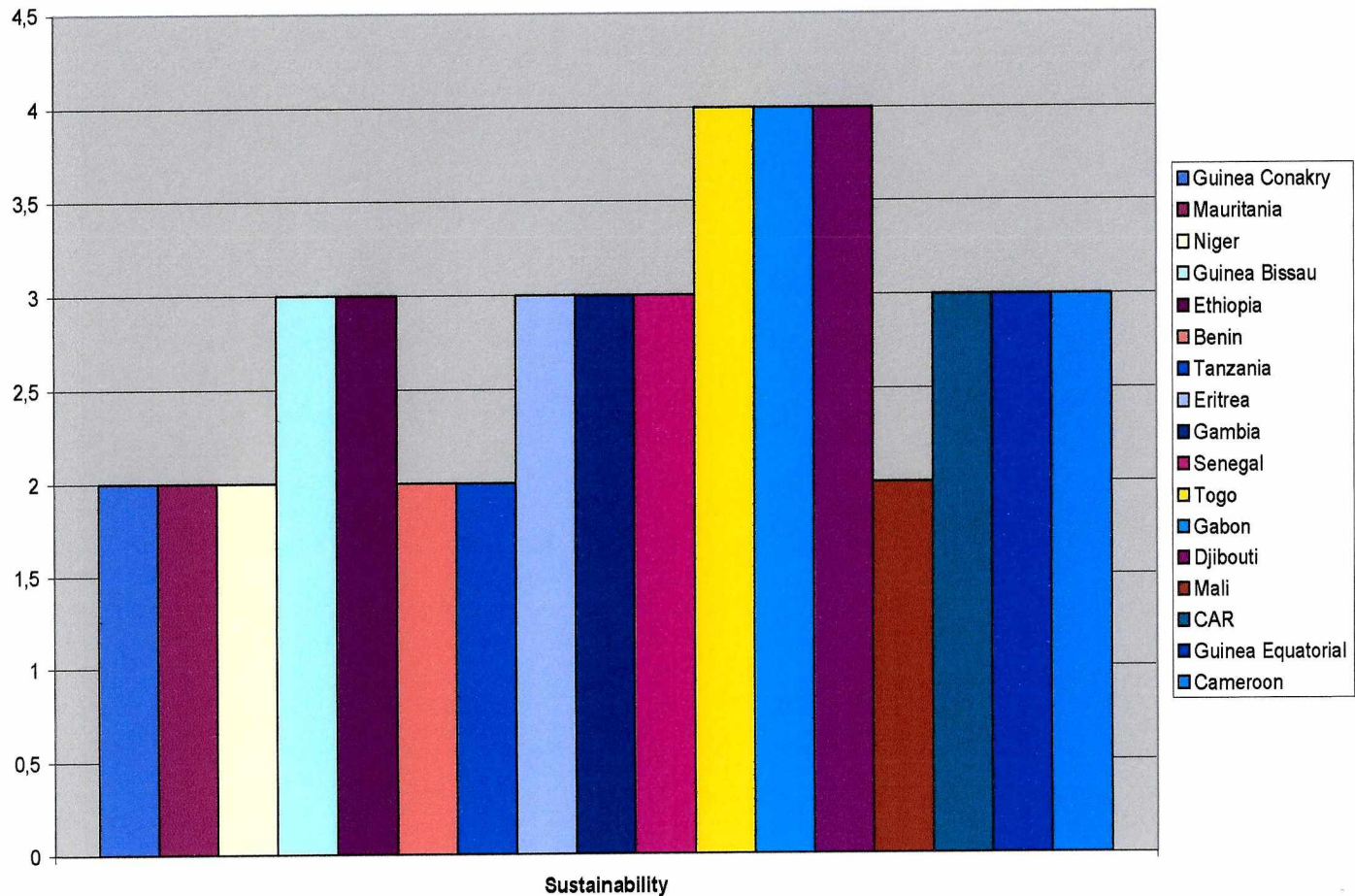










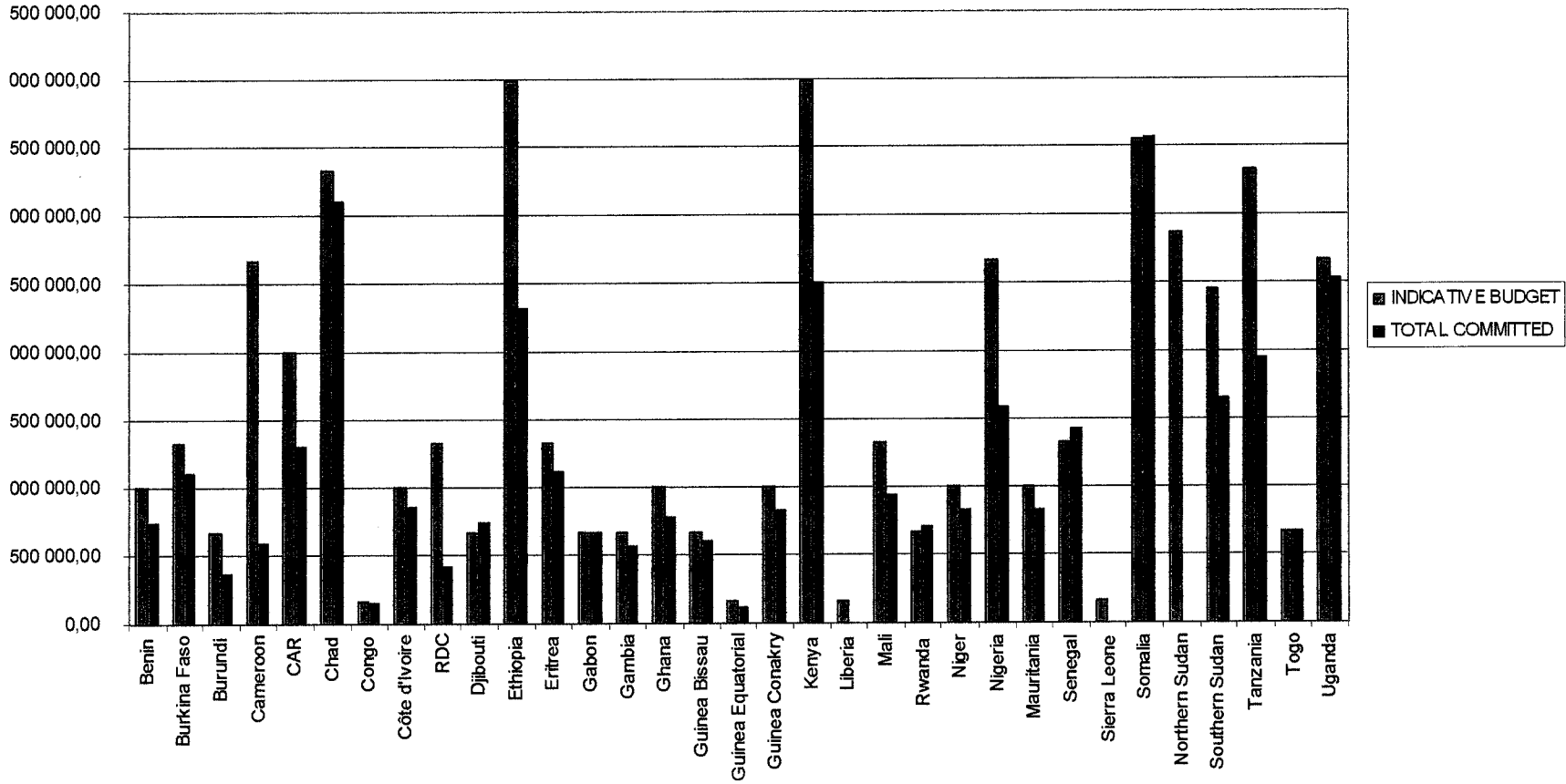


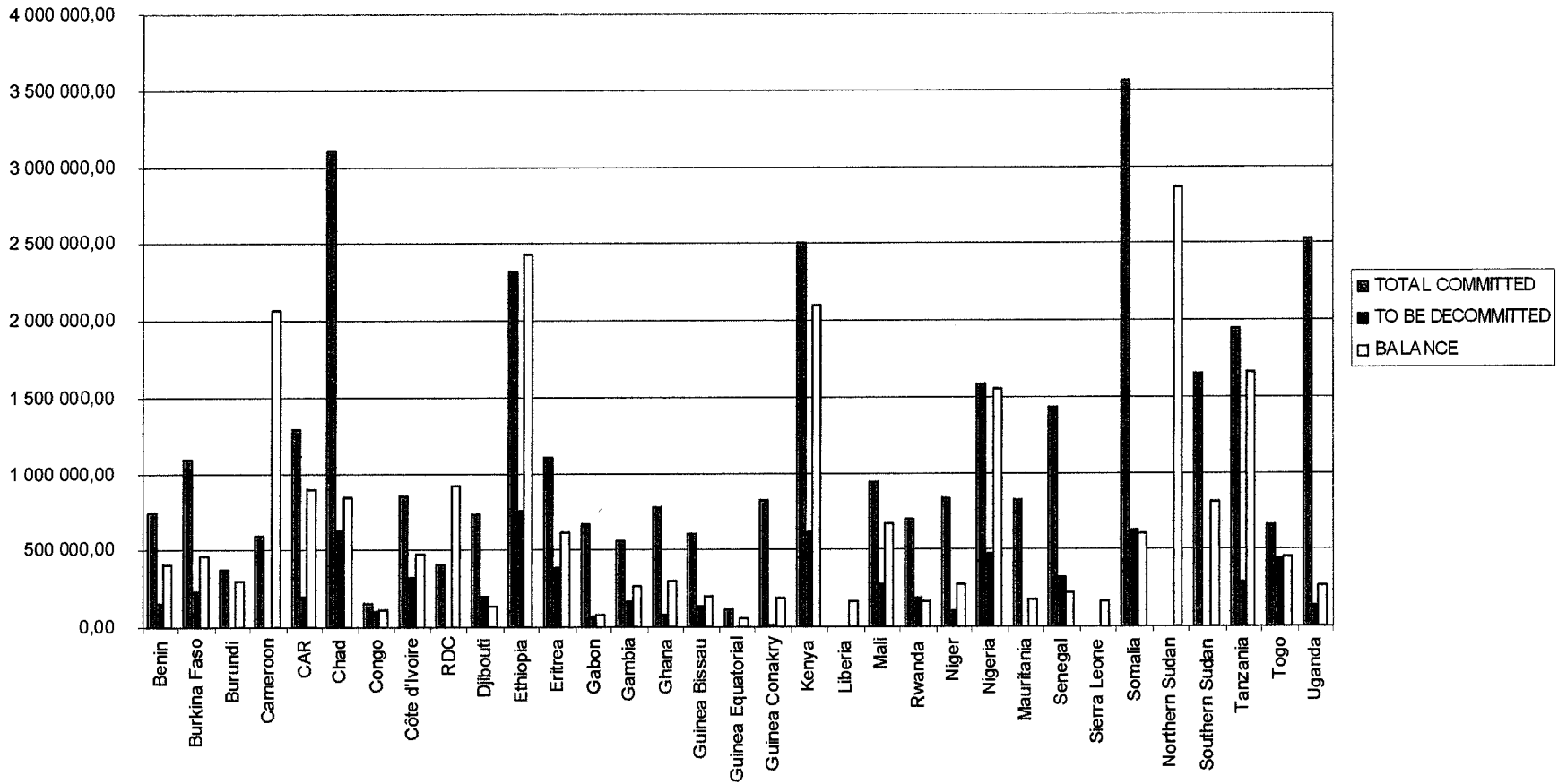
3. Budgetary analysis

COUNTRIES	INDICATIVE BUDGET	TOTAL COMMITTED	TO BE DECOMMITTED	BALANCE	Nr OF WP EXECUTED
Benin	997 000,00	743 104,59	154 741,04	408 636,45	3
Burkina Faso	1 329 310,00	1 097 698,85	226 495,06	458 106,21	3
Burundi	664 655,00	368 000,00		296 655,00	1
Cameroon	2 658 620,00	593 000,00		2 065 620,00	1
CAR	1 993 970,00	1 295 000,00	197 180,40	896 150,40	3
Chad	3 323 280,00	3 105 000,00	625 701,28	843 981,28	3
Congo	166 170,00	151 900,00	99 928,96	114 198,96	2
Côte d'Ivoire	996 985,00	851 000,00	321 090,28	467 075,28	2
RDC	1 329 310,00	407 567,00		921 743,00	1
Djibouti	664 660,00	736 471,23	199 003,42	127 192,19	3
Ethiopia	3 987 935,00	2 315 323,97	748 693,62	2 421 304,65	3
Eritrea	1 329 310,00	1 107 000,00	387 651,00	609 961,00	3
Gabon	664 660,00	663 000,00	70 145,17	71 805,17	3
Gambia	664 660,00	561 000,00	161 726,47	265 386,47	2
Ghana	996 890,00	775 644,04	72 187,13	293 433,09	3
Guinea Bissau	664 655,00	602 000,00	133 969,21	196 624,21	3
Guinea Equatorial	166 165,00	114 000,00		52 165,00	1
Guinea Conakry	996 990,00	819 141,00	10 951,07	188 800,07	3
Kenya	3 987 935,00	2 498 000,00	611 266,54	2 101 201,54	2
Liberia	166 165,00			166 165,00	0
Mali	1 329 310,00	934 945,00	272 623,81	666 988,81	2
Rwanda	664 655,00	695 521,00	189 943,00	159 077,00	2
Niger	996 985,00	825 977,98	102 448,70	273 455,72	3
Nigeria	2 658 620,00	1 584 000,00	471 836,00	1 546 456,00	2
Mauritania	996 985,00	824 525,49		172 459,51	3
Senegal	1 329 310,00	1 430 818,00	315 133,75	213 625,75	3
Sierra Leone	166 165,00			166 165,00	0
Somalia	3 544 830,00	3 567 413,00	624 500,00	601 917,00	3
Northern Sudan	2 862 245,00			2 862 245,00	0
Southern Sudan	2 455 000,00	1 650 000,00		805 000,00	2
Tanzania	3 323 285,00	1 945 362,66	281 399,09	1 659 321,43	2
Togo	664 655,00	659 100,00	438 912,75	444 467,75	2
Uganda	2 658 630,00	2 526 748,00	129 412,72	261 294,72	3
Special fund	2 000 000,00	500 000,00		1 500 000,00	
					2,40
Total	53 400 000,00	35 948 261,81	6 846 940,47	24 298 678,66	

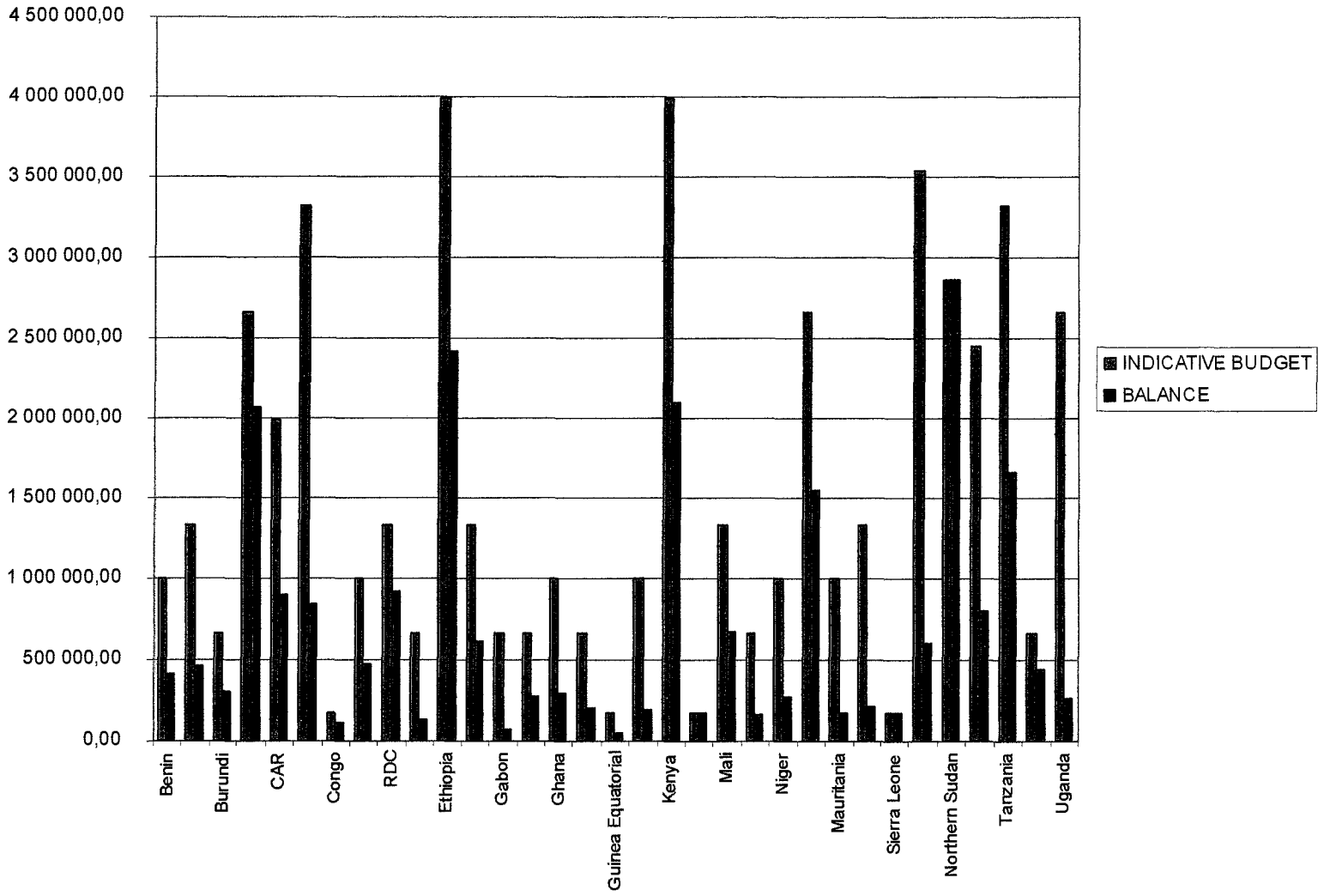
The above table is resuming the situation at the date of the different budgets of the PACE countries. The average implementation period is 2.4 Work plans. From the data available it appears that most of the countries have over-budgeted their WP and there are now constrained to decommit huge amount of budget (10%) through quite complicated procedure.

The following graph shows that some countries have committed almost or even over their indicative budget.

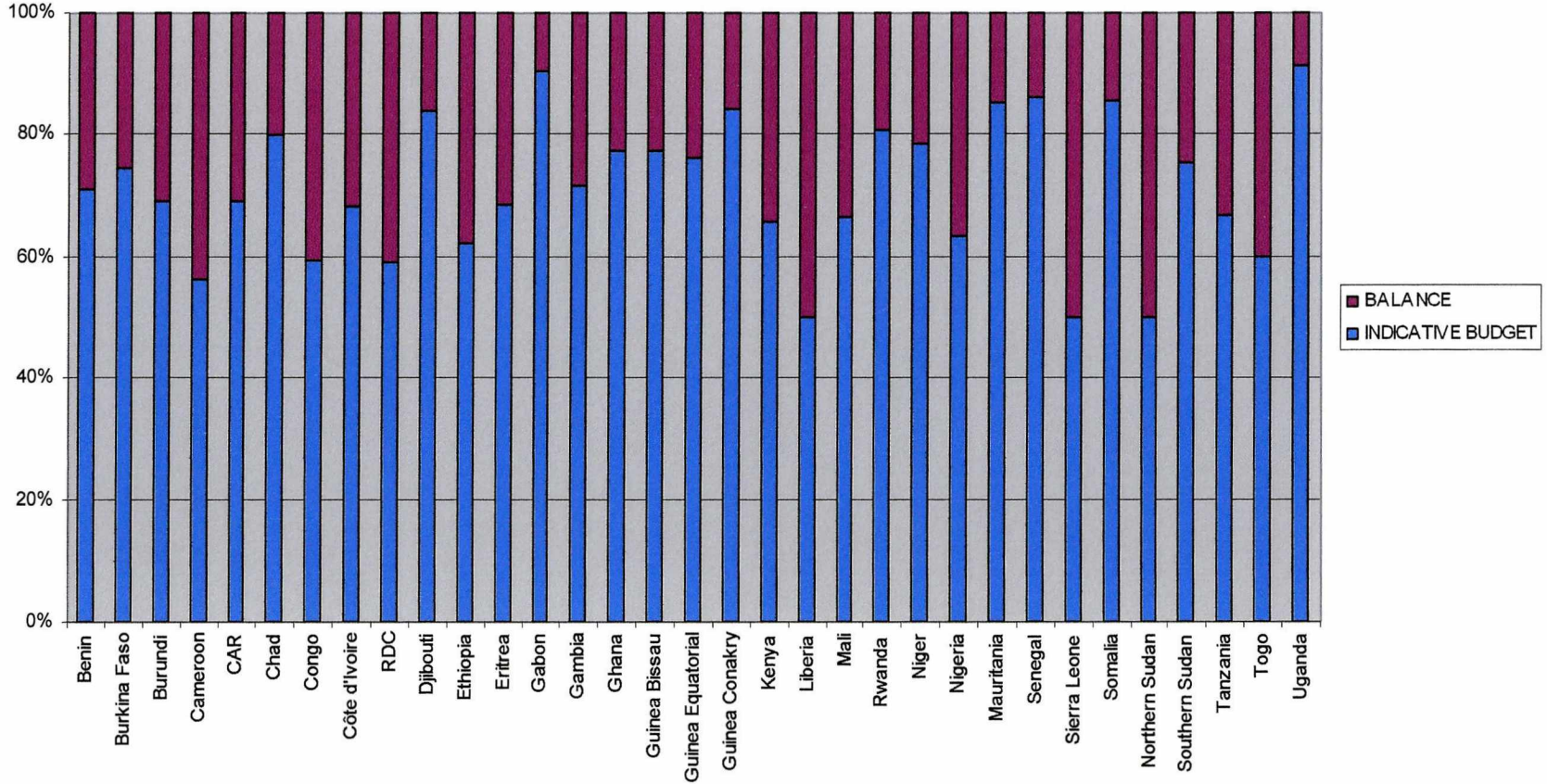


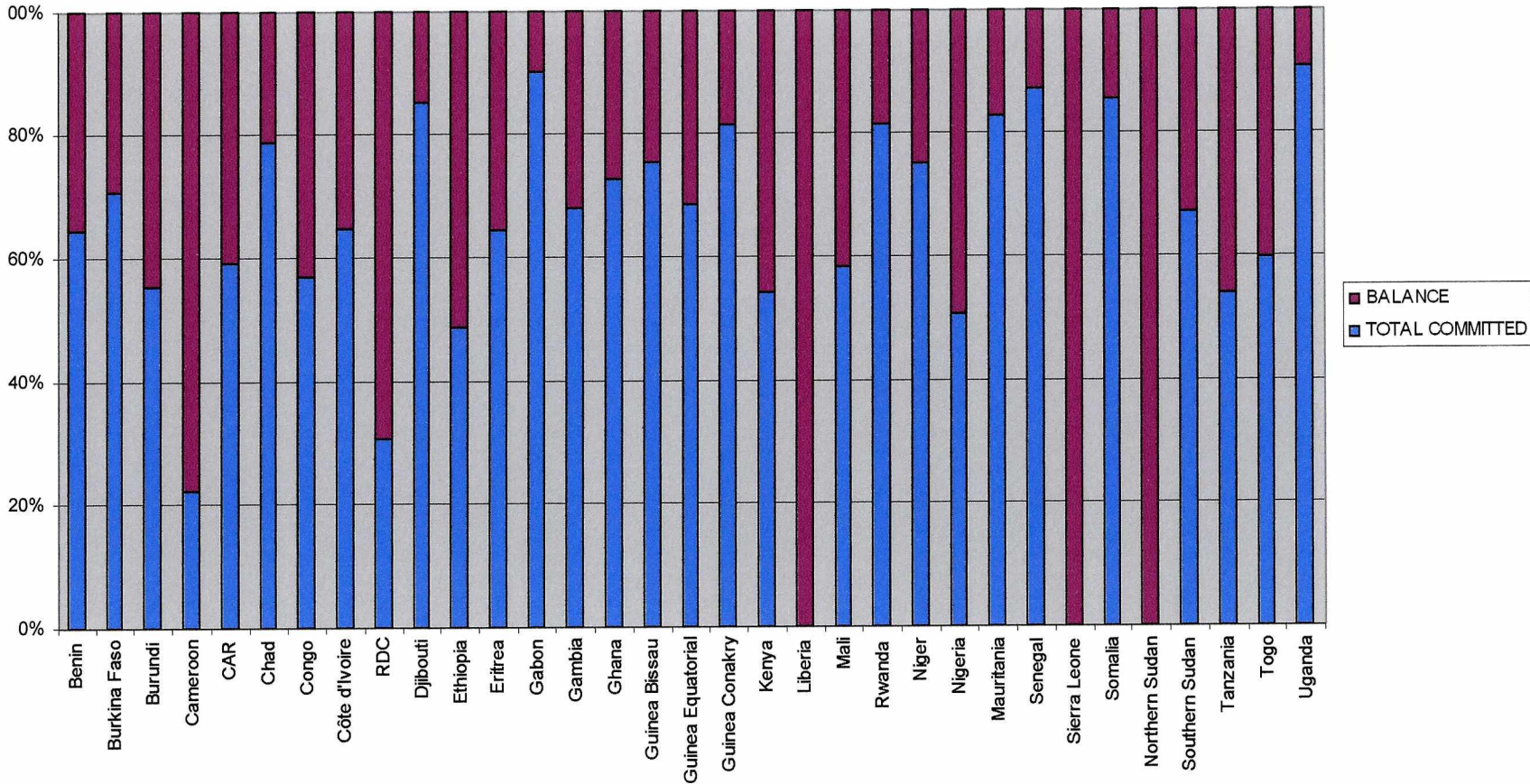


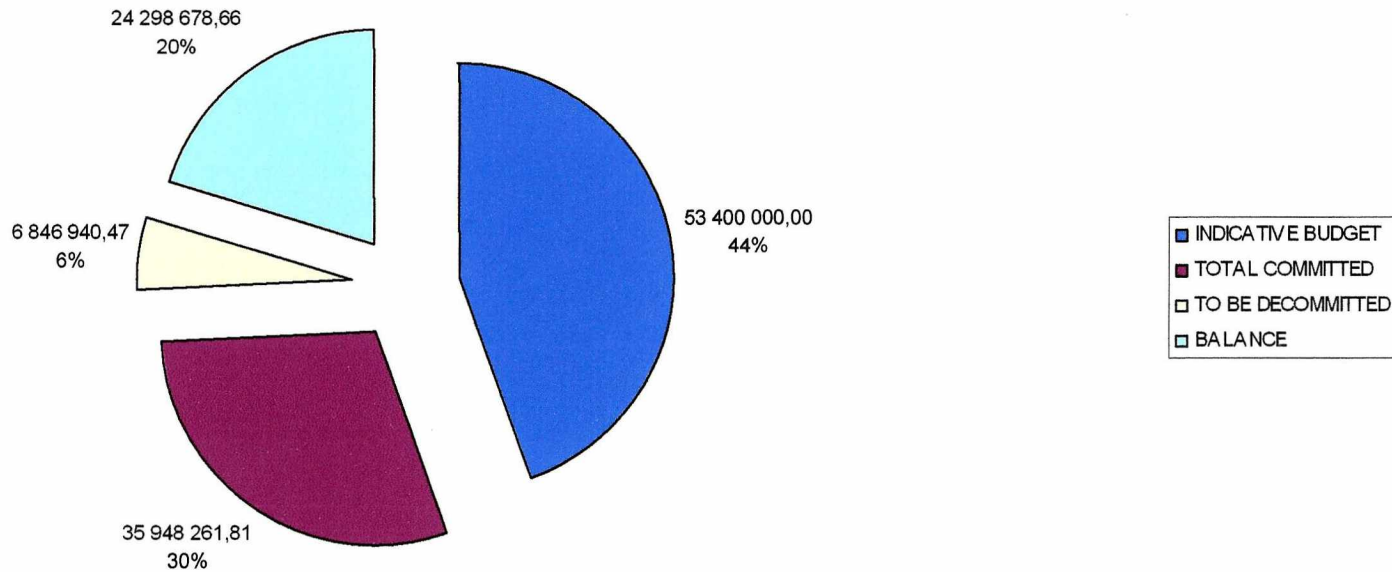
The above graph is showing the level of activities of the different countries and the necessity to decommit the unexpended funds from the previous WP.



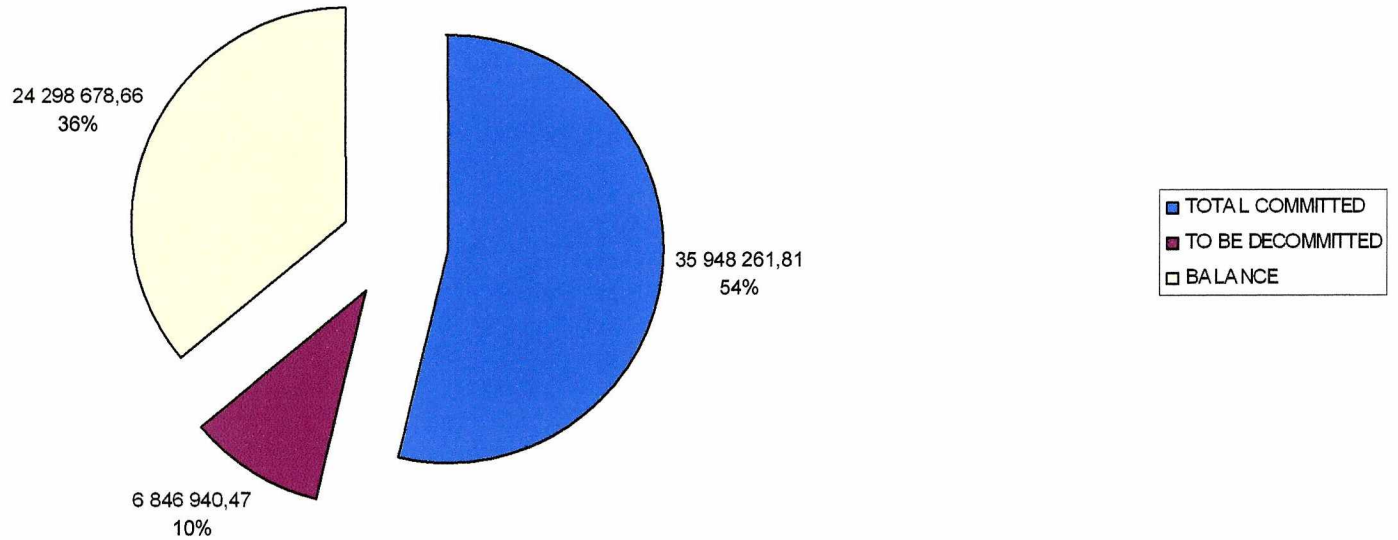
The graph shows the level of real expenditure level to the indicative budget and the remaining balance. It appears that the extension of the programme could be done at no cost for the countries if an efficient budget driving system is implemented. The following graph presents the same data on a percentage scale.







pie graph is showing the proportion of the different budget masses compared to the indicative budget. The analysis done on the country level base nfirmmed through this consolidated set of data



For an average of 2 years and a half of activity at the country level a little bit more than 50% of the gross budget has been committed which means almost the same amount of the EDF fund is still available for enabling the countries which have already implemented 3 WP to complete a five year cycle easily.

Budgetary monitoring was enabling to consider the contribution of the national budget to the running costs of the epidemio-surveillance networks.

4. Conclusion

This monitoring analysis exercise has to be considered has an on-going one as far as the complete frame of monitoring is not yet completely settled.

The first rough trends are showing that a significant percentage (at least $\frac{3}{4}$) of the countries are performing above the minimum required and are showing a very good chance of establishing a sustainable modern veterinary service.

The budgetary analysis is confirming the trend reported by the MTR that an extension of the programme could be done with the remaining fund as far as these extra budgets will be carefully framed.

Each country performing reasonably will be offered to complete a five year complete cycle of programme.

The fund for extending the common and coordination services need to be found among the different cooperation partners.



PACE COORDINATION UNIT

Veterinary School deans meeting Concept note

8th ACM – Bamako

November 2003

Preamble

The main goal of this concept note is to provide the different stakeholders involved in the training of the veterinarians with a common understanding of the analysis carried out of the experience acquired during the last 18 years under PARC and PACE programmes under AU-IBAR umbrella. This working note will be the support of the seminar which is going to be organized within AU Headquarters in Addis Ababa under the patronage of the REA Commissioner. This seminar is planned to be held in January 2004. The Deans of the main African veterinary schools and resource persons will attend this meeting.

Background

The pan African Programme for the control of Epizootics (PACE), is a programme funded by the European Commission(EC), that aims at strengthening and establishing sustainable animal disease surveillance in sub- Saharan Africa. The programme covers 32 Sub-Saharan countries and is coordinated by the African Union/ Inter African Bureau for Animal Resources (AU/IBAR). The European Commission has been supporting the African –wide fight against Rinderpest, through the Pan –African Rinderpest Campaign (PARC). This project has had considerable success and the disease now appears to be restricted to the Somali ecosystem, The PARC project ended on the 31st October 1999, after thirteen years of successful implementation. The European Commission and African Union have developed a new programme PACE, to build on the achievements of PARC with a different conceptual approach.

The main objectives of the PACE programme are:

To enhance national capacities for disease surveillance,

To improve veterinary/ animal health services,

To consolidate the fight against Rinderpest

To enhance the control of epizootics.

In order to address the problem of Rinderpest, other epizootics and modernization of the veterinary services, PACE through its common services provision , is presently tackling issues related to Epidemiology, Legislation and Privatization, Communications, Economics, Data management, Community-based animal health and participatory epidemiology.

One important issue that PACE wishes to urgently address is the issue of sustainability of activities at the end of the five-year programme. PACE is supporting the privatization policy of the delivering of the animal health services. The experience acquired during PARC has highlighted some constraints in the field of human resource availability. The ‘privatization exercise is deeply part of the reorganisation of the veterinary services. This reform induced a complete reallocation of human resources in between the public and private sector. The public sector is requested to focus more on the regalian role of the State (legislation, regulations, and strategical plan of actions...) when the private practitioners are more devoted to the field work and in closer contact with their clients, the livestock owners. As much as the Continent will be lagging behind the international standards, as much the private practitioners must be present at the field level. This will require a new ‘veterinarian’ profile and the veterinary schools could play some role in bringing up to date the field veterinarian practitioner needed.

Under the capacity building initiatives of PACE, there is a need for two types of training:

- Refreshing and continuous training for the current public and private veterinary practitioners.

- Ab-initio training for the veterinary students taking into account in their curricula these new professional needs.

Potential fields of cooperation in between Veterinary Colleges and AU-IBAR PACE

The PACE programme document (Volume III Annex 13) proposed the communication unit will be in charge of this subject.

THE Communication Unit facilitates guest-colleges at selected veterinary schools to introduce up-to-date and innovative approaches in the existing curricula through: the identification of needs, formulation of pedagogic training package(s), identification of fielding of international and local 'guest' lecturers with administrative and pedagogic follow-up. Training materials are produced and distributed.

They introduce concepts going beyond traditional curricula and tailored to new emerging situations. Those inputs will be based on reports from national and regional research institutes, requests by the veterinary school themselves and missions by experts. Veterinary students are equipped with e.g. communication skills.

Core inputs, through local and international lecturers, will deal with involvement of and communication with the population and especially traditional cattle owners, management of livestock profession, report and exchange of information, newly discovered progressive remedies, latest innovations regarding the major cattle diseases in Africa, etc.

- *Review existing curricula at Pan African veterinary schools;*
- *Identify training needs of Pan African veterinary schools in communication fields,*
- *Formulate new curricula for Pan African veterinary schools;*
- *Identify and field content-specialists/lecturers;*
- *Determine production plan;*
- *Produce, duplicate and disseminate training packages with materials;*
- *Guest colleges and diploma courses;*
- *Gather feedback on usage of training materials.*

During the implementation of the different Work plan, the communication experts have established regular contacts with the veterinary faculties. These different activities have been supported by the ACM (7th ACM) and the OIE. It is clear nowadays that if this 'communication' approach is highly necessary for the implementation of this important subject; the joined approach Veterinary faculties- AU-IBAR/PACE needs to take into consideration the whole fields of expertise of PACE with more emphasize on epidemio-surveillance, data management, privatization, economics, paraprofessionals and international standards.

Some of the questions to be brainstormed during this seminar could be:

Is AU-IBAR/PACE analysis still relevant? If yes how cooperation could be strengthened?
What could be the role of this cooperation in the new AU-IBAR structure?

Training needs

Training needs could be defined according to the two types described above.

- **Refreshing and continuous training for the public veterinarians**

The main mission of the public services is to develop the proper surveillance, control and plan of action against the animal diseases. This is including, the design of the national sanitary policy but also the proper analysis of the information coming from the field. In term of training it means a strong epidemiology and national, regional and international legislature inputs.

As far as external funding is concerned training in the good practice of donors' procedures could enhance tremendously the performances of the externally funded programmes.

- **Refreshing and continuous training for the private veterinary practitioners.**

As far as these experiences of privatization are quite recent, it is more difficult to define the real training needs. On a global approach it could be considered at least two main issues:

- Bringing up-to-date the practical technical knowledge of the private practitioner in the field of therapy, pharmacology or semeology of diseases,
- Getting a specific training in the way of implementing sanitary mandate

- **Ab-initio training for the veterinary students**

On top of the normal curricula of a veterinary students it will be useful to offer to them practical training in management, accounting and professional marketing in order to be able to manage a practice.

As far as the public services have gone through a drastic budget constriction, the students starting this career need to be fully aware about the advantages but also the constraints of the profession especially those relevant for a field private practitioner working closely with the livestock owners. It is requiring a lot of abnegation, faith and to be full of energy.

EPIDEMIOLOGY UNIT

The status of rinderpest eradication in East Africa, Eradication strategy and the need for marker vaccines.

PEU, Bamako, 4 November 2003

Summary

This paper describes the current status with regards to OIE declarations; it shows that countries that made self-declarations do not consistently apply the OIE Code. In a regional workshop organised by AU/IBAR/PACE countries were made aware of the inconsistencies and came up with a more harmonised approach on how to proceed, which is presented by country. Mild rinderpest has just been detected using participatory disease searching techniques. It seems therefore possible to implement the strategy of “identification, elimination and verification” that was agreed during the mild rinderpest workshop held in 2002. However, for this strategy to work it is important that the countries that share the Somali pastoralist ecosystem are assured of uninterrupted donor support for 8-10 years, flexible project implementation and secured laboratory support. Wildlife surveillance remains an important component in the fight against mild rinderpest. This paper further proposes a change in management structure of PACE Somalia, enabling a wider participation of stakeholders. The need for a marker vaccine is reiterated. It is suggested that use of PPR vaccine (a product available commercially) against rinderpest could be used since the two viruses are genetically and immunologically related. A draft protocol is included.

1. Progress along the OIE pathway

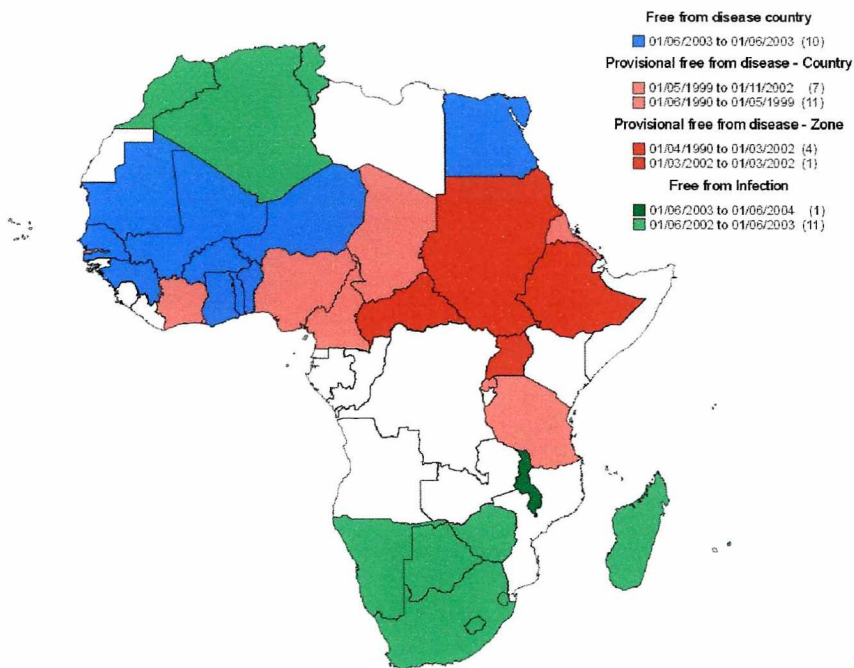
The last confirmed outbreak of rinderpest in the world was in June-November 2001 among African buffaloes *Syncerus caffer* of Meru National Park, Kenya.

It is probable that there is currently only one area of endemic maintenance left in the world, the Somali pastoralist ecosystem. It is not surprising given the ecology of the zone, large livestock population, large numbers of susceptible wildlife species, poor infrastructure and extended period of insecurity and collapse of government services. To further complicate the issue little is known about the epidemiology of this last focus of endemic maintenance. Nevertheless, the presence of this last focus has important implications for neighbouring countries that wish to make declarations or applications to the OIE.

The current state of affairs in Africa with regards to progress along the OIE pathway is depicted in figure 1.

The map shows the progress that was made in West Africa. The application for “freedom of rinderpest disease” of nine countries was accepted by the OIE. However, it should be mentioned here that Mauritania lost this status as of 7 August 2003, due to the fact that a routine wildlife survey detected two warthogs with antibodies to rinderpest, while no clinical disease was observed.

Figure 1: Status OIE Pathway in Africa, September 2003.



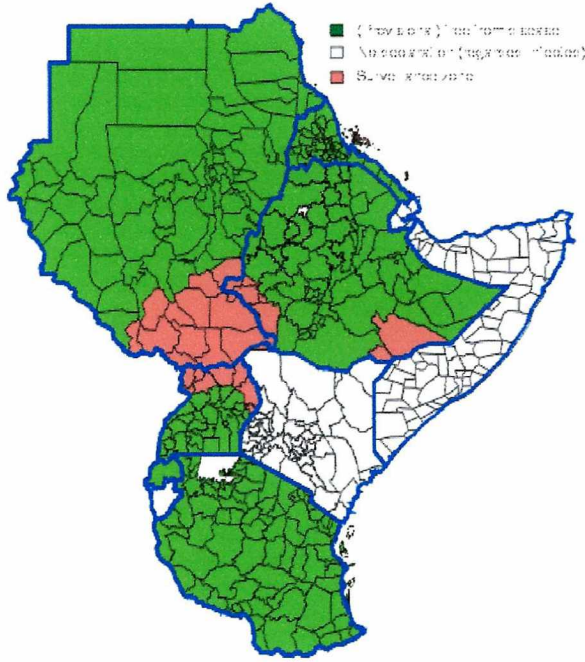
In East Africa significant progress was made by Sudan declaring that as of September 2003 its *infected zone* is no longer regarded infected and is now included in the surveillance zone. The Sudan had ceased vaccination throughout the country by June 2002.

Ethiopia, Uganda and CAR maintained their declarations of “provisional freedom on a zonal basis”. CAR has maintained a vaccination zone up to 2003. During the Arusha meeting, CAR promised to cease all rinderpest vaccinations this year. Uganda had submitted a declaration of provisional freedom of disease on a countrywide basis in November 2002, but it was not published by OIE.

Eritrea, Rwanda and Tanzania have declared provisional freedom from rinderpest on a countrywide basis. Kenya lost its status of provisional freedom on a zonal basis due to the Meru outbreak in 2001. Somalia and Djibouti have not made a declaration. Burundi has recently (1999) become a member of OIE. It had made a declaration of provisional freedom on a countrywide basis in 1997 to the OIE. However, probably due to the fact that it was at that time not an OIE member, this declaration was never published.

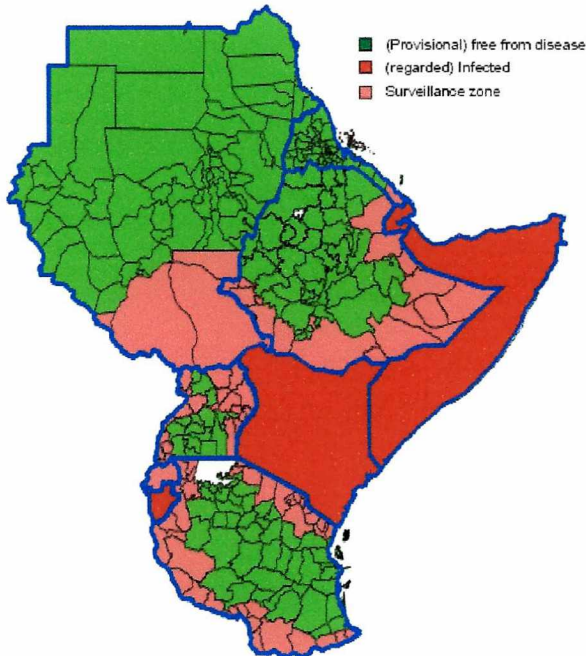
There are countries in central and southern Africa that have not made declarations or applications to the OIE including: DRC, Congo, Equatorial Guinea, Angola, Zambia and Mozambique. Strictly speaking, countries that have not made at least a declaration of provisional freedom from disease are regarded *infected* by the OIE.

Figure 2: Overview of rinderpest zonation based on declarations made to the OIE (Sept 2003)



Paragraph 2.1.4.5 of “The Code” clearly defines what should be regarded as an *infected country or zone*: When requirements for acceptance as an *infection free country*, a *disease free country or zone* or a *provisionally free country or zone* is not fulfilled, a country or zone shall be considered *de facto* as infected. A disease free zone should be separated from an infected area, by a surveillance zone. If this was consistently applied, zonation in Eastern Africa should have looked like figure 3.

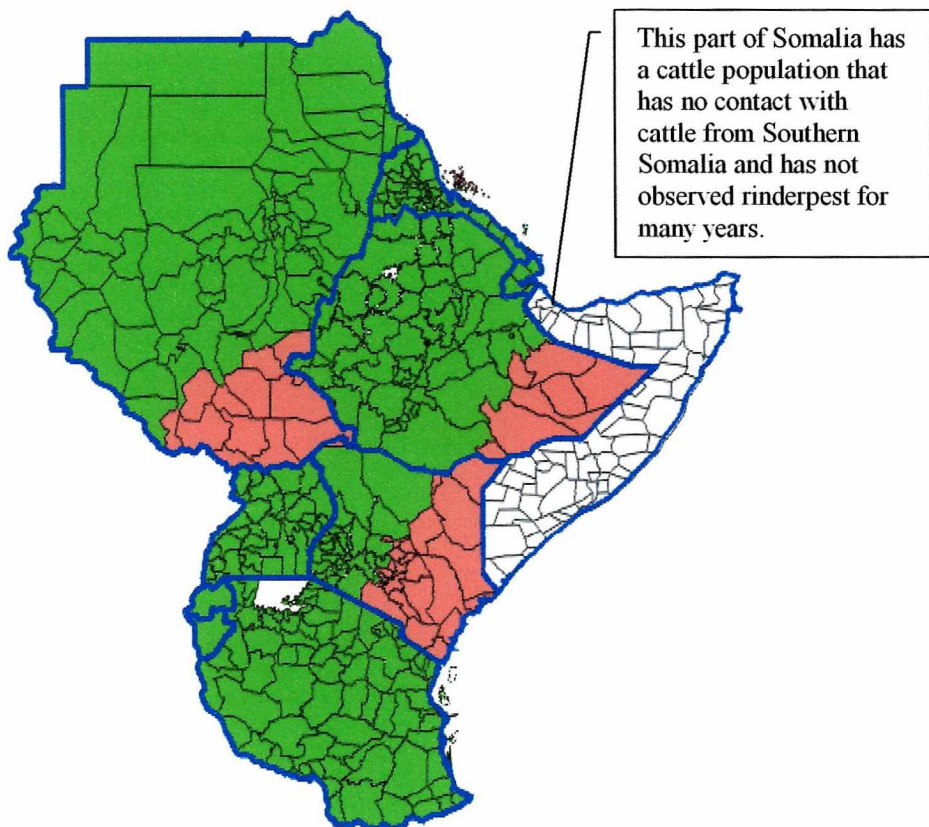
Figure 3: Indication of zoning if OIE principles were applied consistently.



The participants to the OIE pathway workshop held on 8 October in Nairobi recommended that IBAR should stimulate none PACE member countries like Zambia, Angola and Mozambique to apply for historical freedom from infection (or at least freedom from disease) as soon as possible.

Each country needs to present a scientifically sound argument for freedom of disease, which is likely to vary somewhat between countries and preferably risk-based. IBAR should develop the capacity to perform risk analysis.

Figure 4: Map of the horn of Africa indicating the expected situation towards the end of 2004



The countries of East Africa plan to make the following declarations or applications:

Burundi

- A declaration of provisional freedom from rinderpest was sent to the OIE in 1997. This declaration was however not published at the OIE website, most likely because it was not an OIE member at that time. Burundi plans to re-declare the country provisional free using the same letter;
- As the last outbreak of rinderpest was observed in 1933 and the last rinderpest vaccination was conducted in 1993, Burundi started the preparation of a dossier to support an application of historical “freedom from infection”. Burundi planned to submit this dossier to OIE before December 2004.

Djibouti

- Plans to declare it self “provisionally free at a countrywide basis” before the end of 2003;

- Will start the preparation of a dossier for application of “freedom from disease” under the five-year rule. It anticipates sending the application prior to November 2004.
- A complicating factor is that it borders Somalia, a country that is regarded infected.

Eritrea

- Declared itself free from disease in June 1999;
- Started the preparation of an application for freedom of disease on a countrywide basis. It is anticipated that the dossier will be submitted to OIE prior to December 1994.

Ethiopia

- Will establish a surveillance zone bordering Somalia, except for the most western part of Somaliland. There is near to zero risk of introduction of rinderpest from the western part of Somaliland.
- Apply for “freedom from disease on a zonal basis” for the rest of the country in November 2004. Paradoxically the first area that was regarded as free from rinderpest is now included in the surveillance zone;
- Draft dossier has already been submitted to AU/IBAR

Kenya

- To declare provisional freedom from Rinderpest November 2003
- Surveillance zone bordering Somalia
- Provisionally Free zone west of surveillance zone

Rwanda

- Declared itself provisionally free from rinderpest in September 1999.
- Borders an undeclared zone of D.R. Congo.
- Will apply for freedom from disease in 2004?

Sudan

- Has just declared the former infected zone as surveillance zone, as Sudan becomes increasingly convinced that rinderpest might be eradicated from the south;
- Will apply for “freedom from disease” on zonal basis for the northern part in November 2004.

Tanzania

- Will apply for countrywide freedom from disease by June 2004;
- Plans to apply for freedom from infection by 2007-8;
- Intensify movement control of animals at Tanzania/Kenya border.

Uganda

- Presently provisionally free from disease on a zonal basis. A country wide declaration submitted to OIE in November 2002 was not published.
- Uganda should declare again provisional freedom from disease on a countrywide basis in 2003.
- Requesting for “freedom from disease on a zonal basis” by November 2004

2. Mild Rinderpest Eradication Strategy

The Mbagathi meeting on mild rinderpest recommended a strategy based on

- *Identification* of foci of active disease transmission within areas of endemic maintenance.

- *Elimination* of these foci through a process of immuno-sterilisation
 - *Verification* to ensure that elimination has been achieved.
- This strategy is based on the understanding that rinderpest infection moves through populations of susceptible hosts.

Mild rinderpest

Mild rinderpest is clearly not a problem for the Somali pastoralists. Their priorities are different. However, if we in the public interest wish to eradicate this mild strain of rinderpest, we do require their full support. We will only be able to achieve eradication of rinderpest if we simultaneously provide the veterinary services that the Somali pastoralists want and require. The pastoralists now observe a PACE programme that spends a lot of its resources on actively looking for a “non disease”. An extra challenge is to obtain this support and provide these services in the insecure environment of Somalia.

Progress to date:

Both Kenya and Somalia have conducted their first participatory disease searches (PDS) in the year 2003. It should be seen as progress that in both cases the PDS teams, within a couple of weeks, identified outbreaks of a clinical syndrome that is compatible with mild rinderpest, i.e. outbreaks of lachrymation in young stock from 1-3 years of age. The outbreak of mild disease in Kenya was confirmed in the laboratory. It therefore seems possible to clinically detect mild rinderpest and thus opens the doors for a strategy of “seek, confirm, eliminate and verify”. The challenge is now to improve our understanding of the epidemiology of mild rinderpest and train teams of neighbouring countries. We should also use this opportunity to test pen side tests etc.

PDS is performed to detect herds with mild rinderpest virus circulation, collect samples and subsequently obtain laboratory confirmation. To date, PDS has been able to identify one area of active disease transmission that was subsequently confirmed in the laboratory. It provides us with an opportunity to further enhance PDS by providing a better case definition of mild rinderpest and thus increase our chance of detecting and confirming an outbreak of mild rinderpest. It is important that we secure a reliable and timely laboratory support. PDS can easily be frustrated by delays in obtaining laboratory results.

The sero-surveys conducted by PACE Somalia have improved our understanding about the extent of the area of endemic maintenance. Unfortunately due to recent vaccination performed in the Kenyan part of the Somali ecosystem, it is not possible to do the same and assess whether and which parts of Kenya are part of the area of endemic maintenance.

Continued wildlife surveillance in the region is building a bank of evidence that might turn out to be our only means to verify absence of rinderpest virus circulation in the Somali ecosystem. Regular wildlife surveillance around the presumed area of endemic maintenance provides an early warning system for epidemics and reduces the risk of epidemic incursions into increasingly susceptible livestock populations. There is a need to improve our understanding of the epidemiology of mild rinderpest, both in livestock and wildlife.

A start has been made with establishing community-based delivery systems. It will however take quite some time before a network of community based animal health workers (CAHWs) is established throughout the area where rinderpest persists. In order to prevent that they are seen as competition, it is important that the community based animal health workers are linked with the private veterinary professionals operating in the area.

Rinderpest working groups (RWG) have been established in both Kenya and Somalia. Rinderpest working groups consist of the main stakeholders at a national level. They prove to be a useful as a forum for information exchange and developing thrust between professionals, which ultimately leads to increased transparency. RWG also assist in reaching a more common understanding among professionals, detecting constraints at an early stage and in improving the planning.

Improved understanding among Somali veterinary professionals was reached through a meeting for regional representatives of the Somali Livestock Professional Forum that was held in AU/IBAR. It brought together veterinarians from the four main regions, i.e. Somaliland, Puntland, Central and South Somalia.

The first exchange of information between the Kenyan and Somali rinderpest working groups has taken place and both recommended that such information exchange should take place at least on a quarterly basis.

3. How do we proceed?

Donor commitment:

As shown above most of the countries in East Africa will just have applied for a status of freedom from disease by the end of the PACE programme in 2004. Having in mind that it is mild rinderpest virus that is circulating in East Africa, it is especially important that a status of “freedom from infection” is achieved in this region.

As we have not started the eradication of mild rinderpest that is present in the Somali ecosystem, it will take at least 8 to 10 years to verifiably eradicate the virus from this area of endemic maintenance. Besides the five years required for the verification of absence of circulating virus, PACE would require about 3 to 5 years to establish a veterinary service (community based) delivery system with the capacity to collect the required disease intelligence and to conduct the vaccination programmes to eliminate the virus. We should therefore ideally develop a programme with a timeframe of 8 to 10 years. Such a programme, that does not have to be expensive, should be continuous and flexible in its implementation. Gaps as presently experienced due to approval of PACE work plans are seriously prolonging the eradication process.

Project management and coordination

Rather than being based on annual work plans that approve a list of activities, the programme should be managed by a project manager who works with an agreed global strategy. The project should be able to quickly respond to the prevailing situation.

In fact the worst-case and most expensive scenario is one whereby we start activities (especially vaccination) and experience gaps in implementation due to delays in approval of work plans or gaps between phases of the project. Multi-donor funding might be the answer to establish the required continuity in the programme. This is clearly demonstrated in the southern Sudan programme.

After about ten years of collaboration between all stakeholders, rinderpest has apparently been eradicated from southern Sudan. It is therefore appropriate to compare the structure of both

the Somalia and Southern Sudan NGO-implemented animal health programmes. The PACE-supported NGO efforts in Sudan have been based on an inclusive rather than exclusive approach. All NGOs and other organisations were invited to participate and contribute to the development of an animal health delivery system and the eradication of rinderpest. The programme was coordinated by an international organisation (UNICEF and FAO). Policies, strategies and approaches were discussed and decided in open forums that involved all organizations. Such a system is able to absorb new, diverse partners and therefore able to adapt to changing conditions. It is time that we develop a similar coordination structure in Somalia. It is therefore proposed to establish a Livestock Coordination Body that actively encourages the involvement of all organizations, including both PACE and non-PACE NGOs, active in animal health in Somalia. All will be invited to discuss and reach a consensus on key service delivery and disease control policies. An Animal Health Programme Coordinator based in AU/IBAR will facilitate coordination meetings.

As the Somali ecosystem covers a number of countries it is clear that transparency and information exchange between countries are important to develop a coherent approach. This exchange of information should be based on a good understanding of the situation and on trust. It is proposed that this activity be coordinated by AU/IBAR, because of its technical credibility, authority and impartiality.

Eradication/vaccination strategy

Most people seem convinced that a true blanket vaccination that leads to immuno-sterilisation is difficult to achieve in the Somali eco-system, due to the harsh environment, insecurity and the veterinary service delivery system available.

PACE Somalia has prepared a risk based vaccination strategy. In short it entails identification of high-risk areas on the basis of cattle density, rinderpest sero-prevalence, livestock trade routes, presence of wildlife etc. and focus vaccination programmes at the identified high-risk areas. The strategy is mainly based on epidemiological modelling and interpretation; it takes for granted that all populations identified can be reached and that Somali professionals on contract will do the job properly.

Based on the experience in the Sonjo valley in 1965, where 9000 cattle belonging to agro-pastoralists may have maintained virus for four years, and the experiences in Ethiopia where the virus was maintained for up to 8 months in small herds, I believe we cannot afford to ignore small difficult accessible populations.

The fundamental question that requires to be answered before we could confidently design an appropriate and workable vaccination and thus eradication strategy is whether mild rinderpest (lineage 2) moves through the Somali ecosystem as multiple epidemics of mild disease or whether it “tics over” or permanently present in many herds. The first would favour a strategy of disease searching, focussed vaccination and verification of eradication, which could be done without having to establish a veterinary service delivery system throughout. The latter would require a blanket vaccination approach and thus first require the establishment of a veterinary service delivery system throughout the area where mild rinderpest is endemically maintained.

In addition, an improved understanding of the role of wildlife species predominant in the region, like lesser kudu *Tragelaphus imberbis imberbis* and warthog *Phaecochoeros aethiopicus* play in the epidemiology would assist planning the eradication strategy. This will

assist to the decision on how long an immunity level will have to be maintained in the cattle population to prevent re-infection from wildlife. The period over which the disease might be maintained in a wildlife population in the ecosystem might be in the order of 3-4 years before it naturally burns out. This would require support to the regional reference laboratory to further study the biology of lineage II of rinderpest virus in specific wildlife species.

The need for a marker vaccine

The verification of eradication of mild rinderpest depends almost solely on serology in cattle (and wildlife populations present in the area of endemic maintenance).

Currently the recommended vaccine of choice is thermostable tissue culture vaccine. This vaccine has proven to be very effective in eradicating rinderpest from remote pastoral areas. However, the only way to identify whether antibodies are likely to be due to vaccination and not due to infection is when vaccination was combined with permanent marking of all vaccinated animals. However, permanent marking of animals (ear notching or branding) has failed in most pastoralist systems and hence it has been difficult to interpret serological data. A vaccination programme conducted without permanently marking the animals, especially in a highly mobile livestock keeping system, like the Somali pastoralist system, would make it difficult or even impossible to interpret results from serological surveys that were conducted to verify eradication for a period of about three years.

Clearly a marker vaccine has advantages. It will however take quite a while for such a vaccine to be commercially available.

Alternatively we could use the already available heterologous PPR vaccine.

The main advantages include:

- PPR vaccine is already commercially available
- A thermo-stable PPR vaccine is developed based on Xerovac technology
- We would not have to maintain an emergency rinderpest vaccine stock

It is therefore recommended that the research as described in the draft protocol (annex 1) be conducted urgently.

EVALUATION OF PESTE DES PETITS RUMINANTS (PPR) VACCINE AS A HETEROLOGOUS VACCINE AGAINST RINDERPEST

Introduction

A major constraint to the final eradication of rinderpest– and therefore the planned 2010 Global Eradication Declaration – is that currently available vaccine against rinderpest induces serological responses in cattle that cannot be differentiated from those that follow infection with field viruses. For instance, in the Somali Ecosystem it appears that a strain or strains of rinderpest lineage II are prevalent that produce only mild disease in cattle. In the absence of effective movement control, the only effective weapon against the viruses causing “mild rinderpest” is vaccination. However, once vaccination is applied on any scale in the field, the use of serology as a surveillance tool becomes problematic because differentiation between serological responses to vaccination and natural infection is impossible using currently available assays.

“Marker systems” based on rinderpest genes cloned into other viruses or by insertion of foreign genes into rinderpest vaccine virus that express additional proteins that can be detected serologically are potentially available. However, for one reason or another, none of these products are available commercially. This means that the immediate and urgent problem of rinderpest persistence in the Somali Ecosystem, or elsewhere, cannot be addressed.

It has therefore been suggested that use of PPR vaccine (a product available commercially) against rinderpest could be used since the two viruses are genetically and immunologically related. It has already been shown experimentally that PPR vaccine would be effective in protecting cattle against rinderpest disease and/or infection. However, that needs to be demonstrated on a larger scale with current available and sensitive technologies. Furthermore, it would need to be proven that the serological responses to PPR vaccine are readily distinguishable from those resulting from infection with rinderpest virus.

Proposed protocol

The following draft protocol describes a comprehensive testing process to establish whether PPR vaccine would be safe and effective in protecting cattle against rinderpest infection and to confirm the presumption that use of PPR vaccine in cattle will not have adverse effects while allowing serological discrimination.

The protocol is designed with RBOK as the challenge rinderpest virus strain since it the conventional virus for vaccine immunogenicity and potency testing. It would be most relevant to the international community if protection against RBOK is confirmed in the evaluation of the protective efficacy of PPR vaccine against lineage II strains isolated from cases of rinderpest.

Note all test cattle should be at least 2 years of age (young adults by local breed standards) and demonstrated to be serologically negative to both PPR and rinderpest (RP). Pre-testing of source herds would be advisable should the trial be conducted in a region where either infection has been a risk in the last 5 years.

Phase I: Preparation of Seeds and Dose Titration

1. Preparation or procurement of one quality controlled batch of low passage PPR vaccine virus distributed in 1 ml aliquots
 - a. titrated in Vero cells and shown to be of high titer
 - b. sterility (mycoplasmas, bacteria, fungi)
 - c. demonstrated free of bovine and small ruminant adventitious viral agents
 - d. use of reagents internally certified to international standards
 - i. irradiated foetal bovine serum or acceptable alternative
 - ii. trypsin certified free of porcine agents
2. Preparation and characterization of RP challenge virus in 1 ml aliquots
 - a. RBOK homogenized spleen harvest:
 - i. Identity (serum neutralization)
 - ii. Sterility (mycoplasmas, bacteria, fungi)
 - b. parallel titration in cattle and tissue culture
 - i. 5-fold dilution series to one dilution beyond 50% end point
 - ii. 2 to 4 cattle per dilution and an equal number of controls
 - iii. calculation of LD₅₀ and TCID₅₀
3. Dose titration
 - a. Parallel titration of PPR vaccine in cattle and tissue culture
 - i. 5-fold serial dilution to one dilution beyond 50% end point
 - ii. 4 cattle per dilution
 - iii. 4 controls
 - iv. bleed at least weekly; including base line (day 0)
 - v. daily monitoring of temperature and clinical signs
 - vi. addition of 2 challenge controls at 28 days PV
 - vii. challenge all animals subcutaneously with 100 LD₅₀ RBOK at 28 days PV over the prescapular lymph node
 - viii. calculation of vaccine ID₅₀ based on serology and response post-challenge

Phase II: RBOK Immunogenicity Trial and Reversion to Virulence

4. Immunogenicity Trial
 - a. Vaccination of 36 animals with 100 ID₅₀ PPR vaccine
 - i. bleed daily and test for presence of PPR virus by PCR and cell culture inoculation
 - ii. collect nasal swabs daily for 10 days for PPR virus detection (PCR/virus isolation)
 - iii. bleed weekly for RP and PPR antibody determination
 - iv. daily monitoring of temperature and clinical signs through 28 days
 - b. 12 controls
 - c. 28 day challenge
 - i. separate out 12 vaccinates and 4 controls
 - ii. add 2 challenge controls
 - iii. challenge with 100 LD₅₀ RBOK
 - iv. collect blood and nasal swabs for 10 days after challenge for RP virus detection (PCR/virus isolation)
 - v. collect blood for RP and PPR serology from all animals two week after challenge

- vi. animals disposed of two weeks after challenge
- d. 182 day challenge
 - i. separate out 12 vaccinates and 4 controls
 - ii. add 2 challenge controls
 - iii. challenge all animals subcutaneously with 100 LD₅₀ RBOK
 - iv. collect blood and nasal swabs for 10 days after challenge for RP virus detection (PCR/virus isolation)
 - v. collect blood for RP and PPR serology from all animals two week after challenge
 - vi. animals disposed of two weeks after challenge
- e. 365 day challenge
 - i. separate out 12 vaccinates and 4 controls
 - ii. add 2 challenge controls
 - iii. challenge all animals subcutaneously with 100 LD₅₀ RBOK
 - iv. collect blood and nasal swabs for 10 days after challenge for RP virus detection (PCR/virus isolation)
 - v. collect blood for RP and PPR serology from all animals two week after challenge
 - vi. animals disposed of two weeks after challenge
- 5. Back Passage – Test for reversion to virulence
 - a. Inoculate 2 cattle with 100 ID₅₀ of PPR vaccine seed
 - b. Add 2 controls
 - c. Back passage at three day intervals
 - i. Introduce to 2 cattle
 - ii. Transfer 20cc whole blood from inoculated to newly introduced (save aliquot at -70°C for virus isolation/PCR)
 - iii. Repeat process for a total of 5 back passages
 - d. Follow cattle serologically for 28 days
 - e. Daily monitoring of clinical signs
- 6. Serologic tests on all samples
 - a. Competitive PPR ELISA
 - b. Competitive H-RP ELISA
 - c. RP VNT
 - d. PPR VNT
- 7. Additional storage of collected material

4. All sera (2 ml per sample) and virological material to be stored at -70°C for 6 months in case retesting is indicated

Phase III: Lineage 2 Immunogenicity Trial

- 8. Preparation and characterization of RP challenge viruses in 1 ml aliquots
 - a. RBT/1 and RGK/1 homogenized spleen harvest:
 - i. Identity (serum neutralization)
 - ii. Sterility (mycoplasmas, bacteria, fungi)
 - b. parallel titration in cattle and tissue culture
 - i. 5-fold dilution series to one dilution beyond 50% end point
 - ii. 2 to 4 cattle per dilution and an equal number of controls
 - c. calculation of LD₅₀ and TCID₅₀
- 9. RBT/1 Immunogenicity Trial

- a. Vaccination of 10 animals with 100 ID₅₀ PPR vaccine
 - i. bleed daily and test for presence of PPR virus by PCR and cell culture inoculation
 - ii. collect nasal swabs daily for 10 days for PPR virus detection (PCR/virus isolation)
 - iii. bleed weekly for RP and PPR antibody determination
 - iv. daily monitoring of temperature and clinical signs through 28 days
 - b. 2 controls
 - c. 90 day challenge
 - i. introduce 10 additional controls
 - ii. inoculate 10 in-contact challenge donors with RBT/1
 - iii. collect blood and nasal swabs for 10 days after challenge for RP virus detection (PCR/virus isolation)
 - iv. collect blood for RP and PPR serology from all animals four weeks after challenge
 - v. animals disposed of four weeks after challenge
10. RGK/1 Immunogenicity Trial
- a. Vaccination of 10 animals with 100 ID₅₀ PPR vaccine
 - vi. bleed daily and test for presence of PPR virus by PCR and cell culture inoculation
 - vii. collect nasal swabs daily for 10 days for PPR virus detection (PCR/virus isolation)
 - viii. bleed weekly for RP and PPR antibody determination
 - ix. daily monitoring of temperature and clinical signs through 28 days
 - d. 2 controls
 - e. 90 day challenge
 - i. introduce 10 additional controls
 - ii. inoculate 10 in-contact challenge donors with RGK/1 virus
 - iii. collect blood and nasal swabs for 10 days after challenge for RP virus detection (PCR/virus isolation)
 - iv. collect blood for RP and PPR serology from all animals four weeks after challenge
 - v. animals disposed of four weeks after challenge

Note: Purpose of challenge controls – These are introduced just prior to challenge. Their function is to rule out lateral spread of the vaccine virus. If the vaccine virus spreads laterally to the original set of controls, none of the controls would be come ill at the time of challenge.

CONTAGIOUS BOVINE PLEURO-PNEUMONIA: POSSIBLE FUTURE STRATEGIES FOR THE CONTROL OF THE DISEASE IN THE PACE REGION

Background

Contagious bovine pleuropneumonia (CBPP) is a disease of cattle caused by *Mycoplasma mycoides* subspecies *mycoides* (small colony). It has occurred at one time or another in all regions of the world with the exception of South America and Madagascar (Schneider *et al.*, 1994). It remains a significant constraint to cattle production in most of sub-Saharan Africa although a number of southern African countries have been free from the disease for many decades. Annual losses of US\$ 2 billion have been ascribed to the disease in Africa although the reliability of this figure is uncertain (Masiga *et al.*, 1999).

The disease is transmitted by direct contact between infected and susceptible individuals. When first introduced into a fully susceptible cattle population CBPP usually results in widespread mortality. For that reason it is included in the *Office International des Epizooties* (OIE) A list of diseases (OIE, 2003). As an example of the devastation it can cause, within two years of its introduction into South Africa in 1853 it resulted in the deaths of over 100 000 cattle and was a major contributor to the Great Xhosa Cattle-killing Movement of 1856 to 1857 which resulted in the starvation of tens of thousands of Xhosa people and the devastation of that nation (Henning, 1956; Peires, 1989). In endemic situations the disease has a variable course and is often insidious in nature. Clinical forms of the disease include peracute, acute and chronic. There are also cases of inapparent infection when clinical disease does not occur. The latter condition includes carriers (apparently healthy animals that have recovered from the disease) with encapsulated sequestra in the lungs containing live organisms. The extent to which carriers (also referred to as “lungers”) are important in the maintenance and spread of the infection is a matter of contention (Mariner, 2003).

The disease is difficult to reproduce in the laboratory and the study of its epidemiology is problematic in endemic situations because of the insidious nature of the disease. As a result, many aspects of the basic biology, epidemiology, immunology and pathogenesis of CBPP are poorly understood. In particular, determination of fundamental epidemiological parameters such as the basic reproductive number (R_0) that enable inferences to be drawn on factors such as herd immunity levels required to control the disease effectively, have only recently begun to be addressed (Mariner, 2003).

Historically, CBPP was a disease of Europe, the Americas and Asia but was eradicated from the United States, Canada and most of Europe in the 19th Century through clinical diagnosis, movement control and slaughter of suspected cases (Provost *et al.*, 1987). Although CBPP was present in sub-Saharan Africa prior to the colonial era, it was imported by ship into the southernmost part of the continent from Europe in the mid 19th Century, as mentioned above, and subsequently spread as far north as Angola where it has persisted to the present (Windsor, 2000). The complexity of the origins of the infection in Africa is borne out by recent molecular epidemiological studies that have demonstrated three distinct African lineages of CBPP (Lorenzon *et al.*, 2003).

Progress was made in controlling CBPP in Africa during the colonial era and first two decades following independence. Large parts of Southern, Western and Eastern Africa were cleared using slaughter and movement control (Hammond & Branagan, 1965) which later incorporated testing strategies based on the complement fixation test (CFT) (Campbell & Turner, 1936; Campbell & Turner, 1953; Huddart, 1960). However, a problem has been that the CFT, as well as the more recently developed competitive ELISA, are unable to detect carrier animals or those in the relatively long incubation period efficiently. Furthermore, lack of sensitivity on the part of these tests means that they can only be used to detect infected herds and are not reliable as a means of establishing freedom from infection in individual animals.

As vaccines became available, control programmes increasingly relied upon vaccination combined with movement control. However, vaccine coverage in Central, Eastern and Western Africa has declined markedly since the closure of the Pan-African Rinderpest Campaign (PARC) in 1999 because during PARC vaccines against both rinderpest and CBPP were routinely administered to cattle in Central, Eastern and Western Africa. In addition, it appears that the quality of vaccines used in recent times has declined (Waite & March, 2001). There are a number of factors that have contributed to this situation. Lack of independent quality control in some manufacturing facilities in Africa remains a problem and improper handling of the vaccine in the field (poorly maintained cold-chains, for example) have resulted in sub-optimal quantities of vaccine strain mycoplasmas being administered to cattle (Thiaucourt *et al.*, 2003). Occurrence of post-vaccination reactions in as many as 1% of vaccinated animals in some instances, as well as occasional deaths, have contributed to owner reluctance to use existing vaccines in certain areas. Furthermore, available serological tests do not detect vaccinated animals effectively so that sero-monitoring as a means of monitoring vaccination cover and establishing levels of herd immunity resulting from vaccination cannot be conducted effectively (Thiaucourt *et al.*, 2003).

In the 1980's and 90's, economic crises afflicted many African countries and the subsequent structural adjustment programmes resulted in a decline in the funding of public veterinary services. This had an inevitable effect on surveillance and control programmes in Africa, including those for CBPP (Windsor, 2000). Other factors such as increasing public empowerment, recognition of the negative effects of movement control on pastoral livelihoods and a decline in the ability of veterinary services to enforce policies has decreased the effectiveness of measures adopted against CBPP. As a result, the disease is again present throughout most of Eastern, Central and Western Africa (Masiga & Domenech, 1995). The East African focus has advanced south into Tanzania (Bolske *et al.*, 1995) and subsequently spread to most regions of that country. This poses a threat to north-eastern Zambia. The long-standing focus in Angola has again invaded western Zambia and more recently still has spread to north-western Zambia. Furthermore, at least 12 African countries are engaged in or recovering from major internal conflict. These events involve mass movement of people and animals and constitute a significant factor in the spread of CBPP.

As indicated above, African governments are facing acute economic and financial problems that have affected their ability to fund programs of national or regional importance in the animal health field. Livestock and animal health budgets are already small and are being cut further. Most governments rely heavily on complementary donor funding from bi-lateral and multilateral partners to finance animal disease control programs. The sustainability of these programmes is therefore in doubt. Conversely, senior animal health officials of most African countries express the

imperative for introducing an integrated regional programme to either eradicate the disease or to greatly lessen its impact on livestock producers (Reports of PACE workshops on CBPP; Addis Ababa, November 2001; Accra, February 2003). In the light of these two incompatible trends a question that needs to be answered is: As national financial resources are limited and declining in absolute and relative terms, how would an integrated regional programme be financed? In this regard it is necessary not only to establish the cost but also the return on such investment. For example, would investing, say, \$ 150 million in regional CBPP control over a 5 year period provide a better return than investing that money in human health improvement, education or infrastructure development?

Current policy advocated by PACE and AU-IBAR

In the final report of the Pan-African Rinderpest Campaign (PARC) the recommendation was made that future action against CBPP would require:

- Epidemiological data and information to determine and detect foci of infection;
- Effective control of animal movements from and towards these foci;
- Complete vaccine cover of cattle regularly for at least 5 consecutive years; and
- Repeat vaccination of the same cattle each year (Page 242 of the Draft Final Report: 1986-1999).

More simply, this implies close to 100% vaccination of all cattle twice a year for 5 years in addition to effective movement control.

However, since 2000 there has been limited external financial support for mass vaccination against CBPP in the countries of Central, Eastern and Western Africa. At least partially for this reason the objective of mass vaccine coverage of cattle populations of the region has, with very few reported exceptions, not been achieved. A cost recovery strategy for CBPP vaccination advocated through PACE has been implemented in most countries but this is insufficient to overcome budget deficits for implementation of effective mass vaccination. . Nevertheless, as is reflected in the conclusions reached at the PACE workshop on CBPP held in Accra in February 2003, mass vaccination, whether subsidized or supplied free of charge by the veterinary services of countries, continues to be considered by most senior animal health officials in the PACE region as the preferred strategy against the disease. This is despite the fact that both the distribution and prevalence of CBPP have increased in recent years and continue to do so in the tropical regions of Africa (Report of the PACE Workshop on CBPP, Accra, February 2003). The inevitable conclusion is that existing policies are either inappropriate or are not being executed adequately.

There is a growing realisation that eradication of CBPP in the foreseeable future will be more difficult than was the case for rinderpest and probably is not a realistic possibility for the immediate future in the PACE region. If that is so, control of the impact of the disease needs to be the immediate objective (Reports of the PACE workshops on CBPP held in Addis Ababa and Accra in 2001 and 2003 respectively and report on the technical workshop of CBPP experts of 8 May 2003).

Regional options for the future

Judging from the report of the most recent PACE workshop on CBPP (Accra, February 2003) it seems that the weight of opinion among country representatives within the PACE region is that annual mass vaccination should be applied for the next 5 years – although now it is recommended that the cattle be vaccinated only once a year – to achieve control of the disease in infected regions of countries. Once that is achieved it is implied that follow-up action would be aimed at eradication of the disease although precisely what would be required in this respect has so far not been clearly articulated. The recommendations of the Accra meeting refer to a need to re-assess the effects of vaccination after 5 years. It was also recommended that areas free of infection should be protected from incursion of CBPP by vaccination (buffer) zones round the free area(s) and movement control. Ideally, buffer zones should be separated from free zones by surveillance zones in which intensive surveillance should be conducted (Report of the PACE Workshop on CBPP, Accra, February 2003).

It needs to be borne in mind that the recommendation of annual vaccination (in some cases biannual vaccination) for 5 years is based largely on empirical experience. It is only within the relatively recent past that techniques have become available for making extrapolations on the biological consequences of differing herd immunity levels resulting from vaccination. The study by Mariner (2003) is so far the only one that has utilized this approach for CBPP.

Since the Accra workshop held by PACE in February 2003, the report on the consultancy commissioned by PACE (CAPE and PEU [through the Food and Agriculture Organisation - FAO]) and the report on the workshop of CBPP experts held in May 2003 have become available. The consultancy report based on the results of a modelling approach have provided valuable insights into the behaviour of CBPP and what will be required for its control. The study shows, firstly, that eradication of CBPP by mass vaccination alone will probably be unsuccessful. Secondly, it indicates that in order to achieve effective control (as opposed to eradication), high levels of herd immunity ($\geq 80\%$) need to be attained.

Considering these findings, the workshop of CBPP experts held in May 2003 concluded the following:

- Insufficient funding and physical resources exist within the PACE region to sustain mass vaccination as a mechanism of control; therefore, mass vaccination would only be sustainable if significant outside funding support becomes available;
- Poor quality vaccines that induce ephemeral and/or poor immune responses are a problem for effective CBPP control in the PACE region;
- T1-44 vaccine, because it is inclined to produce post-vaccinal reactions that are unacceptable to livestock owners constitutes a disincentive to widespread vaccine use for sustained periods of time (at the least it would require funds to compensate owners for losses resulting from *post-vaccinal* reactions);
- Lack of an *in vitro* test to differentiate vaccinated from unvaccinated cattle complicates control where vaccines are employed;
- Lack of trust and co-operation between some veterinary services and the livestock-owning communities they serve is a significant problem.

This situation leaves AU-IBAR with two alternatives:

1. Devise a regional mass vaccination programme to which donor organizations could be persuaded to contribute that would make up the financial shortfall in funding from country contributions and cost recovery on the one hand and the full cost of mass vaccination on the other; or
2. Develop an alternative strategy.

These two alternatives are discussed in more detail below.

Regional mass vaccination programme

The cost of such a programme, covering a 5-year period (whether the cattle were vaccinated once or twice a year) is likely to be high (see Table 1). The data in Table 1 were derived from information based on the costs of vaccination against CBPP during PARC in 10 countries. It shows the calculated cost of vaccinating 70% of the cattle in the selected countries annually over a 5 year period. This level of vaccine cover was selected because it is 1) unlikely that all cattle in any country could be consistently vaccinated and 2) most countries have zones within the country where vaccination is not traditionally practiced because CBPP has little or no impact in those zones (some are claimed to be free of the infection). It is evident that if a high level of vaccination coverage were to be achieved in the >30 countries that constitute Central, Eastern and Western Africa, the overall costs would be approximately three times greater than those shown in Table 1, i.e. >€ 300 million. It is possible that up to half of this cost could be recovered from the cattle owners but even so a sum of € 150 million is large and probably unrealistic in comparison with previous aid projects directed towards animal health.

It is furthermore unlikely that such a large sum of money would be made available by donors for an animal disease unless there was good reason to believe that it would result in the eradication of the disease and that the extent of the return on the investment could be shown to be at least several-fold higher than the sum invested in the programme. It should also be noted when considering donor support that most European donors link their funding to millennium goals of poverty alleviation and freedom from hunger and the PRSPs whilst USAID is linking its funding to good governance and business development. Merely showing a benefit to cost is unlikely to be sufficient incentive for donor support in the near future.

As already stated, the modelling study of Mariner (2003) indicates that eradication through vaccination alone would be unlikely to succeed. Even effective control over a wide area would require herd immunity levels of around 80% that were hardly ever achieved against rinderpest during PARC. Taking all this into consideration leaves little room for optimism that a mass-vaccination programme against CBPP on its own would be either affordable or effective. Based on experience elsewhere in the world and that from Africa in previous decades, an effective programme would require, in addition to high vaccination coverage, good control over the movement of infected or potentially infected cattle into areas where vaccine is being applied. This would necessitate additional costs, some indirect and essentially hidden resulting from limitations imposed on the choices of livestock keepers, pastoralists especially, in respect of free movement of their animals. Mass vaccination for 5 years therefore has limited prospects for success in the long term.

Alternative strategy

Because CBPP is endemic to many regions of Africa between the Sahara and 15° S, livestock owners have to live on a daily basis with the consequences of the disease, i.e. its erosive effects and periodic epizootics.

It was generally conceded at the two PACE workshops on CBPP held in Addis Ababa and Accra that antibiotic treatment of cases of CBPP is a widespread practice throughout the PACE region. This is despite the fact that treatment of CBPP cases is actively discouraged in many PACE countries and even illegal in some. Antibiotics usually have to be bought by the owners and therefore treatment of cattle for CBPP and other diseases costs owners hard currency which they can ill afford. Conversely, when it comes to administration of vaccine few owners, certainly those in rural areas, have access to vaccine through drug dealers, community-based animal health workers (CAHWs) or private veterinarians. This creates a dichotomy in the approach to CBPP in most countries: the official veterinary service applies vaccine (usually with cost recovery) in areas and at frequencies that they dictate while treatment is discouraged or illegal and at the exclusive cost of the owner. This means that some owners who would like to have their cattle vaccinated have no means of having this done.

The efficacy of treatment for CBPP, as agreed at all the recent workshops held by PACE on CBPP, is largely unknown as are the epidemiological consequences of treatment (possible creation of carriers) despite the fact that livestock owners obviously consider it beneficial. Studies into this issue are ongoing and some are being funded at least partially by PACE. The results are clearly important and anxiously awaited. However, pending the outcome of these studies it is intuitively probable that the best approach to the control of CBPP would be to regularly (say every 6 months) vaccinate cattle in endemically infected areas or those at risk of being infected while treating and, if possible, isolating individual animals when they develop clinical disease. In this way the benefits of both vaccination (creation of high levels of herd immunity) and treatment (enabling animals that would otherwise die or be seriously debilitated to recover) would hopefully act synergistically to reduce losses. The scientific evidence required to recommend the use of a particular antibiotic against a particular microbial agent is based on *in vitro* antibiotic sensitivity tests and determination of minimal inhibitory concentrations reached in various tissues and secretions as well as, where possible, controlled trials. In the case of CBPP, published information on the sensitivity of *M. mycoides sub. mycoides* (small colony) to oxytetracycline (and tylosin) is available and demonstrates sensitivity to these drugs. As there is no scientific evidence to support the hypothesis that the use of these drugs causes a chronic infective CBPP state, there is no scientific reason currently not to use them to treat CBPP.

Mariner (2003) has suggested that elective vaccination of cattle (i.e. the owner decides whether to vaccinate or not and is responsible for the payment for such vaccination) in pastoral areas may be more effective and sustainable than mass vaccination conducted by official veterinary services. He has pointed out that for this to happen would require liberalising the distribution and availability of vaccines against CBPP. Furthermore, Mariner's study has shown that even if elective vaccination was patchily adopted the benefits to the herd-owners who vaccinate their cattle would not be negated by neighbours who fail to do so.

Bearing the above in mind, a somewhat different approach to CBPP control can be considered. The alternative approach is based on enabling owners, either through private practitioners (or possibly veterinary-supervised paraprofessionals such as CAHWs) operating individually or on behalf of co-operatives, to vaccinate and, where necessary, treat their cattle to control CBPP. This presupposes that official veterinary services would support this process by:

- Enacting enabling legislation to permit non-official vaccination and treatment;
- Supply of vaccine and drugs in locations, under conditions (refrigeration) and quantities (small dose packs) that owners would find helpful.

Ideally, some form of management of the movement of cattle from areas where CBPP is a problem disease to areas that are free or relatively free of the disease, would favour better control than vaccination and treatment alone. Circumstances will dictate where that is possible and where not. However, it needs to be ensured that such movement management measures do not cause greater losses to the livestock industry than the disease itself. The knock-on effects of animal health control measures have consistently been underestimated by veterinary authorities in Africa, which is one of the reasons why disease control measures that livestock owners find onerous are often ignored or surreptitiously avoided.

This proposal therefore envisages official veterinary services providing support to livestock owners to control the disease privately rather than physically directing and implementing vaccination and discouraging treatment. This would likely greatly reduce the cost of control to the public sector and enable more effective control for those that want, and are willing, to pay for it.

Clearly, this policy option is contrary to that adopted officially by many countries in the PACE region as well as that recommended internationally. It may also not appeal to many official veterinary services because actions directed towards control/eradication of CBPP are a major focus of their activity. On the other hand, it would overcome the problem of unaffordable – and therefore poorly implemented – vaccination programmes with unrealistic expectations that continually fail to meet their objectives. This unfavourable situation is unlikely to change in the foreseeable future unless, as indicated above, massive additional investment in CBPP control occurs.

CBPP vaccine quality is critical to its efficacy in the field and acceptability to farmers who are expected to pay for the cost of CBPP vaccination. Revival of vaccine quality assurance capacity at regional or pan-African levels is important to ensure good quality products. It is obviously untenable to expect livestock owners to pay for a product that does not reach minimum standards. Ultimately, it is the governments' responsibility to ensure that vaccines and antibiotics available to the public sector are of a suitable standard.

The devolution of CBPP control to the livestock owner would also create difficulties in accepting that a whole region of Africa would tacitly accept that it is unable to eradicate a List A disease that has been eliminated from much of the rest of the world. This is likely to create difficulties in trading live animals but there are other ways of addressing this problem. For example, establishing disease-free or export zones of limited size that could be kept free of CBPP and, in the case of export zones, other trade-sensitive transboundary diseases, are an option. Such approaches would enable international trade from a country that is otherwise not free of CBPP and would also create nuclei of infection-free cattle that could form the basis of a future eradication strategy.

However, if this approach were to be endorsed by IBAR and the PACE countries, it may be able to turn CBPP control into a more palatable option (than mass vaccination) for donor support. Liberalising the use of the vaccine could be viewed as a way of stimulating the private sector delivery of veterinary services. The formation of export zones that create wealth and have a trickle down effect to the poor is similarly likely to be more appealing to some donors than subsidizing mass vaccination campaigns. USAID, for example, is already heavily investing in promotion of livestock trade. The European Commission is increasingly interested in both trade and poverty alleviation.

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Table 1

Total cost (€) of CBPP vaccinations in ten countries (70% mass vaccination scenario)

Country	Year 1	Year 2	Year 3	Year 4	Year 5	Total cost
Ethiopia	6,709,500	5,692,340	5,646,044	5,805,059	5,896,309	29,749,252
Tanzania	4,212,600	3,573,970	3,544,903	3,644,742	3,702,033	18,678,248
Mali	1,909,292	1,619,843	1,606,669	1,651,919	1,677,886	8,465,609
Uganda	2,478,000	2,102,335	2,085,237	2,143,966	2,177,666	10,987,204
Burkina Faso	1,612,800	1,368,300	1,357,171	1,395,395	1,417,329	7,150,995
Senegal	1,040,060	882,387	875,210	899,860	914,005	4,611,522
Cote d'Ivoire	619,920	525,940	521,663	536,355	544,786	2,748,664
Kenya	5,670,000	4,810,428	4,771,305	4,905,684	4,982,796	25,140,213
Ghana	580,580	492,564	488,558	502,318	510,214	2,574,234
Benin	466,550	395,821	392,602	403,659	410,004	2,068,636
Total cost	25,299,303	21,463,930	21,289,365	21,888,961	22,233,033	112,174,592

Assumptions:

1. Cattle population increasing at 1% per year over the base scenario
2. 70% vaccination coverage
3. Depreciation of capital equipment from 20% year 1 down to 65% by year 5.

AFRICAN UNION- INTERAFRICAN
BUREAU FOR ANIMAL RESOURCES

LIVESTOCK EXPORT ZONE STUDY
PROVISIONAL REPORT

PREPARED BY

**DR. S.K. HARGREAVES,
MR. BELACHEW HURRISSA,**

CONSULTANTS,

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NAIROBI, KENYA.**

1.INTRODUCTION

Animal disease has remained as one of the biggest constraints to the trade of animals and animal products in Africa. Not only are many regions of Africa endemic to a number of OIE List A diseases, but they also have numerous diseases of significant zoonotic importance. Food safety is increasing in importance world wide, but especially in developed countries where consumer demands are strongest.

Certification for freedom from additional health hazards such as BSE and drug residues in livestock products are now frequently also included in trade protocols to further guarantee food safety.

With these many difficulties to overcome in order to ensure safe trade in animal and animal products, a consultancy study was initiated to evaluate how the concept of *export zones* could promote trade. As country or zone disease freedom from the List A diseases is very difficult to achieve in most countries in Africa, the development of export zones could facilitate safer trade in livestock and livestock products.

However the accessibility of export markets depends generally on bilateral trade agreements which are supported by availability of suitable product for export to fulfill importing consumer demands.

2.INCEPTION BRIEFINGS

- *As per the work schedule the consultants arrived in Nairobi on Monday, 1st September 2003.*
- *On September 2nd, discussion was held at AU-IBAR's auditorium on the concept of the proposed study in the presence of the organization's executives and high technical professionals.*
- *During the remaining days i.e. September 3 to 5, 2003, intensive consultations on the subject matter and study approaches were undertaken within AU-IBAR.*
- *During the same period, the overall study plan was designed and preparation for visiting Uganda was completed.*

3. CASE STUDY

3.1.Uganda

3.1.1.Information Gathering

- The consultants left for Entebbe on September 7, 2003 and were received by Dr Samaanya, Commissioner for Livestock Resources.
- During their stay in Uganda, (7-13/9/03), the consultants had talked to:
 - High officials of the Ministry of Agriculture, Fisheries and Livestock Industry ,
 - Ministry of Finance, Commerce,
 - Representatives of Investment and Export Promotion Authorities,
 - Representatives of Ugandan Farmers Federation, Beef Producers Association, Livestock Traders Association and

Gathered their views on the current livestock industry development and marketing in general and the development of the export industry and the possibilities of establishing livestock export zones in particular.

Air transport availability to different destinations and corresponding freight costs were also assessed.

3.1.2. Field Visits

A one-day field trip was made to one of the commercial beef ranches where the consultants had a chance of observing the current situation at the farm, future development plans and the possibilities of going into the export market.

One of the largest abattoirs in Kampala was also visited and information on the urban meat market was gathered.

3.1.3.Workshop

Ugandan field study culminated by conducting a day workshop at Kampala. The workshop was officially opened by the Hon. Minister of Agriculture, attended by representatives of different public and private organizations and closed by the Minister of State of the ministry. At the workshop, papers on: -

- Concept of livestock export zone and
- Overview of the study were presented and discussed

After the presentations and plenary discussions, the participants were grouped into two, receptively discussed the technical aspects of the proposed export zone and swot analysis of livestock and meat export.

3. 2. Ethiopia

3.2.1. Information Gathering

The consultants arrived at Addis Ababa on September 13, 2003. Information gathering in Ethiopia commenced on Monday the 15th of September 2003 by initially visiting the CAPE Unit in the country. The consultants met and discussed with:

- the officials of the Federal Veterinary Services, Meat Inspection and Quarantine Service, Livestock Fisheries and Feed development Team of the MOA,
- The manager and other officers of Livestock Marketing Authority,
- Commissioner of Cooperative Promotion Commission,
- Chairman of Pastoralists Parliamentarian Standing Committee,
- Manager of NAHRI,
- The president and other members of Livestock and Meat Exporters Association,
- D/G Manager and the technical staff of the largest company in the meat industry, ELFORA PLC,
- The Manager and the owner of one of the oldest and leading meat exporting firms.

3.2.2. Field Visits

As part of the field information assessments, a field visit was made to ELFORA'S

- small ruminants holding ground in Afar Region,
- Kuriftu and Wonji quarantine type feedlots,
- Debrezeit export abattoir.

HELMIMEX's Debrezeit and the National Animal Health Research Institute were also visited.

3.2.3. Workshop

The Ethiopian workshop was planned, organized and facilitated by the marketing consultant, Mr. Belachew Hurrissa. The workshop was carried out on 23 and 24 of September 2003. Some 47 participants representing:

- Government organizations,
- Private export operators,
- International agencies,
- AU-IBAR representatives,
- Research organizations,
- NGO's.

At the workshop, in addition to the papers presented by the two consultants and Dr. Gavin Thomson's concept note, 6 other papers related to animal health, quarantine, export certification and export policies were presented by different professionals.

After the presentation session and plenary discussions on the first day, group discussions on similar topics as those of Uganda were conducted on the second day. After the presentations of the two groups, general discussions were also carried out.

The workshop was official opened by His Excellency, the manager of LMA, closed by the president of Live Animals and Meat Exporters' Association. It also attracted wide media coverage.

3.3. Nairobi Workshop

3.3.1. Pre-workshop Activities

After reviewing literatures and the findings from the two countries and desk research analysis, the consultants have produced papers that were presented at the Nairobi workshop.

3.3.2 The Workshop

The workshop, which was held on September 6 & 7, 2003, attended by 65 CVO's and other professionals representing: -

- AU-IBAR 12
- Eastern Africa36
- Consultants..... 2
- International/Aid Org... 10
- Private.....5

During the plenary session, Dr. Gavin Thomson and the two consultants presented papers on: -

- Concept of Livestock Export Zone,
- Livestock and Meat Trade In East Africa: Requirements and Potential for Exports,
- Livestock Export Zone Study: Overview.

Every presentation was followed by discussions. In the late afternoon of the first day, three groups were formed and commenced separate discussions on: -

- Major veterinary constraints to export,
- Technical requirements for the establishment of export zones and
- Opportunities and challenges of livestock and livestock products marketing as well as management of the proposed export zones.

On last day of the workshop, each group presented its findings and recommendations, which was followed by hot discussions.

The workshop was officially opened by Hon. Minister of Livestock and Fisheries Development, Kenya and closed by the Director of Veterinary Services. As in the case of Ethiopia, it also attracted media coverage.

4. MARKETING OBSERVATIONS/ FINDINGS

4.1 Marketing

4.1 Export Performances

Based on FAO'S database, meat & livestock export performances of Africa and the Eastern African counties over the period of 1997-2001 are indicated below:

4.1.1. Africa's Meat Trade

- Production..... 10.72 million mt.
- Imports..... 642.03 thousand mt.
- Exports..... 99.44 thousand mt.
- Net imports.....542.60 thousand mt.

During the period under review:

- Export accounted for 0.6% of production,
- Production grew by 11.4%,
- Imports declined by 2.7%,
- Export increased by 0.5%.

Although the continent is a net importer of meat some countries have registered net exports. These include (thousand mt of meat): -

- Botswana..... 15.22
- Sudan 12.13
- Namibia..... 11.67
- Zimbabwe..... 11.24
- Ethiopia..... 1.50
- Kenya..... 0.66
- Madagascar... ..0.04

4.1.2. Eastern Africa

Meat production and trade performances of the Eastern African countries during the period of 1997-2001 were found to be: -

- Production..... 2.44 million mt,
- Imports..... 2.70 thousand mt,
- Exports..... 15.46 thousand mt.
- Net exports.....12.76 thousand mt.

Unlike meat export, the region is a net importer of dairy products. During the same period, the net imports of dairy products were 25.25 thousand mt.

Comparing 2001 performances to that of 1997, it has been observed that:

- Export accounted for 0.6% of production,
- It accounted for 15.4% of the continent's meat exports,
- Production increased by 13.4%
- Imports declined by 24.4%.
- Exports also declined by 37.1%.

4.1.3. Livestock Exports

Most of the Eastern African countries have access to Red Sea and The Indian Ocean for trading across with the Middle East countries where there is substantial demand for live animals. As a result during the period under discussions, the export from the region was:-

- Sheep.....2.55 million heads,
- Goats.....0.83 million heads,
- Camels.....70.77 thousand heads,
- Cattle.....33.31 thousand heads.

As a result of repeated import bans, the export from the region has declined as indicated below:-

- Sheep by 10.3%,
- Goats by 64.6%,
- Camels by 58.8%, and
- Cattle by 52.9%

Among the Eastern African countries, Sudan, Somalia and Djibouti are found to be the leading exporters. Sudan is leading in sheep, Somalia in goats and camels, Djibouti in cattle.

4.2. Potential Markets

Considering proximity, stage of livestock industry development, cultural and trade relationships and the market preferences for the products and the market sizes two potential markets have identified. These are the African and the Middle East Markets.

4.2.1. Features of African Livestock and Meat Markets

Through the discussions made during information gathering processes in Ethiopia, Uganda and the 3 workshops conducted in the two countries and Nairobi it was found out that the African markets are characterized by:-

- Tariffs and non-tariffs trade barriers,
- Regional livestock markets are dominated by informal trade,
- Neighboring countries reluctance in trading in convertible currencies,
- Preferences for low priced frozen beef, offal's etc.

4.2.2. African Market Size

Over the period of 1997-2001, Africa's gross and net meat import was about 642 and 543 thousand mt., respectively. Looking at regional prospective, the following countries can be recognized as potential export African markets for Eastern Africa. These are (thousand mt meat)

-A. North Africa:

Egypt (149.4)

Algeria (15.4)

-B. West Africa:

C.D'voire (45.5)

Benin (33.1)

Gabon (23.6)

-C. Central Africa:

Congo D. Republic (23.9)

Congo Republic (18.2)

-D. Southern Africa:

South Africa (150.6)

Angola (56.7)

Mauritius (14.5)

4.2.3. Features of The Middle East Markets

Based on literature reviews, export views and personal observations of the consultant the Middle East markets are characterized as-

- Buyers markets, dominated by influential personalities,
- Personal relationships and close follow up,
- Stringent health requirements, rejections at ports of destinations,
- Repeated import bans,
- Quality products at competitive prices, credits,
- Preferences for Sudanese, Somali black head and Awash sheep and Boran steers,
- 8-12 kg fresh sheep and 5-7.5 kg fresh goats' carcasses are preferred

4.2.4 Middle East Market Size

Over the years 1997-2001, annually, the Middle East countries imported:-

- Shoats 11 million heads
- Cattle 173 thousand heads
- Camels 24 thousand heads
- Meat 877 thousand mt.

4.2.5 Major Middle East Markets

Among the Middle East countries,

- Saudi, Kuwait, Oman for Shoats,
- Yemen, Jordan for cattle,
- Saudi for camels,
- Saudi, UAE, Kuwait and Iran for meat

Are the major markets.

4.3. Scope of Establishing Export Zones

4.3.1. Ethiopia

- Enabling policy environment,
- Government's commitment to promote export,
- Substantial private investment in export facilities,
- Willingness of the private sector to establish holding grounds/quarantine stations,
- State run quarantine stations establishment is on pipeline.
- Govt. intentions to establish DFZ.

4.3.2. Uganda

- Enabling policy environment,
- Government's commitment to modernize agriculture & promote export,
- Development of beef master plan & revival of commercial beef enterprises,
- No current private investment in export facilities,
- There is export abattoir study, not yet materialized,
- Negotiation for FDI is underway.

4.3.3. Export Cost Implications (Ugandan case without zone)

- Transport cost is the most limiting factor specially for live animals trade, unless efficient alternative means will be in place
- Both beef and goats' meat prices are within highest range and this could affect competitiveness
- Ugandan competitiveness will depend on the productivity of commercial ranches for beef, marketing set up and system for goats , export abattoir investment level and efficiency of operations.

5. ANIMAL HEALTH COMPONENT

5.1. Influence of animal disease on livestock trade

The many transboundary animal diseases which occur in Africa are a major constraint to trade in animals and animal products. These constraints have not only prevented the majority of countries in Africa from participating in the more lucrative livestock and meat markets of the developed world, but also prevented free intra Africa trade.

The international guidelines for safe trade in animal and animal products are specified in the OIE Terrestrial Animal Health Code. These guidelines have been established assuming that the importing country is free of the particular disease or diseases that may be considered to be a risk to the importing country. International guidelines for the safe trade in animal and animal products generally specifies that such products must originate from countries or zones free from the major animal disease threats. Such country freedom from disease or disease free zones are very very difficult to achieve within Africa, especially considering the large number of List A diseases which occur on the continent.

Due to the general weakness of veterinary services in many countries on the African continent, linked to many problems such as uncontrolled cross border movement of unidentified livestock, it is increasingly difficult for veterinary administrations to certify that livestock or their products which are exported are free from the list A diseases and diseases of zoonotic importance. It was therefore proposed that these constraints could be removed by the development of appropriate export zones

In order to promote safe trade of livestock and livestock products the consultants evaluated the existing export systems, current veterinary services and disease surveillance systems, and other related issues. The evaluations were strengthened through wide consultation with senior members of the Ugandan and Ethiopian livestock industries and through the holding of various workshops.

5.2 Export Zone Observations/ Findings

The Consultant Study investigated various initiatives for the development of export systems designed to ensure safer trade of animals and animal products from Africa to specific markets by minimizing the risks of transmission of transboundary animal diseases.

Two export systems were proposed:

1 -Closed Production System (export zone)

- closed system of livestock production demarcated by a barrier - introductions of animals by testing and quarantine
- livestock all identified within the system
- livestock vaccinated to protect them from TADs and other specific disease risks
- livestock treated to boost production
- intensified disease surveillance within closed system
- system under official veterinary supervision
- maintenance of records of all vaccinations, treatments, movements etc.
 - disease and deaths investigated and recorded by official veterinary service
 - drugs and vaccines used registered/recorded
- diagnostic tests done at approved registered laboratory
- animals to be processed at abattoirs approved and registered for export by the veterinary administration
- animals / meat controlled to place of export
- adequate size and number of zones to sustain market demands and viability
- production system protected from wildlife
- welfare of animals must be taken into account to place of export.

2 Compartmentalized Export System

- Livestock purchased from various markets
- purchased from low disease risk areas
- quarantined in prescribed area
- pre quarantine holding area where treatments / vaccinations done - all in all out system to prevent spread of infectious disease through to next compartment

- quarantine of animals to follow all in all out principle
- animals identified – by ear tag in holding area or at time of purchase
 - adequate size and number of quarantine / holding areas for viability
- quarantine and holding area registered by veterinary administration and under official veterinary supervision
- disease and deaths investigated and recorded by official veterinary service
- drugs and vaccines used registered/recorded
- livestock movements controlled - vet permits issued and recorded
- livestock movements between compartments to be by motorised transport
- appropriate infrastructure to insure isolation and good animal welfare
- animals to be processed at abattoirs approved and registered for export by the veterinary administration
- compartments protected from wildlife

5.3.The influence of commodities on safe trade

Meat

- procure animal from low risk area
- process at export approved abattoir
- ante and post mortem inspection
- maturation of carcass
- deboning and lymph gland removal
- cooking / processing

Live animal export for slaughter

- knowledge of major list A disease risks for species in country of origin
- purchase from low disease risk area
- identification of animals
- livestock movement control
- inspection / testing / treatments
- vaccination
 - quarantine

5.4. General Veterinary Observations Regarding Export Systems

- *Export systems will minimize disease risks and provide safer trade of animals and animal products to specific markets with resultant benefits*
- *Export systems should not only protect the importing country but also the exporting country. This is important as livestock production is long term, and export infrastructure costly. Therefore export markets need to be safeguarded to ensure long term trade.*
- *Existing export systems should be improved and modified to minimize disease transmission risks in order to make trade of livestock and livestock products safer.*
- *The treatment, vaccination, testing, holding and quarantine period or processing procedures for animals in order to minimize risks of disease spread will be influenced by the commodity to be exported.*

There is urgent need to establish sound science based animal health and veterinary public health trade protocols with trading partners to ensure safe trade in animal and animal products within and out of Africa. These trade protocols must be established within the terms of the WTO/SPS Agreement.

It is considered essential that individual countries, the region and Africa in general establish sound scientifically based export standards in order to protect the exporting country as well as the importer.

5.6. Holistic Approach

There are a number of very important issues which have major influences on the export of livestock and livestock products and these **must not** be disregarded in consideration of the development of export systems (zones). Some of these factors may be more critical than others depending on any particular country of export or import. Solutions as to how to overcome each individual issue is beyond the scope of the study, but where possible this will be addressed in the final report..

6. GENERAL RECOMMENDATIONS

- Ensure availability of product - Africa is net importer of meat and milk
- develop viable sustainable export markets which have confidence in the product.
- investment into market infrastructures; ie sale pens, livestock handling facilities, water points, loading areas, cold chain, export abattoirs, specialized livestock transport
- general infrastructure development ie. roads, power supply, communication linkages
- strengthen and develop export quarantine and holding areas demarcated by appropriate barriers ie stock proof fences
- improve livestock identification system for export ie ear tags, branding, microchips.
- improve and develop export livestock movement controls - official permits
- improve inspection methods for TADs at critical points (markets-holding areas-abattoirs-quarantine)
- develop good record keeping and documentation of all activities and interventions in export chain of operations
- improve veterinary drug registration/control
- requirement for regular audit of export establishments and procedures by the veterinary administration
- control of product through to point of export
- establish Veterinary-Para Veterinary Councils to establish and maintain veterinary professional and para-professional standards
- **need to strengthen veterinary services** - adequate budgets and resources for improved disease surveillance and diagnostics. This is considered as fundamental and most important for safe trade of livestock and livestock products. The OIE guidelines need to be taken into account in this regard. Credibility of certification for trade is based on strong veterinary services. A functional analysis of veterinary services should be actioned before restructuring takes place. Private good activities need to be privatized.
- review and updating of national animal health legislation is required to empower veterinary services to conduct core regulatory activities. Enforcement and implementation of regulations requires appropriate political support.
- organization of the livestock industry within all sectors requires support; producers, traders, processor organizations require strengthening. National livestock strategic plans must be developed Public/Private partnerships need to be encouraged
- AU/IBAR to initiate the process of harmonization and standardization of disease surveillance, diagnostics etc. within regions (assessment of vet services)

- AU/IBARs central office requires strengthening in order for it to fulfill its mandate and to cater for increasing demands for its services
- AU/IBAR needs to decentralize to regions to more effectively serve the continent
- AU/IBAR should incorporate the OIE Regional Office for Africa in order to improve coordination and cooperation
- AU/IBAR requires to strengthen its technical expertise in order to assist AU member countries with the development of trade protocols which are based on scientific principals. In this regard AU/IBAR urgently requires to establish negotiations between the OIE Regional Commission for the Middle East and the OIE Regional Commission for Africa in order to establish trade protocols which are based on science and are in terms of the WTO/SPS Agreement.
- AU/IBAR to develop the skills to conduct risk analysis studies and to capacitate countries with this knowledge in order to promote safe trade of livestock and livestock products.
- AU/IBAR requires to establish the capacity to be able to audit veterinary services within Africa in order to promote the strengthening of veterinary services to facilitate achievement of the vision of free trade of livestock and livestock products within Africa
- AU/IBAR needs to continue to lobby the AU and donor organizations in order to stress the importance of livestock so that the livestock sector and veterinary services in particular can receive appropriate support and funding
- AU/IBAR requires to continue to lobby the AU in order for the livestock sector to receive appropriate political support.

7. DEFINITION OF AN EXPORT SYSTEM (ZONE)

An export system is one where measures are in place to satisfy all the requirements of a particular importer or set of importers for a particular commodity or range of commodities that are not fulfilled within the country as a whole. The objective is to ensure supply of the commodities of pre-determined quality and reducing the risk of importation of human and animal pathogens to an appropriate level of risk.

ECONOMICS UNIT

**Governments' contributions to sustainability of PACE
activities: An update**

**Eighth Advisory Committee Meeting of the PACE
Programme
4-6 November 2003
Bamako, MALI**

PACE Economics Unit

October 2003

INTRODUCTION

PACE is a five-year program that started in November 1999. It will officially come to an end in October 2004. However, countries that started the programme late *may* be given an opportunity to complete a five-year programme. At the end of the program, each country is expected to take over full funding of all the epidemio-surveillance activities initiated during the program. After all, epidemio-surveillance is an integral part of the activities of the Departments of Veterinary Services and therefore should be funded from the national budget.

The challenge most governments face however, is that with limited financial resources, difficult choices have to be made among the many priority national development programs. For governments to commit financial resources to animal disease surveillance, they must know how much it would cost and what benefits to get from it. The need therefore, to estimate the costs and determine the level of financial commitment to animal disease surveillance is called for.

The PACE Advisory Committee (AC) recommended during its Fifth and Sixth meetings that IBAR should provide arguments for national veterinary services to justify use of resources for epidemiological surveillance as a means of sustaining the investment of PACE. The AC also recommended that the PACE Economics Unit should evaluate the cost of epidemio-surveillance networks by having access to national data on budgets, costs and actual expenditures linked to epidemiological activities that have the support and approval of the PACE epidemiologists.

Early this year, the PACE Economics Unit evaluated the cost of national epidemio-surveillance networks in thirteen (13) PACE member countries. The results were presented during the Seventh PACE AC meeting in April and at the Third Annual PACE Coordination meeting held in Arusha, Tanzania in June 2003. The latter meeting was attended by representatives from 28 PACE member countries and Malawi. PACE national coordinators, epidemiologists and national Technical Assistants attending the meeting suggested that the costing exercise should be revised to accommodate the actual activities that each country was involved in. This was because countries were at different levels of implementing surveillance activities and not all countries were involved in both passive and active surveillance at the same time. Even for countries carrying out active surveillance (i.e. active disease search, sero-surveillance, wildlife surveillance and laboratory analysis), not all countries were involved in all of these aspects.

A revised questionnaire accommodating the suggestions was sent to each PACE member country. The response rate was very poor. Four countries only (Benin, Cote d'Ivoire, Guinea Bissau and Uganda) out of twenty eight countries responded – thus necessitating missions to three other countries – Ethiopia, Tanzania and Central African Republic to collect the information.

This update presents results analysed from the data of the seven countries. Data were received from Rwanda soon after the analysis had been done and therefore will be analysed at a later date.

Results

This section presents information analysed from seven countries. The focus is on the cost of passive and active surveillance as a basis for determining how much each country should budget if it has to carry out each of these surveillance activities.

Importance and types of animal disease surveillance

In each of the seven countries analysed, animal disease surveillance is carried out for several important reasons. The first is to obtain a clear picture of the occurrence and distribution of animal diseases in the country or region. The second is to establish substantial evidence that a particular disease(s) (e.g. rinderpest) is verifiably eradicated from the country or region. This is a requirement of the World Organization for Animal Health (WOAH) or *Office International des Epizooties* (OIE) and for those countries that want to engage in export/import trade in livestock and their products. Epidemio-surveillance is also a strategic decision-making support tool in each of the countries in that the information it provides, when analysed and reported, decisions can be reached on whether or not to control/eradicate a disease. As well, it enables early detection (and therefore early reaction) of animal diseases of economic, food security and public health importance in each country.

In each of the countries, animal disease surveillance information is gathered through a combination of passive and active surveillance. Passive surveillance involves the routine daily activities carried out by all or most of the staff of the Department of Veterinary Services that may lead to the detection of any disease. Livestock farmers and any other livestock stakeholders are also involved in passive surveillance when they rumour or suspect a disease. Active surveillance on the other hand involves the active search for a particular disease following information obtained from passive surveillance. This requires the use of a well structured methodology to identify the disease. Most often, it involves

sero-surveillance and/or laboratory analysis; both of which can be used to monitor the status of the disease.

As shown in Table 1, each of the seven countries is involved in both passive surveillance and active disease (rinderpest) search for which laboratory analysis is required. Four countries (Benin, Cote d'Ivoire, Tanzania and Uganda) carry out serological surveillance whereas all countries except Ethiopia carry out wildlife surveillance.

Table 1. Types of surveillance activities carried out by countries.

Country	Passive surveillance	Active disease search	Serological surveillance	Wildlife surveillance	Laboratory analysis
Benin	X	X	X	X	X
Central African Rep.	X	X		X	X
Cote d'Ivoire	X	X	X	X	X
Ethiopia	X	X			X
Guinea Bissau	X	X		X	X
Tanzania	X	X	X	X	X
Uganda	X	X	X	X	X

Diseases and livestock species under surveillance

Passive surveillance covers the entire surface area of each country and involves all animal diseases and livestock species found in the country. Active disease search and serology involve only two important diseases – rinderpest and contagious bovine pleuropneumonia (CBPP). Table 2 shows the livestock density and livestock staff ratio, both calculated using the number of veterinary livestock units¹.

The total number of veterinary livestock units covered by passive surveillance varies from 0.48 million in Guinea Bissau to 49.5 million in Ethiopia. Ethiopia has the highest livestock density of 44 VLU/Km² while Central African Republic (CAR) has the lowest of 6. For all seven countries, the average number of VLU's covered by each veterinarian is 110,000, with veterinarians in CAR covering significantly greater number compared to those in the other countries. Because of their large numbers, animal health assistants and technicians cover on average, 16,500 VLU's whereas laboratory technicians cover over 365,000 VLU's.

¹ One veterinary livestock unit (VLU) is defined as one cattle, donkey, horse or buffalo or ten sheep/goats or two pigs or 100 chickens/ducks.

Table 2. Livestock density and livestock staff ratios covered by passive surveillance.

Country	Veterinary livestock units	Veterinary livestock units per Km ²	Livestock staff ratio		
			Veterinary livestock units per Veterinarian	Veterinary livestock units per Animal health assistant/ technician	Veterinary livestock units per laboratory technician
Benin	1,885,200	17	99,221	9,063	235,650
Central African Rep.	3,731,450	6	373,145	24,876	339,223
Cote d'Ivoire	2,190,500	7	47,620	4,967	39,827
Ethiopia	49,545,000	44	112,859	12,919	1,501,364
Guinea Bissau	478,650	13	47,865	31,910	68,379
Tanzania	20,210,000	23	62,764	8,313	101,050
Uganda	9,437,960	39	23,833	23,833	269,656
Average	12,496,966	21	109,615	16,555	365,021

Cost of passive and active surveillance

Cost are estimated from the following components:

Salaries

The salary charge for personnel involved in each type of surveillance activity was estimated taking into account the number of staff in each category of personnel, the average annual salary for each category and the proportion of time spent in each type of surveillance activity. Four types of personnel are considered: Veterinarians, laboratory technicians, animal health assistants and technicians (AHA/T), and support staff (e.g. drivers). For the seven countries examined, the average number of veterinarians and animal health assistants/technicians per country was 257 and 1003 respectively. About half of the veterinarians and 80% of the AHA/Ts are involved in passive surveillance. The proportion of veterinarians and AHA/Ts involved in active surveillance varies from 3% to 11%. On average, veterinarians spend 64% of their time in passive surveillance and 40% in active surveillance. AHA/Ts put in more time in passive (80%) and active (60%) surveillance.

According to Table 3 Ethiopia and Tanzania require about 2 million Euros to meet the salary charge for their passive surveillance personnel. However, the salary charge for active surveillance personnel in Ethiopia is quite small compared to Tanzania, simply because Ethiopia has limited its surveillance area to two zones covering 45 Weredas only or 6% of the total surface area and 8% of the cattle population. Uganda and

Cote d'Ivoire also have a large salary charge for both their passive and active surveillance personnel.

Table 3. Personnel expenditures for passive and active surveillance (1,000 Euros)

Country	Passive surveillance			Active surveillance		
	Salaries	Allowances	Total personnel	Salaries	Allowances	Total personnel
Benin	276	105	380	63	75	139
Central African Rep.	203	73	276	81	23	104
Cote d'Ivoire	768	220	988	80	212	292
Ethiopia	1,810	1,485	3,294	34	56	89
Guinea Bissau	231	54	286	n.a.	n.a.	n.a.
Tanzania	1,929	1,074	3,003	419	94	513
Uganda	948	746	1,694	152	293	445

Allowances

These are estimated on the basis of the national per diem rates paid to each of the staff categories considered, the number of staff going out on surveillance related missions and the number of mission days per staff per year. The average number of mission days for each veterinarian and AHA/Ts is 53 and 45 respectively. Per diem rates vary significantly between countries, being higher in Benin, Cote d'Ivoire and Tanzania compared to Ethiopia and CAR. As shown in Table 3, Ethiopia spends about 45% of its total personnel budget on allowances. Tanzania and Uganda spend a large sum on allowances for both passive and active surveillance activities.

Transport

Expenditures on transport for surveillance is estimated from three components: vehicle (and motorcycle) depreciation, maintenance and running expenses. Vehicles and motorcycles are assumed to have a life span of five years and are depreciated accordingly. Tanzania, Ethiopia and Cote d'Ivoire have relatively high transport costs compared to the other countries (Table 4).

Depreciation on equipment

This is estimated for laboratory, field and office equipment taking into account the lifespan of each equipment.

Other costs

These include the expenditures on sample analysis, information processing and dissemination and epidemio-surveillance related training. These expenditures are summarized in Table 4. Note that apart from Tanzania, these other costs are relatively small for the other countries.

Table 4. Non-personnel expenditures for passive surveillance

	Benin	CAR	Cote d'Ivoire	Ethiopia	G. Bissau	Tanzania	Uganda
Transport	49,838	57,622	341,159	625,000	18,372	685,400	172,031
Depreciation on equipment	17,951	30,211	192,311	99,238	19,914	n.a.	14,936
Sample analysis	988	2,171	2,083	38,924	2,083	43,000	n.a.
Information dissemination	3,971	3,971	3,049	4,163	877	203,674	25,783
Training	25,915	25,915	24,832	n.a.	8,396	5,112	18,480
Total	98,663	119,890	563,433	767,325	49,642	937,186	231,230

Financial requirements for sustaining epidemio-surveillance

To estimate the financial needs that countries will have to put aside to sustain their epidemio-surveillance activities after the PACE program comes to an end, it is assumed that the amount that each country is currently spending, if budgeted and the inflation rate taken into account, it would be sufficient to sustain passive and active surveillance activities in each country. These amounts are summarized in Tables 5 and 6 for passive and active surveillance. They have not been adjusted for inflation as this will be done once data from all countries are analysed.

To successfully implement passive surveillance activities respective governments will require the amounts indicated in Table 5. Note the large amounts that will be required by Ethiopia, Tanzania and Uganda. This is a reflection of the large surface area of each country, the number of veterinary staff and the livestock population. The large financial requirement for Cote d'Ivoire reflects more of a relatively high salary and per diem level than the human and animal resources.

Excluding salaries, which most governments have to pay regardless of whether surveillance activities are being carried out or not, the non-salary financial needs account for about half of the total. These vary from 104,000 Euros for Guinea Bissau to about 2.3 million Euros for Ethiopia.

As far as active surveillance is concerned, Tanzania will require over 0.8 million Euros compared to just 20,000 Euros for Guinea Bissau (Table 6). Most of these funds will be required for active disease search which is what all the countries are currently doing.

Table 5. Financial needs required for sustaining passive surveillance activities (Euros)

Country	Financial needs	Non-salary financial needs	Non-salary financial needs as percent of total
Benin	479,370	203,407	42.4
Central African Rep.	395,884	192,908	48.7
Cote d'Ivoire	1,551,467	783,632	50.5
Ethiopia	4,061,650	2,251,840	55.4
Guinea Bissau	335,191	104,093	31.1
Tanzania	3,939,806	2,010,988	51.0
Uganda	1,925,092	977,144	50.8

Table 6. Financial needs required for sustaining active surveillance activities (Euros)

Country	Active disease search	Serological surveillance	Wildlife surveillance	Laboratory analysis	Total	Percent of passive
Benin	116,360	52,747	70,820	21,591	261,518	54.6
Central African Rep.	134,862	n.a.	32,453	59,552	226,867	57.3
Cote d'Ivoire	281,944	66,073	100,845	72,332	521,194	33.6
Ethiopia	241,227	n.a.	n.a.	n.a.	241,227	5.9
Guinea Bissau	14,268	n.a.	3,324	1,880	19,471	5.8
Tanzania	250,873	287,493	157,636	141,574	837,575	21.3
Uganda	171,376	327,856	32,693	145,563	677,488	35.2

Table 7. Non-salary financial needs for sustaining active surveillance activities (Euros)

Country	Active disease search	Serological surveillance	Wildlife surveillance	Laboratory analysis	Total	Percent of total
Benin	93,385	29,771	69,942	5,200	198,299	75.8
Central African Rep.	86,780	n.a.	15,331	43,363	145,474	64.1
Cote d'Ivoire	252,310	52,134	82,827	54,222	441,493	84.7
Ethiopia	207,428	n.a.	n.a.	n.a.	207,428	86.0
Guinea Bissau	14,268	n.a.	3,324	1,880	19,471	100.0
Tanzania	116,304	140,416	92,767	69,114	418,601	50.0
Uganda	128,769	240,672	28,648	127,024	525,113	77.5

Unit cost of passive and active surveillance

The average amount required to carry out surveillance per head of animal for the seven countries is 0.32 Euros. This ranges from 0.08 Euros for Ethiopia to 0.71 for Cote d'Ivoire (Table 8). For active surveillance, the unit financial requirements for Ethiopia is negligible compared to the other countries.

Table 8. Unit cost of carrying out passive and active surveillance

Country	Veterinary Livestock Units (1,000)	Total cost (1,000 Euros)		Unit cost (Euros)	
		Passive surveillance	Active surveillance	Passive surveillance	Active surveillance
Benin	1,885	479	262	0.25	0.14
Central African Rep.	3,731	396	227	0.11	0.06
Cote d'Ivoire	2,191	1,551	521	0.71	0.24
Ethiopia	49,545	4,062	241	0.08	0.00
Guinea Bissau	479	335	19	0.70	0.04
Tanzania	20,210	3,940	838	0.19	0.04
Uganda	9,438	1,925	677	0.20	0.07
Average	12,497	1,813	398	0.32	0.09

Conclusion

The preliminary conclusions from the data analysed for seven countries are that if national governments must sustain the activities of PACE after it come to an end, the estimated amounts presented in Table 8 will have to be put aside for each head of livestock with the country. Since governments are currently paying salaries regardless of whether effective surveillance is on-going, it would be appropriate for them to incorporate in the national budget, the equivalent of the non-salary charge required for operational activities.

**African Union – Inter-African Bureau for Animal Resources
(AU-IBAR)
Pan African programme for the Control of Epizootics
(PACE)**

**Eighth Advisory Committee Meeting of the PACE
Programme
4-6 November 2003
Bamako, MALI**

Cost of CBPP control in Africa

PACE Economics Unit

Introduction

Contagious Bovine Pleuro-pneumonia (CBPP) is an infectious disease of the lungs in cattle caused by a bacterium, *Mycoplasma mycoides* var. *mycoides* (Radostitis *et al*, 2000). It is the second most important trans-boundary livestock disease in Africa after rinderpest with an estimated morbidity of 30% and a mortality rate of 10% (Masiga *et al.*, 1995). CBPP causes both direct and indirect losses. Direct losses are due to mortality, reduced milk yield, vaccination costs, disease surveillance and research costs. Indirect losses are due to loss of weight and working ability, delayed marketing, reduced fertility, losses due to quarantine and reduced cattle trade (Mlengeya, 1995; Masiga *et al*, 1995).

CBPP is a disease of economic importance because of the financial losses to farmers, the economic losses to the nation and the associated social and cultural implications of these losses. CBPP-associated losses also have economy-wide impacts through the reduction in export earnings and the decline in economic activity in industries dependent on the cattle sub-sector. In Botswana for example, Townsend *et al.* (1998) estimated that a generalized outbreak of CBPP would result in a closure of its access to the European Union (EU) market and that the economy-wide effects of such closure would be a 60% decline in beef and other export products. Using a Social Accounting Matrix (SAM) framework, Townsend *et al.* (1998) estimated the total cost to the country to be 1 billion Pulas (US\$350 million). In Tanzania, Anon (2000) assessed the value of direct and indirect losses due to CBPP to be over US\$50 million. This estimate was based on deaths of 250,000 head of cattle, reduced milk yields, reduced growth, loss of weight through wasting, abortions, loss of draught power and manure, and overhead costs of disease control. Mlengeya (1995) also reports that the CBPP outbreaks that occurred in Tanzania from 1990 to 1995 resulted in deaths of 14,000 cattle valued at over US\$1 million. Based on losses of cattle from CBPP in Northern Nigeria Egwu *et al* (1996) estimated the direct economic cost of CBPP to be more than US\$1.5 million. In Nigeria still, Osiyemi (1981) reported economic losses due to CBPP of US\$3.6 million.

In view of its economic importance, CBPP has been identified as a priority disease by the Pan African Control of Epizootics (PACE) program and is a major focus of activity for the program. However, before the program embarks on a control strategy, it is essential to know what it would cost to control the disease. National governments as well as donor institutions need this information so as to weigh the costs against their resources. This report identifies the various control options for CBPP and estimates the annual costs of its control using one of the options namely, vaccinations.

Options for CBPP control

Immunization

The PACE policy for CBPP control is that “blanket vaccination” over a period of about 5 years can be used to reduce the prevalence of infection to insignificant levels. Thereafter the infection can be finally eliminated by a “search and destroy” policy. This option is somehow problematic in that even if vaccination and active surveillance are conducted efficiently, re-introduction from adjacent foci is almost impossible to prevent.

Antibiotic treatment

CBPP is a treatable disease of cattle. Traditionally, farmers have used antibiotics to treat CBPP in the field with various levels of success. The actual degree of effectiveness of these treatments has not been well established for a number of reasons. First, several types of antibiotics from various sources (often unknown to the farmers) are available in the field and at various price levels. Some of the products have either expired, are fake or are poorly stored. Secondly, it is difficult for some farmers and veterinary staff to make the appropriate choice of which antibiotic to use, the proper dosage to apply and the interval of application. As a result, antibiotic use has been less efficient, leading to chronic infections, carrier cases and increased spread of the disease.

Stamping-out

Successful control and eradication of CBPP was achieved in Europe in the 19th Century using the “stamping-out” policy. In Africa, there is only one authenticated case of CBPP having been eradicated in Botswana in 1995/96 where 320,000 head of cattle were destroyed and buried at a cost exceeding US\$350 million. Although theoretically sound, slaughtering animals with clinical signs and compensating their owners is a very expensive option that most African Governments cannot afford. Even if this were financially affordable, without fencing, prevention of re-introduction would be impossible. If governments were to slaughter animals without compensation, the owners would be unwilling to cooperate. Sick animals will be smuggled in order to escape the surveillance and detection of CBPP.

Quarantine, movement controls and surveillance

Increased trade and cattle movements have fueled the spread of CBPP in Africa. In pastoral production systems, effective control of cattle movements is next to impossible. Cattle movements are favored by climatic, environmental, feed, water and market conditions. In some countries rules and regulations for cattle movements exist but enforcement is difficult owing to limited resources, vast geographical areas and lack of cooperation by cattle owners and traders. Inadequate resources also limit the extent to which surveillance of the disease can be

carried out. Proper definition of stock routes; establishment of quarantine areas (along the stock routes, near cattle markets and near abattoirs); and adherence to existing rules and regulations could help control the spread of CBPP.

Cost of CBPP control

Before a farmer or the government embarks upon a CBPP control program, they usually ask salient questions such as:

1. How economically important is CBPP i.e. what is the magnitude of the losses caused by CBPP (at farm and national level)?
2. How much will it cost to control CBPP and what will the benefits of investing in the control effort?
3. Who will benefit from the control and by how much?

To answer these questions, economic (and associated epidemiological) studies are required. First, the economic costs of CBPP need to be estimated. This involves quantification of the losses in livestock products and income, lost potential of livestock and costs of control.

Secondly, benefit-cost analysis (*ex-post* and *ex-ante*) is needed to determine:

- (i) the economic viability of alternative control options and
- (ii) the benefits to society and how they are shared. This is important because of the need to make decisions (i) when faced with limited financial resources and (ii) on who should contribute to the cost of control and by how much. Results of the economic studies can then be used to design cost-effective control strategies.

It is more difficult to estimate the cost of CBPP control using a combination of immunization, antibiotic treatment, stamping-out, quarantine, movement controls and surveillance. Inadequate data is the major constraint as the data requirements are enormous. Cost estimation becomes easy when the control option is less complicated.

The PACE strategy for effective control and eradication of CBPP involves continuous annual mass immunization over a five-year period. This strategy is built on past experience gained during PARC which showed that the combined rinderpest and CBPP vaccinations carried out under PARC significantly reduced the incidence of CBPP from 1986 to 1995.

The cost of a similar campaign for CBPP is estimated based on the PACE policy of mass vaccinations over a five-year period. A sample of ten countries for which data are available is used along with a number of assumptions. Based on the recent report by Mariner (2003) three vaccination scenarios are used ranging from a coverage of 70% to 90% to achieve total eradication.

Annual and total costs are presented in Tables 1 to 3. A seventy (70%) percent vaccination coverage in the ten countries would require a total of €112 million over the five year period with an initial first year investment of 23% of this amount. At 80% and 90% vaccination coverage, these countries will require €129 million and €144 million respectively. If these estimates were to be extrapolated to the 32 PACE member countries, a CBPP eradication campaign would require €359, €410 and €461 million, assuming a vaccination coverage of 70%, 80% and 90% respectively.

Total cost (€) of CBPP vaccinations in ten countries (70% mass vaccination scenario)

Country	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Ethiopia	6,709,500	5,692,340	5,646,044	5,805,059	5,896,309	29,741,252
Tanzania	4,212,600	3,573,970	3,544,903	3,644,742	3,702,033	18,678,248
Mali	1,909,292	1,619,843	1,606,669	1,651,919	1,677,886	8,465,619
Uganda	2,478,000	2,102,335	2,085,237	2,143,966	2,177,666	10,987,204
Burkina Faso	1,612,800	1,368,300	1,357,171	1,395,395	1,417,329	7,150,995
Senegal	1,040,060	882,387	875,210	899,860	914,005	4,611,522
Cote d'Ivoire	619,920	525,940	521,663	536,355	544,786	2,748,664
Kenya	5,670,000	4,810,428	4,771,305	4,905,684	4,982,796	25,140,213
Ghana	580,580	492,564	488,558	502,318	510,214	2,574,234
Benin	466,550	395,821	392,602	403,659	410,004	2,068,636
Total cost	25,299,303	21,463,930	21,289,365	21,888,961	22,233,033	112,174,597

Assumptions:

1. Cattle population increasing at 1% per year over the base scenario
2. 70% vaccination coverage
3. Depreciation of capital equipment from 20% year 1 down to 65% by year 5.

Total cost (€) of CBPP vaccinations in ten countries (80% mass vaccination scenario)

Country	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Ethiopia	7,668,000	6,505,531	6,452,622	6,634,354	6,738,638	33,999,145
Tanzania	4,814,400	4,084,537	4,051,318	4,165,419	4,230,895	21,346,569
Mali	2,182,048	1,851,250	1,836,193	1,887,908	1,917,584	9,674,973
Uganda	2,832,000	2,402,669	2,383,128	2,450,246	2,488,762	12,556,805
Burkina Faso	1,843,200	1,563,771	1,551,053	1,594,737	1,619,804	8,172,565
Senegal	1,188,640	1,008,442	1,000,241	1,028,411	1,044,577	5,270,311
Cote d'Ivoire	708,480	601,074	596,186	612,977	622,612	3,141,329
Kenya	6,480,000	5,497,632	5,452,920	5,606,496	5,694,624	28,733,672
Ghana	663,520	562,930	558,352	574,078	583,101	2,942,981
Benin	533,200	452,367	448,688	461,325	468,576	2,364,156
Total cost	28,913,489	24,530,205	24,330,704	25,015,955	25,409,178	128,199,531

Assumptions:

1. Cattle population increasing at 1% per year over the base scenario
2. 80% vaccination coverage
3. Depreciation of capital equipment from 20% year 1 down to 65% by year 5.

Total cost (€) of CBPP vaccinations in ten countries (90% mass vaccination scenario)

Country	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Ethiopia	8,626,500	7,318,723	7,259,200	7,463,648	7,580,968	38,248,042
Tanzania	5,416,200	4,595,104	4,557,732	4,686,096	4,759,757	24,014,889
Mali	2,454,804	2,082,656	2,065,718	2,123,896	2,157,282	10,884,356
Uganda	3,186,000	2,703,002	2,681,019	2,756,527	2,799,857	14,126,405
Burkina Faso	2,073,600	1,759,242	1,744,934	1,794,079	1,822,280	9,194,135
Senegal	1,337,220	1,134,497	1,125,271	1,156,963	1,175,149	5,929,100
Cote d'Ivoire	797,040	676,209	670,709	689,599	700,439	3,533,996
Kenya	7,290,000	6,184,836	6,134,535	6,307,308	6,406,452	32,323,131
Ghana	746,460	633,297	628,146	645,837	655,989	3,309,729
Benin	599,850	508,913	504,774	518,990	527,148	2,659,675
Total cost	32,527,675	27,596,481	27,372,041	28,142,947	28,585,326	144,224,470

Assumptions:

1. Cattle population increasing at 1% per year over the base scenario
2. 90% vaccination coverage
3. Depreciation of capital equipment from 20% year 1 down to 65% by year 5.

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COMMUNICATIONS UNIT

THE PACE –COMMUNICATION UNIT

Progress Report

Introduction

The Communication unit adopted its work priorities for part of work-programme 3 and for wp4, based on the recommendations of the mid-term review and the 7th Advisory committee of PACE.

As per recommendations the unit is placing emphasis on activities aimed at improving the PACE visibility(internal and external) , strengthening the PACE national communication components , with a view to improving the information/ communication flow within the epidemiosurveillance networking and at the regional and subregional levels. Emphasis is also placed on activities that will enhance the sustainability of PACE activities once donor funding comes to an end.

Progress –to-date

1. Improving PACE Visibility (Internal and external)

In order to enhance the visibility of PACE , the unit has been producing information and promotional material. The following material has been produced by the unit since the last Advisory committee meeting;

- Two PACE newsletters, both in English and French have been produced
- PACE web-site is under construction
- A PACE-booklet outlining the progress made by PACE is about to be printed by the unit.
- A PACE video documentary has finally been produced and copies given to PACE national coordinators.
- Posters on Progress made towards eradication of rinderpest from the African continent, and another on multi-user and multi-lingual application for animal health information management, have been facilitated by the communication unit, in their production.
- The PACE press kit has been updated during the period under review

2. Strengthening the PACE-national communication components

Since the last Advisory Committee meeting , the PACE – Communication Unit has managed to accomplish the following under the above objective:

- Kenya, Ethiopia, Eritrea, Uganda, Tanzania, Nigeria, The DRC, Senegal , Gambia, Ghana, have been visited and communication needs of these countries determined. Specifically, Ethiopia, Kenya and Tanzania were assisted in preparing their third year workplans. In Tanzania, the Communication unit was assisted in putting together a concept note for a workshop to develop a communication strategy for Tanzania, which is planned to take place in December, 2003.
- A communication strategy development workshop was organized for Eritrean Veterinary Officers in August 2003.
- A communication skills training workshop was organized for the University of Lubumbashi –the DRC in April 2003.
- The Unit is planning to organize a meeting of Deans of Veterinary Schools in January 2004. This meeting is to work out modalities of how the Universities can assist IBAR in sustaining activities that are currently being funded by the European Commission within the framework of PACE-Programme,
- A KAP study training workshop was held in Uganda in May 2003 for participants from Uganda, Ghana, Sudan, Kenya, Nigeria and Tanzania.

Support to IBAR and other projects

In this regard the Unit has been assisting other projects within IBAR, i.e. FITCA, CAPE, and IBAR itself to produce outreach materials. In the case of IBAR and its advocacy and promotional work the unit was utilized to organize an exhibition in Maputo, during the Conference of African Ministers of Agriculture, July 1-2, 2003. The products of IBAR in the form of publications were displayed and some distributed to participants. This exhibition greatly increased the knowledge of African Ministers of Agriculture regarding IBAR.

Administrative Report

Despite the departure of the Communication TA based in Nairobi in September, 2003 the unit continued to implement its planned activities though with some difficulties. Some of the difficulties stemmed from the fact that the number of travel days assigned to the Nairobi based Communication expert were dismally few. This curtailed the implementation of some activities. A request has been made to PCU to increase the

number of travel days of the Communication Expert who has been mandated to carry out the duties that were being carried out by the Communication TA who has left PACE.

A LOOK INTO THE FUTURE

With the transformation of the OAU into the AU, it is envisaged that the unit will increasingly play a vital role in the implementation of IBAR's four year work-plan beginning January, 2004. The draft four year work-plan of IBAR include an aggressive communication policy to put AU/IBAR in the limelight. PACE communication unit is being looked upon to play a major role not only in promoting the PACE visibility, but also that of IBAR as a whole.

At the 27th Ordinary Session of the Ad-hoc Committee on the structural reform of the OAU relating to the restructuring to the restructuring of the scientific and technical offices , resolution NO. Doc. CM/2199, was adopted. The resolution among other things called upon IBAR “ to design and implement an information and communication strategy to disseminate information about its activities to all member states , their representatives at the AU headquarters , partners and potential partners .

At the 2nd Ordinary Session of the African Ministers of Agriculture held in Maputo , Mozambique , 1-2 July 2003, the ministers recognized the vital role IBAR was playing and recommended that additional resources be made available to IBAR. Additionally, the ministers conceded that the activities of IBAR in the animal resources sector were quite useful to the African countries and needed to be promoted in Africa and internationally.

In view of the above observations, the Communication unit of PACE needs to be strengthened to meet the current and future communication challenges i.e. serving PACE as a Programme and IBAR as a whole.

**9ème Comité Conseil du Programme PACE
4-6 novembre 2003, Bamako Mali**



**PACE
Unité de Communication**

Programmes Nationaux Composantes Communication

Indicateurs de progression

Etat d'avancement des Composantes nationales Communication

Méthode

- ✳ Questionnaire envoyé aux trente pays
(retour: 15/30)
- ✳ Rapports d'activités et documents divers en provenance des pays
- ✳ Missions d'appui et de suivi effectuées par l'Unité de Communication
- ✳ Connaissance du terrain

Etat d'avancement des Composantes nationales Communication

Huit Critères :

- ✳ Existence d'un Chargé de Communication qualifié
- ✳ Intégration dans l'équipe PACE
- ✳ Termes de référence et Programme de travail en adéquation avec les objectifs PACE / s'adaptent à la progression
- ✳ Disponibilité des moyens financiers et matériels
- ✳ Production de supports et d'indicateurs d'impact
- ✳ Thématique des activités Communication
- ✳ Type de supports et de matériel produits
- ✳ Utilisation des technologies de Communication TIC

C1 : Existence d'un Chargé de Communication qualifié

- La quasi totalité des pays (25/30) ont un chargé de Communication
- Qualifications et compétences sont estimées insuffisantes malgré le plan de formation PACE et le suivi effectué lors de missions d'appui
- Expériences capitalisées & formation parfois faibles (lié notamment au turn over des cadres)
- Difficultés face aux TIC
- *Un référentiel de compétences des Chargés de Communication des PACE nationaux a été établi par l'Unité de Communication*

C2 : Intégration de la Communication dans l'équipe PACE et dans les SV comme composante transversale

- Les Chargés de Communication sont de mieux en mieux intégrés dans les équipes PACE et disposent d'une relative autonomie de travail sous responsabilité de la Coordination (50%)
- mais assez peu intégrés dans les Services Vétérinaires (hors Programme PACE) / *durabilité ?*
- *Nécessité d'une participation accrue des Chargés de Communication à l'élaboration des DP & budgets et rapports d'activités*
- *Amélioration nécessaire du couple Epidémiologiste/Communicateur*

C3 : Termes de Référence et Programme de travail

- Termes de Référence du Chargé de Communication et les fonctions 'Communication' PACE sont généralement 'bien formulées' par les Coordinations nationales.
- parfois ambitieux (en rapport aux moyens humains, techniques et financiers disponibles) *ex: 'Ramener le climat de confiance entre l'éleveur et l'agent des services vétérinaires'*
- Difficultés à préparer et mettre en œuvre un Programme de travail bien formalisé et globalisé

C3 : Termes de Référence et Programme de travail (2)

Remarques

- (1) Le concept et les activités de Communication sont très peu présents dans les Plans & Budgets Globaux PACE, et par cascade dans les DP.
- (2) Autant le concept & activités Communication étaient clairs dans un **projet d'exécution** de type PARC, autant il est plus difficile de les concevoir et de les formuler dans un **programme structurant** de type PACE

C4 : Disponibilité des moyens financiers et matériels

- Au regard des besoins, dans 75% des pays les moyens financiers (PACE) des Composantes nationales pour les activités de Communication sont estimés trop faibles
- Les SV (hors PACE) ne disposent pas/très peu de budget 'Information-Education-Communication (*durabilité ?*)
- *Nécessité d'Avenant ou de ré-allocation de budget dans les DP ou de financements extérieurs*

C4 : Disponibilité des moyens financiers et matériels (2)

- Disponibilité ou accessibilité à l'équipement 'Communication' globalement satisfaisante
- Possibilités matérielles de travail sur le terrain estimée globalement insatisfaisante par les pays en rapport aux besoins & étendue du pays (nbre de jours/transport/facilités diverses)
- Budgets de production & diffusion de supports & TIC généralement sous évalués (*absence d'expertise dans ce domaine lors de la préparation des Plans Globaux*)

C5 : Production de Supports, Stratégie et Indicateurs d'Impact

- La production (nbre & qualité & diversité des supports) est globalement insuffisante pour répondre aux besoins des éleveurs et des acteurs de la Santé Animale et aux besoins institutionnels dans les pays
- Peu ou pas d'analyse par les pays de l'impact de la Communication qu'ils produisent
- *Nécessité d'innover et/ou de diversifier les supports (Stratégies plus affinées)*
- *Nécessité de continuer à conduire des études KAP dans les pays pour redéfinir et/ou recentrer les thèmes techniques de Communication*

C5 : Production de Supports, Stratégie et Indicateurs d'Impact (2)

- L'impact des activités de Communication est difficile à mesurer:
 - Les changements d'attitudes et de comportements sont lents
 - La masse critique (volume de production de supports) est souvent insuffisante
 - Grande diversité des cultures humaines, des modes d'élevage, des écosystèmes, et de l'histoire de l'intervention des SV dans les pays
 - L'emprise du 'politique' souvent évoquée
- Certains pays font état d'une meilleure adhésion des acteurs et partenaires sur le terrain aux objectifs du Programme

C6: Thématique des activités/supports de Communication
(Classement quantitatif)

- 1. Information sur les maladies animales en référence au PACE national (description, orientation 'surveillance')
- 2. Information sur le réseau d'épidémiologie (description et résultats produits par les labos)
- 3. Information institutionnelle (sur PACE)
- 4. Faune Sauvage & Environnement
- 5. Législation/Privatisation
- 6. Commerce national et international
- 7. Développement et renforcement Institutionnel
- 8. 'People'

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- 4. Faune Sauvage & Environnement
- **5. Législation/Privatisation**
- **6. Commerce national et international**
- **7. Développement et renforcement institutionnel**
- 8. 'People'

**C7: Type et nature des supports utilisés pour informer,
s'informer, former et communiquer**
(budget utilisé / support)

1. Visites, réunions et travail de terrain
2. Bulletin Epidémiologie / Réseau.
3. Radio Rurale
4. Manuels & Guides méthodologiques
5. Plaquettes d'information
6. Supports électroniques & Internet
7. Centre de Ressources / Base de données / Bibliothèques
8. Supports traditionnels

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5. Plaquettes d'information
6. **Supports électroniques & Internet**
7. **Centre de Ressources / Base de données / Bibliothèque**
8. Supports traditionnels

C8 : Utilisation des Technologies d'Information et de Communication TIC

- La plupart des cadres PACE nationaux (estimation 80%) utilisent à des niveaux variables les outils bureautiques standard (Word et Excel principalement) – formation complémentaire (13 pays)
- Insuffisance d'expertise au sein des SV/PACE dans le domaine des TIC
- Bien que professionnellement très valorisée, faible utilisation de la documentation électronique (CDRom, accès au Web, réseau d'échanges par email, etc.)

C8 : Utilisation des Technologies d'Information et de Communication TIC (2)

- Coût élevé de l'Internet dans de nombreux pays
- Usage professionnel des adresses email privées (17 pays/30
- Faible gestion et stockage des informations (gestion non formalisée, turn over des cadres, machines à faibles capacités, etc.)
- Obsolescence rapide des équipements (manque d'expertise dans les PG des pays) / Problèmes PID
- Manque de logiciels spécialisés (coût élevé, non disponibles localement, manque d'expertise)

C8 : Utilisation des Technologies d'Information et de Communication TIC (3)

Cependant:

- **La culture et les usages des TIC pour l'information, la recherche et les échanges est en progression**
- **L'introduction de la PID dans les pratiques**
- **Le site web PACE**
- **Mais les usages des TIC sont encore trop informels (cybercafés, etc.)**

Conclusion provisoire

Selon ces critères, au regard des objectifs PACE, et en termes de durabilité post PACE :

- 40-45 % des pays : Communication satisfaisante
- 25-30% des pays: Communication moyennement satisfaisante
- 30% des pays: Communication faible

Conclusion provisoire

En Communication, les efforts devraient porter sur :

- Analyse de l'impact
- Développement de thèmes Communication:
Privatisation/Législation/Enjeux économiques et commerciaux
- Formation des épidémiologistes à la Communication
- Développement des usages des TIC dans les pays à travers PID et PACE Website
- Utilisation des médias transnationaux
- Accroissement des connaissances professionnelles des éleveurs et opérateurs SA

Merci pour votre attention

DATA MANAGEMENT

PROGRESS OF PID IMPLEMENTATION (THE FIRST 372 DAYS)

DATA MANAGEMENT UNIT

INTRODUCTION

Lack of adequate information has always considered as the major constraint for formulating sound projects in animal health in many African countries. The problem involves both the capacity of collecting baseline and activity monitoring data and processing it as to produce quality and sufficient information for decision making, planning and monitoring. More specifically, lack of appropriate information management tool for the storage and analysis of data and dissemination/sharing of information hamper even the little data collected by many countries.

In the context of PACE, enhancing the capacity of information management is given due attention as this constitute the base for every type of subsequent action, planning, making decision or monitoring activities. Since its inception, the Programme has aggressively embarked on establishing a Unit in charge of information management and went ahead looking for adequate tool to be used in member countries. One of the information management tools suggested for use by PACE and its member countries was *TADinfo*, a Transboundary Animal Diseases Information System, developed by the EMPRESS group of the Food and Agriculture (FAO) of the United Nations (UN). Based on the recommendations of the third PACE Advisory Committee Meeting (ACM) held in Addis Ababa, Ethiopia in January 2001, the Data Management Officer (DMO) of PACE has familiarized himself with the application and suggested some enhancement as to accommodate the needs of the Programme. Those involved in the development of *TADinfo* at that time recognized the limitations of the Access based application and started already to develop the Java Version, received the suggestions made and promised to incorporate to the new version. As the Java version of *TADinfo* was not ready by April 2002, about 15 months later, a decision was made by PACE to go ahead with designing a database which suits the purposes of PACE and serve as information management tool for National Veterinary Services. The proposal was presented to the fifth PACE ACM, which advised to proceed with the design of the application.

The Oracle based multi-lingual, multi-user and Internet enabled database was designed between July and October 2002 and the first version was presented to the sixth PACE ACM. The meeting appreciated the achievement in short time and recommended to develop the remaining modules and speed up the implementation of the application in PACE member countries. This reports highlights the progress made in improving the database, baptised as PACE Integrated Database (PID), and the implementation in different countries and PACE headquarters and Regional office.

ENHANCEMENT OF PID

The sixth PACE ACM recommended that the DMU continue with developing further the application and speed up its implementation in member countries. Based on this, PID was continuously improved thanks to the technical support agreement signed between the company, which programmed the application, Software Technologies Ltd. and PACE. Since the first release in September/October 2002, feedback from users in different countries was gathered and regular updates made at an average of once every three months. Hence, the current version of PID is version 1e, denoting the fifth release since the start. This current release has all the four proposed modules at the fifth PACE ACM with built-in Performance Indicators. Refinement of this version will continue at similar interval till the second version, planned to begin by May 2004.

Similarly, the original Oracle software purchased about one year and a half ago was the version 8i. As this version was designed before the introduction of Pentium IV machines and Microsoft Windows XP Operating System, installing PID on computers with this environment had problems. An Oracle patch files was used as interim solution on Pentium IV machines, however, the Windows XP problem remained unsolved. Provision for the upgrade of the software was made at initial phase of the PID project and the DMU has now secured Oracle 9i capable of solving the above-mentioned problems.

IMPLEMENTATION IN COUNTRIES

By the time of writing this report (October 2003), PID was introduced in 16 countries and at VSF Belgium, a non-governmental organisation implementing PACE in Southern part of the Sudan. The implementation included the installation of the application and training of staff involved in information management at PACE and/or Veterinary Services. Table one shows the list of countries where PID was installed and number of staff involved in information management trained in each of these. Similarly, map 1 portrays the geographical coverage of PID implementation in Africa.

Table 1, List of countries where PID has implemented and number of staff trained.

No	Country/PACE Programme	Period of implementation	Number of Senior Staff Deployed	Number of Staff trained
1	Gambia	28/09 – 06/10/2002	1	2
2	Kenya	07 – 08/10/2002	3	4
3	Ethiopia	10 – 18/12/2002	11	8
4	Tanzania	23 – 28/02/2003	8	12
5	Somalia	06/03/2003	0	3
6	VSF Belgium/S. Sudan	11/03/2003	1	1
7	Mauritania	21 – 24/03/2003	4	1
8	Guinea	24 – 28/03/2003	9	4
9	Rwanda	13 – 17/05/2003	3	2
10	Nigeria	16 – 18/06/2003	PID Installed	Training pending

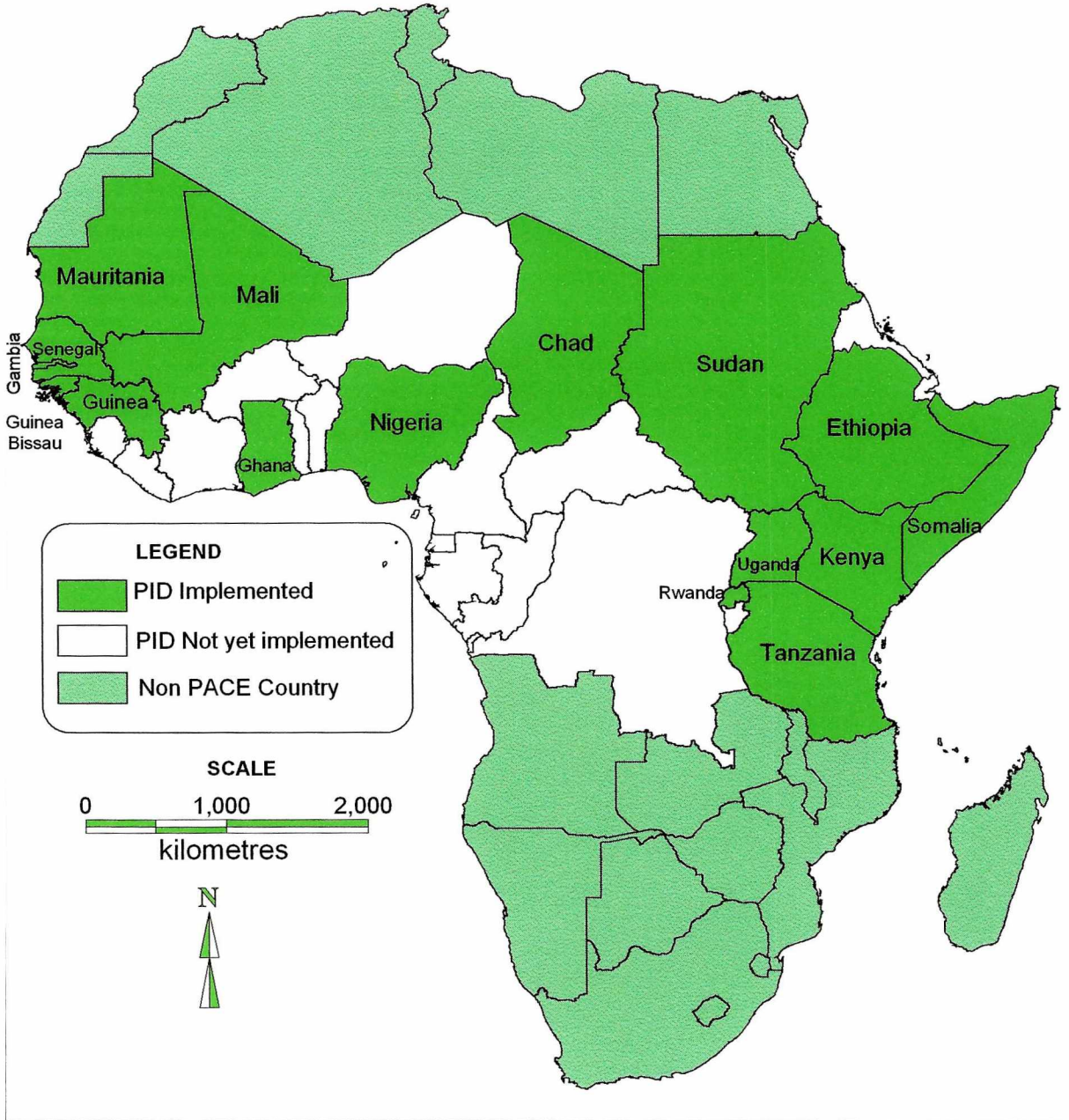
11	Uganda	08/2003	PID Installed	Training planned for mid November 2003
12	Guinea Bissau	19 – 23/08/2003	4	6
13	Senegal	24 – 27/08/2003	2	1
14	Sudan	26 – 31/08/2003	12	15
15	Ghana	21 – 27/09/2003	9	7
16	Chad	17 – 23/10/2003	8	7
17	Mali	Implementation planned for 28 – 31/10/2003		
		Total	75	73

Awareness of senior staff members of the livestock department and veterinary services on PID was given due attention. During each mission a 20 to 30 minutes Power Point presentation on the components and facilities of PID followed by discussion were organised. Such presentations were attended in some countries by Ministers of Animal Resources (i.e. Sudan).

During the reporting period, the DMU has produced PID installation Guide and Users Manual both in English and French and distributed to all countries where the application has implemented. Training course notes were also produced in English and translation of these in French is underway.

As can be seen from Table 1, an average of four days were used for the installation and configuration of both the training database and the one to be used on day-to-day basis and training of staff. Note that the installation and configuration of Oracle, the relational Database used as engine for PID, is complex and depending on the memory and processing speed of the machine may take between an hour and two. If the number of computers to use for training purpose is large, the installation and configuration takes about a day or more. In some countries this was further complicated by the lack of an adequate computer for the installation of Oracle and PID. As a large-scale relational database, Oracle requires very good processing capacity and memory, criteria which several computers in PACE countries lack. Despite the fact that computer specifications for PID purpose is indicated and countries are requested to provide the specification of their computers prior to organising missions there, the reality upon arrival is different. Hence, searching for adequate computer or adjusting the existing one like upgrading the Operating System takes away hours and some time days from the mission. The obsolete Server at PACE Ethiopia, the clone Server with wrong configuration at PACE Ghana, lack of computers with Pentium processors at PACE Guinea Bissau and Chad are some examples. Out of five computers used by PACE Guinea Bissau, four have a Celeron Processor while the fifth has Duron. These processors are known to have about half the memory cache of the Pentium processors and were not able to handle Oracle. Similarly, nine of the 10 computers presented for PID installation at PACE Chad have either Celeron or Duron processors and in two of the cases the Operating System was Microsoft Windows 95. It was only the tenth computer, which was adequate for PID installation and the National Co-ordination has to hire computers for PID training.

Map 1, Geographical coverage of PID implementation



It was also noted that staff in most countries are familiar with the small-scale database such as Microsoft Access or dBase and their expectations were for something very basic and simple. This coupled with limited knowledge and experience of computing make some staff hesitant to use PID. Training of staff on general computing is very important to overcome such problems.

Based on the information gathered from countries during the needs assessment phase of PID design, three multi-user versions of Oracle with five concurrent user licenses were purchased for Ethiopia, Ghana and Kenya. Installation of PID on a Server and making it available to those clients connected to the network couldn't take place in all the three countries and instead a stand-alone version was implemented. The main reason for this was the sub-optimal or obsolete Server in Ghana and Ethiopia respectively and the delay in the implementation of the Local Area Network in Kenya. Improvement of the current situation is awaited and once adequate Server is secured, the application and the data on a stand-alone machine will be transferred to this.

Till very recently, Nigeria was in forefront in implementing PID at state level and linking this to the Federal application. The National Coordination has purchased computers for the seven PACE Zonal offices, installed PID and distributed. Ethiopia, Sudan and Tanzania has also an immediate plan to install PID at regional level where data is entered in a decentralised manner and analysis for the specific Regional State (Ethiopia), State (Sudan) or Veterinary Investigation Centre (Tanzania) is done and raw data transferred automatically as e-mail attachment or on disk for integration to the national database and analysis at country level.

Approaches used - The approaches used in PID implementation included the training and deployment of national experts for cross-border experience sharing and direct implementation by the DMO. Staff members from Tanzania (Dr. Francis Sudi), Mauritania (Dr. Idrissa Diara), Guinea (Dr. Alfred-Saki Sarapogui) and Chad (Mr. Ougal Mahamat) were trained to assist in PID implementation in Eastern, Western and Central Africa countries respectively. So far, two of the four staff members (Dr. Sudi and Dr. Sarapogui) were sent on PID implementation missions to Rwanda and Guinea Bissau and Senegal respectively and successfully completed their assignment. This, in addition to reducing the workload of the DMO in countries, will foster in creating regional capacity and experience sharing among African countries and experts. On a similar note, staff members, who took part of one of the regional training session managed to install and configure the application in Uganda. Similarly, the Technical Assistant of PACE Nigeria, Dr. Yann Michaux, has installed PID in Nigeria for the Federal Veterinary Services and seven Regional PACE offices in the country making use of the installation guide and with minimal support from the DMO. This demonstrates that despite the fact that the installation and configuration of the database is complex, proficient computer users can easily cope with it following the simple and illustrative instructions provided in the installation guide.

To speed up PID Implementation in the remaining PACE countries, it is planned to train TAs on this and deploy them. The training is foreseen towards the end of October 2003 in Bamako, Mali. This is again a pragmatic solution as to ease the pressure on the DMO to cover all PACE countries with limited number of mission days allocated.

IMPLEMENTATION AT PACE HQ AND REGIONAL OFFICE

PID has implemented and continuously upgraded at PACE/IBAR headquarters in Nairobi. The last update was done very recently and re-connection of users needs to be established on some client machines. Despite these efforts, data entry to the system has two problems. The first and the main problem is the delay in securing data entry clerk, who can assist in entering available data at office and those coming from countries. The second problem is the need for readjusting reporting forms for data coming from countries. The form currently in use doesn't accommodate most parameters and a draft form, which could comply with this, was presented at PACE third co-ordination meeting held in Arusha, Tanzania in June 2003. The form for passive surveillance was discussed and participants agreed to adopt it. This is expected to ease the second problem soon.

Attempts were made to install PID at PACE Co-ordination Office for West and Central Africa at Bamako in March 2003. However, the capacity of the Server was limited and improvement of the LAN was recommended. As most of the staff members of the Office were on mission, only one-client machines was connected to the database on the Server. In general, the installed application for the Bamako Office need to be updated and user connected, once the situation of the Server and LAN improves. The purpose of PID at Bamako office is to mirror data received at PACE headquarters and make it available to experts there.

OTHER TRAININGS SESSIONS

With the objective of boosting information management capacities in member countries, two Regional training sessions on data management, GIS and PID were organised and delivered in 2002 and 2003. The first training session, organised by the PACE DMU with the assistance of the Regional Co-ordination Office for West and Central Africa and the International Trypanotolerant Centre (ITC) in Gambia attracted 16 trainees from 15 West and Central African countries. Similar training session was organised for Eastern African countries in Nairobi in May - June 2003 with the assistance of the PACE Epidemiology Unit. Twelve participants from six countries took part of this training where instructors from ILRI and Software Technologies were invited to cover the *GIS* and *Data Management using Oracle* components of the training respectively. The DMO delivered the training on PID.

While the Regional trainings are very important and efficient way of capacity building in PACE member countries, organising these is becoming more and more difficult. This is because of the training budget, which is with the individual countries and not by PACE headquarters where the training is organised.

PID IN NON-PACE COUNTRIES

Different opportunities and ways were used to create awareness on PID among users in non-PACE countries. To this effect, brochures were distributed at OIE Regional Meeting held in Maputo in February 2003, PID was presented at the 2003 SADC Livestock Technical Committee meeting held in Mbabane, Swaziland in April 2003, and poster was presented at South African Society of Veterinary Epidemiology and Preventive Medicine conference held between August 21 and 22 2003 in Pretoria.

As a result of the awareness created, increasing number of users are forwarding their requests for PID to PACE and IBAR. The SADC animal health sub-committee has also made the following suggestion (extract from the meeting report) to member countries during the 2003 meeting.

4.1.1 The Committee urged Member States to explore the possibility of using the PACE Integrated Database (PID) developed by AU IBAR. This is an information system for the storage, transfer and analysis of livestock data on health and production.

NEXT STEPS

In addition to continuing the implementation of PID in the remaining PACE countries, collection of ideas and feedback for the second version of PID is an immediate task of the DMU. Requests for PID implementation from Gabon, Burkina Faso and cote d'Ivoire are overdue and will be entertained immediately, now that the TAs can assist in installing the application and train staff members. Release of the final version of the reporting form in English and French and finalising the recruitment of the Data Management Assistant are also top priorities of the Unit.

The availability of PACE/IBAR Website paves way for putting the next version of PID on line. Although the initial investment at the headquarters or where the database will be hosted on the Web is usually high, that avoids current problems of hardware and software for PID implementation in member countries. If there is a reliable connection, another issue to consider seriously before going on line, users need only browsing software (Internet Explorer or Netscape) and a valid username and password to access the database (PID). Filtered information will be available for general public on the Website. Planning on how the second version of PID incorporates these facilities is another immediate task for the DMU.

CONSTRAINTS

The following is the list of major problems faced during PID implementation and proposed solution to some of them.

- ***Sub-optimal and obsolete computing facilities (both hardware and Operating System)*** - An engine PID uses for storage and analysis of data is Oracle database. This is a powerful relational database, which requires very good processing capacity and memory. Computing facilities in several PACE member countries do not comply with requirements and there is a pressing need to improve this, not only for PID purpose but also to keep pace with fast changing information and communication technology. Hardware and Software specification are provided to countries (and will continue to be circulated among others) to facilitate the purchase. However, in some countries the availability of machines with required specification and the price are still problematic. For example, a desktop computer with adequate specification for PID cost about 800 Euro in Europe and 1000 in Nairobi, while the some machine will cost around 3000 Euro in N'djamena. Purchasing computers centrally will ease this problem and facilitate the installation of PID at one site. If this is coupled with regional training, trainees will take home a ready-to-use PID to their respective countries. However, as there are no budgetary provisions for such purchase and regional training at PACE headquarters, this seems difficult to materialise. The above mentioned approach of putting PID on-line may ease the problem but countries with poor computing facilities are usually those with poor Internet connectivity as well.
- ***Reduced mission days*** – Due to the shortage of funds at the PACE headquarters, the number of mission days were trimmed to the minimum and the one allocated to the DMO doesn't correspond with planned activities. The 45 mission days approved for the DMO, which includes meetings and activities in countries, will exhaust before mid-November 2003 (before the end of the first six months of the fourth year PACE implementation). It is not yet clear whether the approved mission to Uganda during the third week of November 2003 can go ahead or not.
- ***Confusion on which database to use in some countries*** – There are countries, which have their own home-grown database and have adopted also PID and TADinfo. Although the decision to select the best database for the purpose of the national interest lies with the countries, it is better to find ways of working towards serving the interest of the countries instead of confusing them.
- ***Delay in signing technical support contract*** – There was unnecessary delay of four months for renewing a technical support contract entered with the company, which programmed PID. This, in addition to frustration and mistrust, lead to loose continues technical support for the mentioned period and delay in receiving quarterly upgrades.
- ***Logistical problems to organise regional training on PID*** – It has been mentioned earlier that national programmes manage training funds while the regional office, which organises the training, makes commitments on behalf of the countries. When some countries fail to send their trainees, as happened during the

two regional trainings on data management, GIS and PID, training plans and therefore the commitment is affected leading to embarrassment.

- ***Lack of Data Entry Clerk*** – Despite several efforts made to recruit an information management assistant for data entry and support other DMU activities this is not yet concluded. Hence, more and more data is accumulated for entry delaying in this way several information management activities at PACE headquarters.

CONCLUSIONS

The design of PID and its installation in countries and training of staff on how to operate it is a big achievement. The quick design, test and debugging of PID, its continues refinement, implementation in 16 countries and training of over 100 national experts during the first 372 days indicate an encouraging step in the application. The success of PID, however, is the time when countries start using it on day-to-day basis. Although the DMU of PACE is working very hard to achieve this, current problems faced need to be solved and full cooperation from countries is required to achieve this.

DESCRIPTION OF PARAMETERS TO COMPLETE IN EACH COLUMN OF THE AU-IBAR MONTHLY DISEASE REPORTING FORM

Part I - Introduction

Reporting Unit

Country	Country filing the monthly disease report
Region	Region or State (2 nd administrative layer in the country) from where the report is coming
Province	Province or any 3 rd administrative layer in the country from where the report is coming
District	District or local administration or any 4 th administrative layer in the country from where the report is coming

Note – In countries where one or both intermediate layers (i.e. Region, Province) do not exist, please leave the boxes blank and fill only the layer applicable.

Reporting Period

Month	The name of the month for which report is prepared
Year	The year for which report is prepared in full (e.g. 2003)

Reporting Officer

Name	The name of the person preparing the report at the district or lower administrative level
Position	Responsibility or duties of the reporting officer (e.g. District Veterinary Officer, team leader, etc.)
Signature	The signature of the person preparing the report

Date Report

Prepared	Date in dd/mm/yyyy form when the report is prepared. This is usually towards the end of the reporting month or the beginning of the following.
Received at Vet. Dept.	This is the date in dd/mm/yyyy form when the report is received at the headquarters of the veterinary services in the country.
Received at IBAR	This is the date in dd/mm/yyyy form when the report is received at IBAR office in Nairobi. The two dates are completed at the headquarters of the veterinary services in the country and at IBAR in Nairobi respectively. Therefore, reporting officer at districts shouldn't complete these.

Is there outbreak to report? The complete question directed to the reporting officer is "Have you had any outbreak during the reporting month in your district? The expected answer is YES or NO and this is done by placing a cross "X" in one of the provided boxes. If the answer is NO, then there will be no need to complete the remaining column and the report should be sent as it is. However, if the answer is YES, the details of EACH outbreak should be provided on a separate ROW. For multiple species diseases, reporting officers

are expected to provide separate details per species and outbreak.

Part II – Details

This is the part of the report form where details of each outbreak are provided on separate rows for each of the columns labelled from a to ab. The letters from a to ab under the column names are to guide users the sequence of filling the form, divided in to three parts because of space limitation, and its continuity. Once the details of an outbreak is entered to columns a to m, reporting officers have to CONTINUE filling details of the same outbreak in to the remaining columns labelled a) to ab). Although the number of rows provided in the sample reporting form is five, users can extend rows to suit the number of outbreaks they are reporting in a given month. For example, if the reporting form is increased to two pages, users can have at least 14 rows for details of outbreaks.

- a) Disease & Serotype The name of the disease (in a known abbreviated form) suspected or confirmed during the outbreak and the serotype of the agent involved if known (e.g. A, O, C, SAT 1 etc. for FMD)
- b) Date occurred The date in dd/mm/yyyy form when the first case of the outbreak was observed
- c) Date reported to vet. The date in dd/mm/yyyy form on which the outbreak was first communicated to local veterinary staff
- d) Date investigated The date in dd/mm/yyyy form on which the outbreak was first investigated by local veterinary staff
- e) Date of final diagnosis The date in dd/mm/yyyy form on which the outbreak was confirmed by laboratory or final diagnosis was made by clinical, postmortem or another means or combination of these.
- f) Name of village affected The name of the village or locality where the outbreak was observed
- g) Latitude (in DD) The latitude in degree decimal (to 3 decimal place precisions) of the village affected by the outbreak
- h) Longitude (in DD) The longitude in degree decimal (to 3 decimal place precisions) of the village affected by the outbreak
- i) Species affected The name of the species of animal affected (i.e. Bovine, Ovine, Caprine, Avium, etc.)
- j) Age group The age group of the animals affected during the outbreak
- k) Sex The sex of the animals affected during the outbreak
- L) Production system The type of livestock production system affected by the outbreak
- m) Control measure The type of control measure(s) used to stop the progress of the disease outbreak being reported
- n) Basis for diagnosis The method (laboratory, post-mortem or clinical, etc.) used to arrive to final diagnosis
- o) Number of suscep. The number of animals (per species for multi-species diseases) susceptible to the disease being reported (Population at risk)
- p) Number of cases The number of animals (per species for multi-species diseases) affected by the disease being reported (clinical cases)
- q) Number of deaths The number of animals (per species for multi-species diseases) died as a result of the disease outbreak being reported
- r) Number of slaug. The number of animals (per species for multi-species diseases) slaughtered as a result of the disease outbreak being reported

- s) **Number of destroyed** The number of animals (per species for multi-species diseases) destroyed (killed and buried or burnet) as a result of the disease outbreak being reported
- t) **Number of recoverd** The number of animals (per species for multi-species diseases) affected by the disease outbreak being reported but finally recovered
- u) **Outbreak stopped?**The column expects answer to the question on whether there are still clinical cases of the disease outbreak at the end of the reporting month or not. Reporting officers are expected to fill the column with “Continued” or “Ended”
- v) **Disease** In case of continuing giving details of an outbreak, please enter the name of the same disease outbreak being reported. However, if there was a prophylactic vaccination for other disease(s), the name of this (these) should be entered.
- w) **# control vaccination** This is the number of animals per species vaccinated to stop the progress of the disease outbreak.
- x) **# Prophylactic vaccination** This is the number of animals per species vaccinated to prevent the infection of animals (in absence of disease)
- y) **Source of vaccine** The origin (the manufacturing institution) of the vaccine used for control or prophylactic purpose.
- z) **Date produced** This is the date the vaccine used was manufactured
- aa) **Expiry date** Date on which the vaccine used for control or prophylactic purpose expires (ends)
- ab) **Tested for quality?** This column expects an answer on whether the vaccine used for control or prophylactic purpose was tested for quality at Panvac or not. The answer is YES or NOT



African Union, Interafrican Bureau for Animal Resources (AU-IBAR)

P.O.Box 30786, Nairobi, Kenya - Fax +254 20 226565 - e-mail pace@oau-ibar.org

Monthly disease reporting form

Reporting Unit: Country Region Province District

Reporting Period: Month Year
(name of the month) *(yyyy)*

Reporting officer: Name Position Signature _____

Date report: Prepared Received at Vet. Dept. Received at IBAR
(dd/mm/yyyy) *(dd/mm/yyyy)* *(dd/mm/yyyy)*

Is there outbreak to report? YES NO *(mark with X an appropriate box)*

For each outbreak, please enter the following parameters in columns labelled from a) to ab)
 Please provide details for each species on different lines for multi-species diseases

Disease & Species	Date				Name of village affected	Latitude (in DD)	Longitude (in DD)	Species Affected	Age group	Sex	Production system	Control measure
	occurred	repor. to vet	investigated	final diagnosis								
	b	c	d	e	f	g	h	i	j	k	L	m

Disease & Species	Number of						Outbreak stopped?
	suscept	case	deaths	slaug.	destroy	recover	
	o	p	q	r	s	t	u

Disease	# Control vaccination	# Prophyla. vaccination	Source of Vaccine	Date Produced	Expiry date	Tested at PANVAC?

VETERINARY LEGISLATION AND PRIVATISATION UNIT

VLPsU

HALF-YEARLY REPORT (April - October 2003)

Short report for 8th AC

Foreward:

During this term, the activities of the unit have been reduced to 2 months, having been stopped from the 11th May to the 22nd September due to a gap between the TA contract and its extension.

However, the TA has still organized and animated, out of contract, two workshops planned since a long time in collaboration with French cooperation and French National Veterinary Board in Paris on 24th and 25th May.

1. INTRODUCTION

1.1 OVERALL APPROACH

The reorganization of national Veterinary Services, a review or a real enforcement of the veterinary legislation, introduction of the concept of Animal Health Accreditation (*mandat sanitaire*) or its extension to epidemiosurveillance, and the reinforcement of professional organizations such as veterinary boards have still remained priorities. The unit has paid a close attention to the **status and ways of supervision of CAHW**, and collaboration with OIE has been sought on this issue.

the following priorities have been addressed:

- A laboured thought on the roles, status and uses of animal husbandry auxiliaries in veterinary services delivery systems.

1.2 THRUSTS ADDRESSED

The subunit is addressing mainly thrust 2: "Greater privatisation of veterinary services and public/private sector linkage in the field"

1.3 ADMINISTRATIVE REPORT

Not relevant for this subunit.

2. TECHNICAL REPORT
2.1 SUMMARY TABLE

ACTIVITIES	RESULTS/ ACHIEVEMENTS	Objectively Verifiable Indicators	PROBLEMS/ CONSTRAINTS/ COMMENTS	RECOMMENDATIONS
Promote OAU/IBAR privatization policy	<i>Mission in Ethiopia and Eritrea (2)</i>	<i>Draft legislation for Ethiopia Draft legislation for Eritrea</i>	<i>The privatization policy has not yet been adopted at AU level because it was too late to register it on the calendar of the last Ministers meeting held in Addis Ababa in March 2002.</i>	<i>The best way to get them adopted by the next Ministers meeting (and the one of PACE) is to see them to all AU members in order to obtain their assent</i>
Analyse the relationship between the Bank and the veterinary profession in each country visited	<i>See boxes below Done in Ethiopia</i>		<i>Not applicable in Eritrea where the privatisation process cannot start by lack of human resources</i>	<i>Training of new v</i>
Foster the creation of guarantee funds to support loans for private veterinarians	<i>Audit of memorandum between bank and PACE in Ethiopia</i>	<i>On coming memorandum & Mission report</i>	<i>Ethiopia had launched a credit line managed by the bank and not a guarantee fund.</i>	<i>Transform the credit line in guarantee as long as money reimbursement is coming back.</i>
Audit the existing memorandum of understanding between the bank and the "privatization scheme" in countries	<i>Audit of memorandum between bank and PACE in Ethiopia</i>	<i>On coming memorandum & Mission report</i>		<i>Transform the credit line in guarantee as long as money reimbursement is coming back.</i>
Propose a by-product model inspired by the KVAPS experience to manage the guarantee funds and loans for privatization of veterinarians	<i>Audit of loans contracts between private veterinarians and Bank in Ethiopia</i>		<i>Too early to be done in Ethiopia</i>	
Determine with the DVS of countries visited the situation of the country vis à vis the re-organisation of VS and assist him to determine the ways to go forward	<i>Done in Ethiopia Done in Eritrea through 2 seminars (April and October)</i>	<i>Minutes of the 2 seminars in Asmara</i>	<i>DVS of Ethiopia is pro-poor orientated and see VS as a public good only. DVS in Eritrea has launched the process of restructuring the VS</i>	<i>Prospects for privatization seem very hopeless for next months in Ethiopia Follow the process in Eritrea</i>
Participation in International meetings	<i>May: 1. Organization and animation of a seminar about "Role, place & status of non diploma holders animal health auxiliaries", in collaboration with OIE and French cooperation. For each country, a representative of veterinary administration & a representative of the private sector were invited. 2. Organization of a meeting with all Veterinary Boards or</i>	<i>Minutes of the seminars</i>	<i>Organization of meetings in May and participation in September meeting have been done out of PACE budget because of the administrative situation of the TA (contract not signed). Further more, the TA has worked without any payment for these 3 meetings.</i>	<i>Ensure a secure administrative environment for PACE experts</i>

	<i>Councils chairpersons in collaboration with French Veterinary Board chairman. September : presentation of a paper on harmonization of activities for national veterinary services and private veterinarians on the basis of OIE International Animal Health Code October: Second meeting of the OIE ad hoc group on relationships between private sector and public sector</i>			
Design an evaluation model for assessing the level of reorganisation of veterinary services at national level.	<i>Done in first half-year</i>	<i>document</i>		
Audit the veterinary legislation in countries during missions	<i>Done in Ethiopia with national PACE team Started and still on going for Eritrea</i>	<i>Recommendations produced for countries</i>	<i>A mission planed for Nigeria in June was not possible due to TA contract ending.</i>	
Diffuse the guidelines on veterinary legislation	<i>Done in Ethiopia and Eritrea</i>	<i>Documents given</i>	<i>Those guidelines are available since a while as regards pharmacy, veterinary practice, veterinary deontology code, veterinary board, and paravets. Documents are also available for sanitary mandate, but only in French</i>	<i>Reinforce the translation capac. of PACE Guidelines will be refined according the new OIE recommendation: veterinary statute body, and definiti and regulation of paraprofessional</i>
Meet the DVS in countries to check the status of the country vis à vis the IBARs guidelines and stress on the role that should be played by private vets and their para-veterinary networks to reinforce the official sanitary surveillance capabilities of the country	<i>Done in Ethiopia and Eritrea</i>	<i>missions report</i>	<i>Private vets in Ethiopia are shut up indoors selling drugs and kept away from field activities: hence they cannot perform any role in epidemiosurveillance networks and CBAHWs poorly & costly monitored by public veterinary services or NGOs have the responsibility of epidemiosurveillance at field level. Eritrea has a lack of human resources for privatisation.</i>	<i>It will be difficult to change the stron political options of decision makers in Ethiopia, that thrc their organization and policy choice don't allow (wish the private sector play a role at field level. Training of new v is essential in Erit (10-15).</i>
Propose models of intervention of private veterinarians through the mandat sanitaire	<i>Done in Uganda</i>	<i>Mission report</i>	<i>Uganda is good willing to launch contracts for private vets for official tasks (mandat sanitaire)</i>	<i>Bring a close back stopping to Ugan for the launching mandat sanitaire</i>
Organize a meeting between Anglophone and Francophone chairmen of veterinary boards to share experiences.	<i>Done in Paris in May (see above)</i>			

Generate meetings between DVS and Veterinary boards chairmen during missions in countries to sensitise decision makers about the necessity of reinforcing the roles of the veterinary board or council	<i>Not applicable in Eritrea Composition of the board designed for Ethiopia</i>	<i>Recommendations of mission report in Ethiopia</i>	<i>First design of Veterinary Board in Ethiopia gives empowers the public sector in the Board</i>	<i>Reduce the power veterinary administration in board by following the VLPU recommendation: composition of the Board</i>
Promote during missions in countries the farmers-associations model to frame the activities of paravets	<i>Done only through Paris workshop on animal health auxiliaries (see above)</i>	<i>Minutes of the workshop</i>	<i>Farmers association model is going against NGOs model for the monitoring of CBAHWs NGOs model needs external funds.</i>	<i>Adapt models to countries. Advocate for farm associations model</i>
Design, in close collaboration with the economic unit, a questionnaire that could assess the cost and benefits of the re-organisation of national veterinary services from various levels.	<i>Not done this year</i>		<i>The two units had not enough time to meet and brainstorm about this activity</i>	<i>This activity is postponed for Y4</i>
Audit the veterinary legislation in countries during missions	<i>Done in Ethiopia with national PACE team Started and still on going for Eritrea</i>	<i>Recommendations produced for countries</i>	<i>A mission planned for Nigeria in June was not possible due to TA contract ending.</i>	
Diffuse the guidelines on veterinary legislation	<i>Done in Ethiopia and Eritrea</i>	<i>Documents left</i>	<i>There is usually a very low level of competence in legislative issues in countries Veterinary Services and the VLPU guidelines are not always sufficient to allow countries to review their legislation.</i>	<i>Back stopping missions and close and personalized audits are necessary</i>
Support countries for designing their WP & CE	<i>Not applicable for VLPU this half year</i>		<i>From one year to another, countries are not always taking in account the recommendations done and some countries are really undervaluing the question of re-organization of their veterinary services. The country reports are not fully detailed about the privatization process.</i>	<i>Being more strict the acceptance of countries as concern privatization issues, that are a part of their general commitment to the PACE project. Further more, reorganization of Services are an essential step towards their conformity to OIE criteria for quality VS.</i>

2.2 Conclusion

VLPU activities have been severely hampered by administrative failures during this first half of the 4th year. However, the unit has been strongly keen to carry on the planned seminar on animal health auxiliaries.

The recommendations of the seminar' have emphasized the necessity for a close monitoring of these auxiliaries, "chosen by the farmers among their community and regularly legitimized by it through the existence of a "tripartite protocol of collaboration between the auxiliary, the farmers and the vet". The workshop has also underlined the necessity for NGOs involved in the process (and often useful, in the beginning, to launch the systems) to include exit strategies in their planning of activities. On a concrete point of view, NGOs are requested to seek on an autonomous functioning of CBAHWs system, emancipated from the dependence of external funding drained by them.

During the workshop, a document of policy about animal health auxiliaries has been distributed in the name of IBARⁱⁱ. By leaving a substantial role to the farmers themselves in the management of AHA, the recommendations of the seminar seem to invalidate the policy proposed, where, weirdly, the farmers are totally absent. Furthermore, it appears that the workshop has privileged a real participatory approach of the basic animal health delivery between the beneficiary (farmers), the performer (auxiliary), and the professional (veterinarian, and, being implicit here, the private vet). Regrettably the policy document does not refer to any participation from the farmers themselves, and it appears even difficult to position the private practitioners in this so complicated hierarchical top-down monitoring system that seems to have been designed mainly for a system involving costly NGOs or governmental veterinary service whose one can wonder where they could get the money for this supervision.

It is unfortunate that the decision of broadcasting IBARs policy has been clumsily done during the workshop, and before its conclusions, because in spite of having had not any influence on the teamwork of the participants, this policy is showing now an obvious and regrettable discrepancy between the position expressed by IBAR and the feelings of the countries (lets remind that the audience was composed by two representatives of PACE countries, one for the veterinary administration and the other one for the private sector and Veterinary Board).

We think that there is now a necessity for IBAR to amend its policy according to the will and wishes expressed by PACE countries on this controversial subject.

RECOMMANDATIONS

Considérant le rôle important et souvent incontournable joué en Afrique par des intervenants non vétérinaires en élevage et santé animale,
Considérant les premiers résultats du groupe ad hoc de l'OIE précisant le rôle des services et autorités vétérinaires officiels dans la détermination des rôles, places et statuts des para professionnels,
Considérant les obligations de qualité des services vétérinaires auxquelles doivent se soumettre les pays exportateurs de produits de l'élevage,

L'atelier recommande :

1. de réaliser des études d'impact (incluant une démarche participative) sur le rôle joué par les auxiliaires dans les pays où l'expérience a été menée ;
2. de définir et de fixer au niveau national les champs d'attribution et de fonction de l'auxiliaire d'élevage ;
3. d'harmoniser les formations des auxiliaires au niveau national sur la base de référentiels de compétences à partir d'une approche participative ;
4. d'inscrire le travail de l'auxiliaire dans le cadre d'un protocole ou d'un contrat liant les différents partenaires que sont l'éleveur, l'auxiliaire et le vétérinaire. Ce protocole devra préciser les modalités de la rémunération de l'auxiliaire ;
5. de garantir la pérennité des missions confiées aux auxiliaires, en demandant à tous les intervenants (projets, ONG,...), souvent utiles dans la mise en place initiale de tels systèmes, mais ne pouvant en assurer la pérennité, d'inscrire la passation de relai dans leur stratégie ;
6. de s'assurer que l'auxiliaire soit choisi par la communauté des éleveurs en son sein et régulièrement légitimé par elle ;
7. de demander à chaque Etat de définir l'Autorité compétente responsable de l'enregistrement des auxiliaires et des structures chargées de leur formation en précisant la place de l'Ordre National des Vétérinaires au niveau de cette instance.

Union africaine / Bureau interafricain des ressources animales

Politique en matière d'auxiliaires d'élevage

Avril 2003

1. Introduction

L'union africaine/Bureau interafricain des ressources animales (UA/BIRA) a de nombreuses années d'expérience dans le domaine de l'amélioration des services vétérinaires de base par le biais de l'emploi d'auxiliaires d'élevage¹. Ce document de politique précise la position du bureau en matière d'auxiliaires d'élevage et décrit la supervision et la réglementation requises pour ce type de travailleur vétérinaire. Cette politique a été formulée en se référant au Code zoosanitaire international de l'Office International des Epizooties (le «Code OIE»). De plus, L'UA/BIRA approuve les recommandations faites lors de la Conférence sur «Les premiers soins de santé animale au 21ème siècle: adaptation des règlements, des politiques et des institutions» qui a eu lieu à Mombasa en octobre 2002 et du Comité ad hoc de l'OIE en février 2003. Ce document de politique remplace toute autre déclaration de politique émanant des projets de L'.UA / BIRA.

Ce document de politique emploie la même terminologie que celle dans le Code OIE et on suggère aux lecteurs de consulter les chapitres 1.3.3. et 1.3.4 de ce dernier.

2. Lignes directrices de la politique en matière d'auxiliaires d'élevage

2.1. Organisation et structure des services vétérinaires

Le bureau définit un «auxiliaire d'élevage» comme une personne qui accomplit un nombre limité de tâches vétérinaires, telles que celles définies par l'autorité compétente dans un pays donné. Dans le code OIE, les auxiliaires d'élevage sont considérés par l'UA / BIRA comme constituant une catégorie de para professionnels. La politique de l'UA/BIRA est que les activités de l'auxiliaire d'élevage devraient être réglementées par l'autorité compétente. La définition des rôles et des niveaux de relations de supervision et de rapportage permet aux services vétérinaires de décrire la hiérarchie opérationnelle et les relations formelles.

Le bureau recommande que les tâches relatives à la certification de la qualité des auxiliaires d'élevage soient confiées à des agents nommés par l'autorité compétente et que ces tâches soient définies dans les descriptions des postes à pourvoir ainsi que dans les procédures d'évaluation des performances de ces agents nommés. Le bureau

recommande également que l'on permette à l'autorité compétente de déléguer des tâches à des agents vétérinaires du public afin de garantir la compétence des auxiliaires sur le terrain. Dans le cadre de ce document de politique, de tels agents vétérinaires sont appelés « inspecteurs vétérinaires ».

2.2 Legislation

La politique de l'UA/BIRA est que la définition, les rôles, la réglementation et la supervision des auxiliaires devraient être définis dans la législation vétérinaire. Le bureau recommande que la législation spécifique aux auxiliaires fasse partie de la législation subsidiaire.

2.3 Contrôle de la qualité

Les services vétérinaires doivent établir des systèmes objectifs et transparents pour l'agrément, le suivi et la supervision des auxiliaires d'élevage.

2.3.1. Programme de formation pour les auxiliaires d'élevage

La formation d'auxiliaires devrait se faire en suivant un programme-type approuvé par l'autorité compétente. Ce dernier devrait comprendre deux composantes:

- a. Les connaissances et les aptitudes essentielles requises pour tous les auxiliaires d'élevage sans tenir compte de leur emplacement géographique.
- b. Les connaissances et les aptitudes spécifiques à la région en fonction des besoins prioritaires dans les zones écologiques et les systèmes de production animale.

2.3.2. Formateurs pour auxiliaires d'élevage

Les qualifications requises pour les formateurs d'auxiliaires devraient être définies par l'autorité compétente. Cette dernière devrait tenir un registre des formateurs d'auxiliaires agréés.

2.3.3 Inspection de la formation

Les cours de formation pour auxiliaires devraient être évalués par des inspecteurs vétérinaires. Les institutions officielles devraient développer des méthodes types d'évaluation des cours de formation pour auxiliaires. On peut obtenir les indicateurs d'évaluation de ces cours auprès de l'UA / BIRA.

2.3.4 Contrôle des connaissances des auxiliaires d'élevage

Le contrôle des connaissances des auxiliaires devrait être basé sur des tests harmonisés approuvés par l'autorité compétente et conçus pour évaluer aussi bien les connaissances techniques que les aptitudes pratiques des auxiliaires, et ce, en fonction du programme type de formation. Les inspecteurs vétérinaires devront assurer que le contrôle des connaissances des auxiliaires se fasse au moyen des tests standard. On peut obtenir les indicateurs pour le contrôle des connaissances des auxiliaires auprès de l'UA / BIRA.

2.3.5 Délivrance d'un permis pour les auxiliaires d'élevage

L'autorité compétente devrait établir un système de permis pour les auxiliaires et tenir un registre des auxiliaires disposant de ce permis. Ce sont les inspecteurs vétérinaires qui devraient délivrer les permis. Ces derniers devraient être renouvelés annuellement en fonction de l'évaluation annuelle des connaissances et des aptitudes des auxiliaires réalisée par les inspecteurs vétérinaires.

2.3.6 Supervision et prise de responsabilité relatives aux auxiliaires d'élevage

Les institutions officielles devraient définir des systèmes pour la supervision et la prise de responsabilités relatives aux auxiliaires. La supervision par les inspecteurs vétérinaires devrait comprendre l'évaluation des connaissances des auxiliaires en matière de diagnostic des maladies, de leurs aptitudes dans l'emploi de médicaments vétérinaires et de leurs aptitudes pratiques. On peut définir deux types de supervision officielle :

a. La supervision post-formation

L'expérience de l'UA/BIRA indique que la plupart des problèmes techniques ou de communication par rapport aux auxiliaires surgissent dans les trois mois après la formation. Après que les auxiliaires aient été formés et avant qu'ils aient travaillé plus de trois mois, on devrait procéder à la supervision post-formation en ayant recours à une méthode harmonisée. La supervision post-formation est une évaluation plus complète des performances des auxiliaires que la supervision de routine (voir le point b. ci-dessous). On peut obtenir les indicateurs de la supervision post-formation auprès de l'UA/BIRA.

b. La supervision ordinaire

La supervision ordinaire consiste en un suivi régulier des auxiliaires de la part des inspecteurs vétérinaires. On devrait établir un système harmonisé de supervision de routine pour pouvoir procéder à une évaluation objective des performances des auxiliaires. Les tailles des échantillons et les méthodes d'échantillonnage devraient garantir la validité des résultats statistiques tirés de l'ensemble du système. On peut obtenir les indicateurs de la supervision ordinaire auprès de l'UA/BIRA.

Les vétérinaires responsables des activités des auxiliaires, tels que ceux qui travaillent pour des ONG, le secteur privé ou des associations, seront identifiés sur les permis des auxiliaires comme précisé au point 2.3.5 ci-dessus.

3. Cohérence des politiques en matière de restructuration et de privatisation des services vétérinaires

La mise en oeuvre de systèmes d'auxiliaires d'élevage de qualité au niveau national dépendra considérablement d'une politique claire en matière de restructuration des services vétérinaires et d'un appui étatique suffisant à l'égard des organes statutaires ainsi que des inspecteurs vétérinaires afin que ces derniers puissent remplir leurs rôles de contrôle. La politique de l'UA/BIRA est que les services vétérinaires nationaux devraient revoir les capacités et la structuration des organes statutaires. Ces derniers devraient aussi assurer que la restructuration mène à un renforcement des capacités de contrôle. Au niveau du terrain, la durabilité des réseaux entre vétérinaires privées et auxiliaires dépend en partie d'une politique claire en matière de privatisation vétérinaires et d'une contractualisation avec le secteur privé d'activités qui relèvent habituellement du secteur public.

Directeur intérimaire, UA/BIRA, Avril 2003
Révision prévue en mars 2004

¹ L'expérience de l'UA/BIRA a été en grande partie accumulée grâce au travail effectué par la Pan African Rinderpest campaign (Campagne panafricaine contre la peste bovine), de la community-based Animal Health and Participatory Epidemiology Unit (Unité de santé animale communautaire et d'épidémiologie participative) et du Pan African Programme for the control of Epizootics (Programme panafricain pour le contrôle des épizooties)

Role of privatisation process in reinforcement of National Veterinary Services in PACE members countries : success, failures and prospects

by Yvon LE BRUN, head of VLPU

Context:

PACE countries (and by extension, most of African countries) veterinary systems are suffering of chronic disease: (1) incapability in delivering an acceptable level of animal health services at field level, and particularly in remote areas, and (2) incapacity in producing reliable official veterinary certification. Consequentially, access to international criteria of quality of national veterinary services cannot be secured without a complete remodelling of the concept of animal health control at national level, as well as regard to services delivery than disease monitoring and eradication.

During 3 years, PACE has been blindly oriented towards rinderpest eradication. Traditional circulation of the virus (lineage 2) in East Africa, but above all more recent discovery of its existence in Western Africa can temperate the former certitudes of success in eradication (free of infection) by 2010. Efficiency of national capacities of disease surveillance, early warning and disease monitoring will be essential.

Hence, an appropriate reorganisation of national veterinary systems is unavoidable. This reorganisation has to be adapted to the reality and an holistic approach of the “reform”, appears necessary. In the context of structural adjustment programs, anaemic National Veterinary Services obviously need fresh human resources and new sources of funding, but also an alternative organisation and appropriate chains of command. The emergence of a private sector mainly financed by a cost recovery strategy is the indispensable oxygen balloon.

Consequentially, “Privatisation”, in spite of its undervalued appreciation in the design of PACE program, detains a major importance for the future of African veterinary services existence. In the actual context of budgetary restrictions, it represents the unique blessed lifebuoy for several PACE countries to carry on some animal health activities at field level.

Strategy of the passed 3 years:

Because PACE has been drawn up by following epidemiological concerns, the role of privatisation process has been undervalued in the design of PACE program. Yet, a quick analysis of the African reality could show that the costly epidemiosurveillance networks built with many difficulties by PACE program are economically unviable and by consequence functionally unsustainable without external funding. The question now is if we should follow a classic project logic (fulfilling the short term objectives) or if we try to hand down some capacity building in African Veterinary Services for the long run.

VLPU has always thought that the reorganisation of veterinary systems, with an implicit emergence of private sector, was a priority to reach reinforcement of national veterinary services.

Because suffering from understaffing and under budgeting, VLPU has been forced to limit its field activities. This relative discrete support of the unit in each country has been worsened by an obvious discrepancy in the aid brought to the different PACE countries.

Facing this situation, the unit has concentrated its efforts on the production of guidelines usable by any country showing an elementary (but necessary) good will to introduce and facilitate the emergence of a private sector in veterinary services delivery. The unit has been keen in underlining the necessity for countries to rebuild a veterinary system in accordance with OIE requirements on quality of veterinary services.

This has been the spirit in which many papers have been produced, among which the guidelines titled “IBARs guidelines for reorganisation of veterinary services”, are an essential document. The goal of these guidelines, that remain voluntarily simple and easily understandable, has been to show to countries that “privatisation” had to be part of a whole consistent process of restructuring National Veterinary Services. Without this “revolution” in the approach of the concept, privatisation was unrealisable and any attempt of creation of private sector would remain for the best a commensal wart on state veterinary services, often a parasite, but never a symbiotic partner charged to take charge of a complete domain of animal health control.

They don't pretend to be a complete “owner's manual” for any reorganisation recipe, but they have the ambition to show to countries the way where to go. Sophistication in procedures and standards for any particular domain are complementary and later requirements.

The other main documents produced, “Guidelines for veterinary legislation” and “Guidelines for relationships between the bank and the privatisation scheme”, “Monograph on possible implications of the private veterinarians in official activities: the animal health accreditation mandate (*mandat sanitaire*)” represent tools for implementing the privatisation process.

Unfortunately, an insidious but pre-existing divergence of views between CAPE unit and VLPU on the position to be given to non graduated animal health auxiliaries in a national veterinary system, according to their capacity of sustainability without external support (NGOs or projects) has become a major subject of dissension as and when CAPE agenda was insisting on the necessity to officialize these “CAHWs” in national veterinary services. Because of the hazardous choice for future quality of national veterinary services that the policy advocated by CAPE was representing, VLPU has been forced to emphasize more than it wished its own intervention in this topic. A special workshop has been implemented on the subject in Paris, hosted by OIE, and bringing together representatives both of the private veterinary profession and of the veterinary administration of all PACE countries. The results of the workshop have underlined the major role of participatory links between the main actors of the field level: private practitioners, animal health auxiliaries, and farmers and their associations (recommendation 4 and 6). Sustainability of the animal health has also been one of the major concerns of the participants (recommendation 6). Unfortunately, these recommendations are not in concordance with the “IBAR policy for animal health auxiliaries” published by CAPE at the same time. Vis à vis member countries, IBAR has a technical expertise mandate and not a policy making assignment, and it should, as long as PACE program is concerned, integrate the voice of the member countries in its recommendations or guidelines.

Results at country level:

At country level, there is a lot of discrepancy in the results of the privatisation process.

At the beginning of PACE, most countries had not properly understood the signification of the words « privatisation of veterinary services », felt threatened by the expression and were, in reality and despite their commitments to PACE, very reluctant to launch any privatisation activity. On an other hand, for those countries that had advanced on the concept during PARC, the future of the process appeared not clear. They felt abandoned and without proper realistic and practical guidelines to carry on the process.

Later, as shown on the problem tree, different factors have contributed to slow down the process:

- ignorance of OIE requirements for qualities of National Veterinary Services,
- Delays in launching national components,
- Disinterest of some countries for international trade issues,
- Slowness of legislative reforms.

2. Actual situation :

- In the PACE zone, at the end of 2003, there are 2 countries (Senegal and Guinea Conakry) that are really advanced on the process of reorganisation of national veterinary network, the only way to reach the criteria of quality of VS decreed by OIE in the “code zoosanitaire international”. But:
 1. Senegal has still to review its veterinary legislation,
 2. Guinea knows now, at the field level, a mix between public services and some private vets, the private vets supplying the public service staff (vets and paravets) in veterinary drugs, and until a certain extend, “employing” them to retail the goods at farm level.

These countries still obviously deserve a close back stopping and monitoring.

- All the other countries in Western Africa are still on the process of reviewing or trying to enforce a veterinary legislation adapted to the emergence of a private sector. The reorganisation of national veterinary network is not done, private vets being not sufficiently involved in official sanitary tasks, or, opposite, being exclusively focused on them (Chad).

These countries are still very far of any conformity with OIE requirements on quality of veterinary services. They need, of course, to be closely conducted.

- At the end of PARC, the wide majority of countries in Eastern Africa had not began any concrete step on the way of privatisation of veterinary services delivery for farmers. Only “alternatives” veterinary systems using CAHWs more or less “supervised” by NGOs using occasional budgets or by Gov DVO without running costs have been put in place. These “low cost - low skill” systems cannot in any way fit with the aim of PACE for privatisation of veterinary services.

Hence, in average, countries are still pacing slowly on the privatisation way: legislative review is not done or maladjusted, veterinary boards or councils are not adapted to the management of a private sector, and the concept of intervention of private veterinarians in official sanitary activities (sanitary mandates) is not yet properly understood.

Obviously, a strong support is still relevant for these countries, bearing in mind that a complementarity has to be delivered to balance unilateral CAHWs implementation activities.

On an other hand, the chances of sustainability of the epidemiosurveillance networks in countries, appear to be very weak in absence of a reliable private sector that could take a part of the epidemiosurveillance activities, through sanitary mandates, and part paid by the first beneficiaries of epidemiosurveillance (the stock holders), and part subsidized by the Government.

Hence, building “privatization” is still a up to date activity of PACE that will not suffer being abandoned when strong basis have not been settled in countries.

3. Conclusion and ways forward

According to the first results of PACE and analysing the weaknesses in countries themselves, it has quickly become obvious that the improperly called “privatisation of veterinary services”, meaning *privatisation of veterinary services delivery*, that was implying the creation of a private sector could not be succeeded without a **complete reorganisation of national veterinary networks**. This implicates a reform or re-structuring (this word is often avoided in the common speech, because carrying to much traumatism generated by WB re-structuring projects...) of the public veterinary services, sharing the veterinary activities with the just-born private sector. This implicates, obviously and unavoidably a skimming of public staff, which basic intervention agents could probably be employed in the private sector, if one gives him one day any chance to bloom on a financial plan.

This re-structuring of veterinary administrations shall imply a re-focusing of the activities of a public sector, and an association of the private sector in official activities (sanitary mandates).

In parallel with the re-organisation of public services, the environment for private sector still needs to be enabled:

- Legislation review, following IBAR guidelines,
- reinforcement of veterinary boards or council, private sector-oriented,
- invention of a social welfare for self-employed veterinarians and their employees,
- integration of qualified paravets in animal health networks,
- positioning of CAHWs at a place where they could be useful without jeopardizing the quality of national veterinary services.

Y4 VLPU half yearly report

Y4 VI PT I half yearls rorvrt

Yd VI PIT half works, covered

¹ see workshop recommendations annex

ⁱⁱ see document in annex

CAPE UNIT

CAPE Unit

Six month Report (May-October, 2003)

This report is divided into two parts. Part one describes CAPE activities in the Somalia Ecosystem, reflecting the importance currently being placed on need to develop credible services in that eco-system because of the rinderpest situation. Part two describes other CAPE activities that fall within the PACE programme.

Part 1. Somali Eco-System

Summary

The purpose of the CAPE sub-unit of the PACE programme was designed to establish sustainable animal health services to control diseases that threaten the health and productivity of livestock reared by pastoralists in the Greater Horn of Africa. This progress report utilizes the Jan. 2003 revised CAPE logical framework and covers activities carried out in the East Horn of Africa Ecosystem under output one of the logframe which is within the PACE Programme.

In the reporting period CAPE has made good progress in the establishment of community-based animal health delivery systems, development of standard curriculum and code of conduct to harmonise CAHS in the Somali ecosystem. Especial emphasis was given to southern Somalia to support the final eradication of rinderpest from these endemic foci through a network of CAHWs which can be used in surveillance and disease reporting. CAPE has also supported NGOs operating in northern Somalia, Somali region of Ethiopia and north east province of Kenya to implement quality animal health projects and establishment of privatised animal health services.

Following the training organised by CAPE on Regional Participatory Disease Searching (PDS) training in November 2002 and training of trainers in PDS in February 2003, national PACE programmes, especially Kenya and Somalia, are showing good progress in implementation of PDS in the field.

Establishing CAHS

During the reporting period CAPE has established CAHS in Sakow, Buaale and Afmadow districts of southern Somalia through the training of 40 CAHWs. Livestock play a very substantial role in the livelihood of poor households in these areas. However, these areas are characterised by insecurity and limited or no accessibility to veterinary services. The few veterinary professionals are based in small urban centres and have difficulties in accessing pastoral communities.

Prior to the training extensive dialogue with communities was carried out to ensure that CAHWs training is relevant and there is demand for the service. At each stage of this process, participatory approaches and methods were used to facilitate discussion and ensure the active involvement of communities in the project. The process gave the community clear responsibilities for identifying important animal health problems to be addressed, selecting appropriate people for training as CAHWs and agreeing a system for the payment of services and the financial incentives for CAHWs. The programme was enthusiastically embraced by the community and in all the areas covered the community contributed 30% of the initial start up drug kit cost.

The sustainability of CAHW networks heavily depends on drug turnover and effective linkages with private suppliers. To ensure this the *local Somali vet professionals were fully involved in the initial community dialogue and trainings*. This on job training will give them opportunity to handle subsequent trainings and monitoring of the programme on their own and to reach new clients and expand a business into areas that otherwise would be inaccessible. The SVPs running drug shops and pharmacies recognised the value of working with community-level operators to expand and improve their business viability. After the trainings the SVPs and the CAHWs concluded agreements to arrange systems of drug supply and remuneration that were mutually beneficial.

The rinderpest status of these areas is an important consideration taken into account with the objective of complementing ongoing PACE activities to eradicate the disease from the ecosystem. The southern parts of the Somali ecosystem are thought to be the last foci of rinderpest and these sites exhibited a high rinderpest sero-prevalence during the recent serological survey carried out to delineate the presence of rinderpest in the area. Surveillance plays a crucial role in the identification of these rinderpest foci for their subsequent elimination. In the absence of conventional veterinary services in these remote, marginalised and insecure areas, CAHWs should be part of the surveillance network as far as they are correctly trained and supported by the veterinary services.

These systems would allow PACE projects to co-ordinate activities in the ecosystem and give them the opportunity to meet their commitments to successfully conclude the OIE pathway for the final eradication of rinderpest. The delivery systems will at the same time improve the health of pastoral livestock populations by providing basic veterinary services and control of other epizootic diseases.

In the coming months, CAPE will concentrate on ensuring sustainability of these systems through regular monitoring, refresher trainings and strengthening of the linkages with private drug suppliers. It will also engage the various agencies operating animal health services in the area to harmonise approaches and to make sure that subsidized services don't undermine existing credible informal and formal private veterinary business initiatives which strictly operate on a business approach. Furthermore, efforts will be made to establish a structure for CAHW reporting and full integration of CAHWs in the rinderpest surveillance and control programme of PACE Somalia and PACE Kenya

In Kenya, 40 CAHWs along the Kenya/Somali border areas of Garissa and Ijara have been identified for further support and linkage to a privatised drug supply system. During a recent North Eastern province (NEP) agriculture and livestock stakeholder workshop, intended to develop an appropriate plan for NEP, the stakeholders expressed and noted the importance of CAH systems to the region and the system has been included into the plan of development. Ijara District intersectoral strategic planning workshop – meant to develop strategic development plan for the district has recognised the importance of CAHS. *NEP DVO's have agreed to include CAHWs into the disease control committees recently formed by PACE Kenya at various divisions for rinderpest active surveillance.*

It is beyond the capacity of CAPE to establish sustainable community-based animal health services in all areas of the Somali eco-system where such services are required. Therefore, during the reporting period *considerable technical and financial support was extended to support local and international NGOs operating in poorly serviced, marginalized and insecure pastoral areas of Ethiopia, Somalia and Kenya to establish privatised animal health services.*

In the Somali regional state of Ethiopia, CAPE supported Action Contre La Faim's (ACF) community-based animal health service programme in Warder and Korahai zones. The objective was to consolidate and ensure the sustainability of the CAHS project established by ACF which came to an end in February 2003. The project has developed community oversight mechanisms to monitor the CAHWs and carried out refresher training to enhance the technical competence of the CAHWs. Efforts are underway to link the CAHWs with the government veterinary service for technical supervision and establish licensed private drug dealers to ensure a regular supply of drugs.

In North East Kenya and adjoining areas of Gedo region of Somalia, CAPE is supporting NORDA, a local NGO, to improve primary animal health services in the area. NORDA has managed to harmonise the activities of all actors in animal health service delivery in the area, engage the DVO in the regular field monitoring and supervision of CAHWs and train management committees for the Community Livestock Drug User Associations (LDUAs). A similar initiative in Somalia has resulted in agreement of CAPE support to Norwegian People's Aid (NPA) to implement the Sool Livestock Development Programme in northern Somalia. The project aims establishment of sustainable animal health services to pastoralists in five districts of Sool region, Somalia, through Community-Based Animal Health Service Delivery System.

Catholic Relief Services (CRS) Kenya is currently implementing a project called "Agricultural Commercialisation Project for Small-Scale Farmers in Homa bay, Suba and Tana River Districts of Kenya." The plan of activities includes training CAHWs, drug supply and linking CAHWs to private stockists. The existing CRS proposal outlines a sequence of activities beginning with CAHW training and ending with facilitation of linkages with the private sector. Experience of the CAPE Unit in Kenya and neighbouring countries indicates that *immediate* involvement of the private sector is beneficial for the sustainability of CAHW services. CAPE Unit is currently assisting CRS

to address these issues and formulate activities required for the implementation of a fully privatised CAHW system in Tana River district.

GTZ has recently started a programme in Bakol area of southern Somalia. This agency plans to operate in the areas of agriculture, livestock, water, and household micro enterprise and conflict management. CAPE has engaged GTZ to harmonize the animal health component of their programme. Agreement was reached to harmonize approaches in areas of community participation, selection, training, cost recovery and drug re-supply systems for CAHS in the area. A similar agreement has been reached with the Italian NGO COOPI also working in the Dinsoor areas of S. Somalia

Harmonisation and development of best practice guidelines

In the Somali Eco-system alternative veterinary delivery systems are evolving to meet the immediate needs of pastoralists. However, in many areas supply systems are in place but they are not quality controlled and are subjected to unfair competition, particularly in the form of emergency relief interventions, donor and aid agency subsidies. There is lack of coordination and approaches among agencies involved in animal health service delivery in the Eco-system.

Following the Sept 2002, Galkayo stakeholders workshop to discuss the concept, CAPE unit has supported VetAid for production of guidelines and training manuals for community-based animal health care (CAH) projects in the East-Horn ecosystem. The guidelines and three volumes of training manuals will be written in Somali with easy-to-understand illustrations and drawings where necessary. The first draft is ready and is distributed to a group of professionals for comments and will be further discussed on a stake-holders workshop. *A workshop in which all relevant stakeholders endorse and develop ownership of the guidelines and training manuals will be carried out in the coming quarter.*

The provision of animal health services in emergency relief situations is very detrimental to the development of sustainable animal health services. In emergency and relief situations such as drought or livestock disease epidemics, a common response of aid agencies (NGOs) is to provide free or subsidized veterinary drugs. However, without careful planning with communities, CAHWs, government and private suppliers of veterinary products, these programmes can seriously undermine the financial sustainability of existing private services. CAPE has engaged various NGOs in a series of dialogues and discussions to harmonize approaches and avoid practices which undermine community-based animal health delivery systems (CAHS) which operate on full cost recovery. The SACB-LWG forum was also used to influence project proposals submitted to donors.

Upon the request of SACB-LWG CAPE volunteered to prepare standard guidelines and approaches for establishment of CAHS in Somalia. The draft guideline is completed and submitted to the SACB-LWG. The SACB Livestock working group is suggested as the

forum to move the code of conduct forward. *The code of conduct will be debated, amended and adopted by consensus among the agencies, donors and local organisations currently active in Somalia.* Once adopted, all agencies and projects will state their intent to adhere to the code of conduct.

The CAPE unit is a strong advocate for increased involvement of AU/IBAR/PACE in the management and guidance of PACE Somalia. On the 30th of September a meeting was held to harmonize livestock related projects and programmes run by different agencies in Somalia. It was noted that Somali Areas Coordinating Body's –Livestock Working Group is dealing with donors and broader issues related to the sector such as food security, and it was recognized that there is immediate need to have a livestock coordination forum which can deal with harmonization of livestock activities at implementation level. The meeting unanimously agreed to establish the forum and to be chaired by AU/IBAR.

Participatory Disease Search (PDS)

CAPE unit supports the further development of participatory approaches and methods by veterinarians, particularly those working in pastoral areas. CAPE organised Regional Participatory Disease Searching (PDS) training in November 2002 and training of trainers (TOT) in PDS in February 2003. Selected veterinary professionals from the Somali eco-systems (Somalia, Kenya and Ethiopia) participated in these trainings. This was in line with the recommendation of the workshop held in Nairobi in June 2002 to review strategies for the eradication of mild rinderpest from the Somali ecosystem.

The plan was for PACE personnel attending the TOT would then be responsible for training other veterinarians within their national programmes. Subsequent trainings were held by national PACE programmes in line with this plan. Especially in Kenya where disease search and reporting officers are assigned in districts and disease control committees are formed at various divisions for co-ordinated application of PDS. Currently PACE Kenya is undergoing PDS in north eastern province of the country as an integral part of comprehensive surveillance systems. The exercise is generating invaluable information and data with regard to the epidemiology of rinderpest in the area. A number of stomatitis-enteritis events have been detected and investigated as a result of the PDS activity. *This is clear evidence that PDS has increased the sensitivity of surveillance programs in the Somali ecosystems.*

During the base line survey for the establishment of CAHS in Sakow, Buaale and Afmadow districts, communities were asked to list and rank the major animal health problems in their locality. These were aimed at getting an insight of the communities on animal diseases common in their area and include them in the CAHW trainings. The open-ended interviews conducted revealed that pastoralists in the areas consistently mentioned rinderpest to be a major threat for their cattle herds and are able to differentiate between the classical and mild rinderpest. Further studies were made using participatory methods to appraise the ability of pastoral communities to recognize and

report Rinderpest and probe in detail the clinical and epidemiological features of the disease.

Some 450 informants from 20 informant groups from the three districts were involved in the study. The matrix scoring results will be used to analyse local knowledge and identify the extent of agreement between the different informant groups. *The analysis when finalized will be used to assist in defining the case definition for mild rinderpest as a target of the active surveillance program.*

Support to Somali Livestock Professionals

CAPE is providing technical support to enable the creation of local and regional veterinary professional associations in Somalia. The associations are established with the objective of fostering effective and efficient provision of veterinary services in Somalia through promoting veterinary privatization, enhancing the technical skills and knowledge of its members, upholding professional ethics and standards, protecting the interest and welfare of members, creation of linkage with other stakeholders in the livestock sector and advocacy for appropriate policy reforms.

Somali Veterinary professionals in the region are in the process of being linked with their professional associations. However, the associations are in their infancy stage and far from fully operational. *There is need to build the capacities of the associations so as to impart skills necessary for improving service delivery.* During the reporting period support was given to South West Livestock Professional Association (SOWELPA) to strengthen their institutional capacity. Training in managerial skills was given to the office bearers and other executive members of the Association. 16 participants; seven from the executive committee at the headquarters and three executive members from trans-jubba and two executive members per region participated in the training which was held in Dinsoor from June 18-24, 2003.

2. Support to sustainable community-based animal health delivery systems (CAHS)

Summary

Complementing activities in the Somalia ecosystem CAPE has in the reporting period implemented other activities under output one that are primarily designed to improve the enabling environment for CAH and privatisation of these systems in pastoralist areas.

It is now believed that the methods of developing privatised CAHS are largely developed and are available to those countries that wish to utilise CAHWs within national veterinary services. IBAR has produced a policy statement on the use of CAHWs that include indicators for effective delivery. This statement compliments and supports the findings of the OIE ad hoc group on the use of para-veterinary professionals. The OIE code commission met and discussed these findings in July 2003 and no major problems were identified. The findings are on schedule for presentation to the OIE general assembly for further discussion in May 2004.

CAPE continues to support those countries requesting advice and support on use of CAH as a component of disease surveillance networks and privatisation of veterinary services in remote, under-served areas.

Enabling environment

Sudan

Sudan completed a 'workshop on strengthening the role, regulation & legislation of community based animal health workers (CAHWs) in Sudan'. The workshop was the last of a series of workshops on the subject of Community-based Animal Health, held this year by the Department of Animal Health & Epizootic Disease Control (DAHEDC), together with the Southern Desk of the Federal Ministry of Animal Resources & Fisheries (FMoAR&F), and funded by the CAPE. The other four workshops were training workshops for vets.

Sudan has a long standing and extensive programme of CAH work. The first four training workshops were an opportunity to pull together experiences from a wide variety of different CAH projects. Together with other recent meetings they recommended revision of policy and legislation affecting community based delivery of primary veterinary services. CAH work will be strengthened by more enabling policies and legislation, allowing it to expand its coverage and improve in quality. This will benefit both communities and the national disease surveillance and control programme.

The workshop examined the current CAH situation in Sudan and the implications of revising animal health policy and legislation; it examined possible ways forward; and endorsed a plan of work. Participants represented different levels and departments within the FMoAR&F; the Department of Legislation in the Ministry of Justice and other parts of government; State veterinary departments; the Sudan Veterinary Council; the Sudan

Veterinary and Women's Veterinary Associations; FAO and other local and international agencies and NGOs.

The workshop provided guidance on the future use of CAHWs and other para-professionals and recommendations included the need to develop appropriate, flexible legislation, that CAHWs (and other para-professionals) need to be recognised, properly regulated and registered and that revised legislation should also consider private practitioners. *A working group to draft the proposed legislation or amendments of existing laws including bylaws was established and has begun its work.* Furthermore, the meeting recommended the *establishment of a central CAH unit at Federal level.* This unit will be linked to the DAHEDC, FMOAR&F, comprise one or two vets, a social scientist and an economist and be guided by a steering committee.

Ethiopia

A Workshop on "Integration of Community-Based Animal Health Services into the existing Animal Health Delivery in Ethiopia" was held in Addis Ababa, Ethiopia on August 30, 2003. The workshop was organized by AU/IBAR CAPE unit in collaboration with Animal Health Services Team and PACE Ethiopia with the main idea to acknowledge the positive impacts of CAHWs on livestock health, and forecast ways and means to streamline and institutionalize CAH projects.

The participants of the workshop were largely veterinary professionals drawn from federal and regional bureau of agriculture, NGOs, higher learning institutions and research stations. Members were also from Ministry of Federal Affairs, the Federal Parliament Pastoral Standing Committee, and other relevant institutions. During the official opening, the need to draw key lessons for the future about institutionalizing community based animal health services has been highlighted.

Four presentations were made related to the active involvement of CAHWs in offering an alternative path for the veterinary services to reach to the needy rural livestock keeper, and furthermore, the future direction to link the CAHWs to the existing service delivery system. The final session was aimed to map out the practical steps needed to bring about the incorporation of the principle of CAH and CAHWs into the system on board. *Four major elements were considered to map the way forward. These were policies, organizational structure, linkages and sustainability.*

The workshop adopted a plan of action to be implemented by various actors to ensure the acceptance, integration and full-fledged service provider partners to the conventional animal health service delivery system.

Assistance was also provided to the Ethiopian Veterinary Association and senior policy makers. Following a fact finding mission for Ethiopian policy makers to Zambia a decision was made by federal and regional policy makers and veterinary authorities to prepare a draft veterinary privatization strategic plan document at a federal level and then to conduct a discussion workshop, which will encompass all regions. It was also agreed

simultaneously work on the finalization of the veterinary privatization regulation based on the provisions made on animal disease proclamation.

In Uganda, the draft CAHW training curriculum has been discussed and distributed.

In Kenya a manual of training guidelines to accompany the CAHW training curriculum has been produced and is under final review.

A regional workshop for private pastoral veterinary practitioners from six countries was held. The workshop participants were limited to private veterinarians only in an effort to learn more about the challenges and opportunities they face. The workshop was a success in that it highlighted the fact that private practices can be viable in pastoralist areas with out subsidy and identified some of the conditions and training required for further practices to establish in such areas. The significant constraints of un fair government competition and disabling legislation and bureaucracy were noted. The workshop report will be available in November 2003.

Business training manuals for the private veterinary practitioners wishing to work with para-professionals were produced in collaboration with the World Bank's Africa Project Development Facility (APDF).

CAH Establishment

Negotiations continue with Tanzania on support in the re organisation of the Tanzania Veterinary Board to a Council and the establishment of a CAH Unit within the DVS.

In SW Ethiopia, the South Omo CAH Project (SOCHAP) completed its community action plan that defines the supervision, follow up, veterinary drugs supply system and exit strategy. The ultimate goal of the action plan is to establish a system where the government animal health service section takes delivery of monitoring and supervision responsibility while the private practitioners to establish drug vendors and linking it to CAHWs to supply veterinary inputs, participate in the training process and report preparation on CAHWs performance.

Support to NGOs and local government veterinary services in NE Uganda is on going and a joint PDS training will be held with PACE Uganda during the week of October 6th 2003.

Strengthening Disease Surveillance Using Community-based Animal Health Workers

CAPE Unit, November 2003

TANZANIA

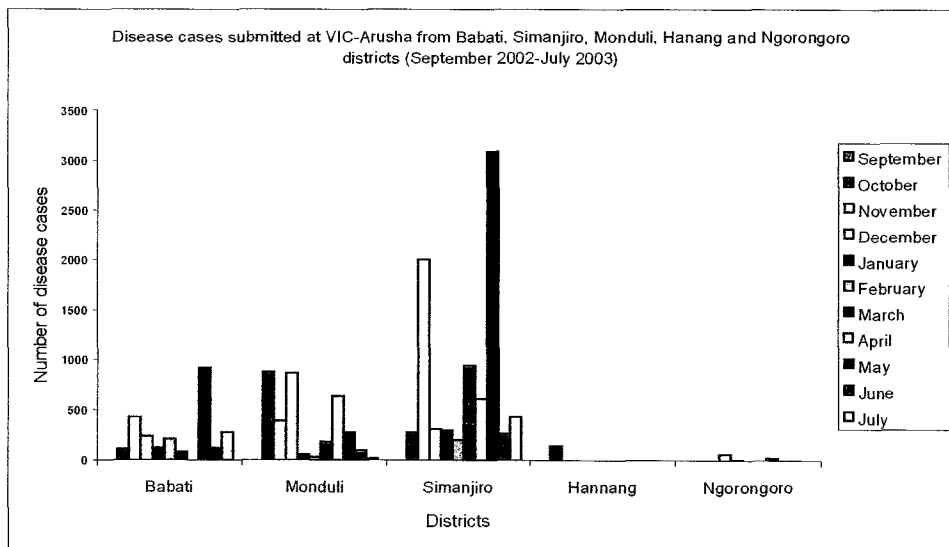
The CAPE Unit has been working with PACE Tanzania and the NGO VetAid to test surveillance systems that link CAHWs to government officers at provisional and district levels. This pilot project also aimed to assess the validity of CAHW reports by using professional staff from a veterinary investigation centre to conduct spot-check visits on CAHWs to verify their knowledge and where possible, confirm diagnoses using laboratory tests. The project was set up in three districts in northern Tanzania in June 2002.

A recent project report includes the following results:

Disease reporting

The graph below shows the number of disease reports at district levels for five districts in northern Tanzania from September 2002 to July 2003.

Babati, Monduli and Simanjiro districts used the CAHW reporting system whereas Hanang and Ngorongoro did not use CAHWs.



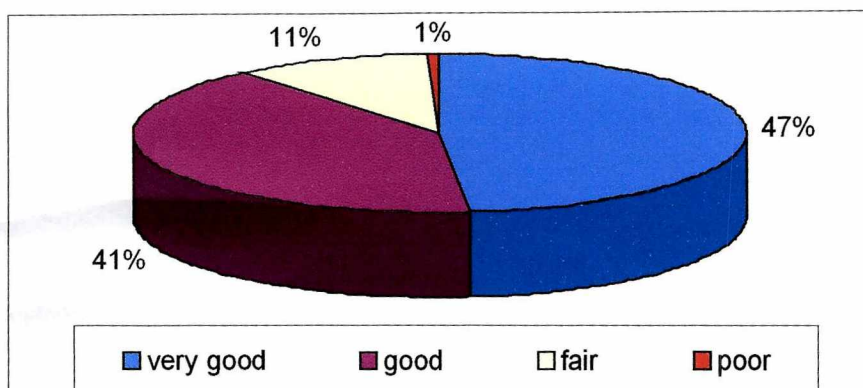
The report notes that:

'Simanjiro now reports on more disease cases than any other district in Tanzania'.

Validity of CAHW reports

During the same nine-month period reported above, 236 cases reported by CAHWs were also investigated by a veterinary investigation officer. This officer interviewed the CAHWs to check their knowledge of diseases signs for the diseases they reported. Each CAHW was graded as 'very good', 'good', 'fair' or 'poor'. Results are summarised below.

Assessment of CAHW diagnostic ability (n=236 cases)



KENYA

Based on examination procedures used at the Faculty of Veterinary Medicine, University of Nairobi, a faculty professor and chairman of the Kenya Veterinary Association developed a skills and knowledge test for CAHWs in Mwingi District. The test involved oral examination, practical tests and physical inspection of CAHW drugs and equipment.

The test was used by the professor and the District Veterinary Officer on a random sample of 40 out of 99 CAHWs in the district. These CAHWs had been working for at least two years without any refresher training. Results are summarised below.

Results of skills and knowledge test of CAHWs (n=40) in Mwingi District, Kenya, January 2003

Topic (Total marks/pass mark)	Mean score	Proportion of CAHWs passing the test (%)
Clinical signs of disease (40/20)	22.0	67.5
Notifiable/reportable diseases (3/1.5)	2.4	90.0
Zoonotic diseases (12/6)	4.0	52.5
Veterinary drug and equipment usage (47/23.5)	30.5	93.0
Ticks and tick-borne disease control (7/3.5)	4.9	88.0
Drug use record keeping (6/3)	3.2	72.5
<i>Total (115/57.5)</i>	<i>70.8</i>	<i>90.0</i>

The results show that CAHWs should be integrated into the disease surveillance system in the district.