



Primary animal health care in the 21st century: shaping the rules, policies and institutions

An international conference held in
Mombasa, Kenya, 15–18 October 2002

Editors: Keith Sones and Andy Catley

The African Union/Interafrican Bureau for Animal Resources

The African Union/Interafrican Bureau for Animal Resources (AU/IBAR) is a specialist technical agency of the AU mandated by member states to promote livestock development in Africa. Based in Nairobi, Kenya, AU/IBAR implements major livestock development programmes including the Pan African Programme for the Control of Epizootics (PACE) and Farming in Tsetse Controlled Areas (FITCA).

The aims of AU/IBAR are to:

- Co-ordinate the activities of all AU member states in the field of livestock development;
- Collect, collate and disseminate information on all aspects of livestock development;
- Initiate, develop and execute livestock development projects;
- Liaise with appropriate authorities of member states, regional groups, inter-governmental and international organisations.

For many years, AU/IBAR has been an African success story, attracting donor funds and providing technical and policy support to the AU's member states, particularly for state veterinary services. The bureau understands that livestock issues are becoming increasingly complex due to forces such as globalisation, rapid technological advances and the demands of stakeholders. Stakeholders at all levels are becoming more vocal and influential, and now demand to be involved in all aspects of livestock development interventions, including priority setting, financing, governance and evaluation, in addition to planning and implementation. AU/IBAR provides effective responses to stakeholders' needs through a clear vision of its direction, policy and strategies.

For further information contact:

The Director, AU/IBAR, PO Box 30786, 00100 Nairobi, Kenya

Tel: +254 2 334550/251517/226651

Fax: +254 2 332046/226565

E-mail: jotham.musiime@oau-ibar.org

The Community-based Animal Health and Participatory Epidemiology Unit

Within AU/IBAR, the CAPE unit links field experience with stakeholder dialogue to create enabling policy and institutional settings for community-based animal health services. The unit also supports a range of government and non-government partners in their efforts to improve epizootic disease control in marginalised areas.

E-mail: tim.leyland@oau-ibar.org or andy.catley@oau-ibar.org

Website: www.cape-ibar.org

Primary animal health care in the 21st century: shaping the rules, policies and institutions



**An international conference held in
Mombasa, Kenya, 15–18 October 2002**

Editors: Keith Sones and Andy Catley

© African Union/Interafrican Bureau for Animal Resources

First published 2003

All rights reserved. The publisher encourages fair use of this material provided proper citation is made. No reproduction, copy or transmission of this publication may be made without written permission of the publisher.

Correct citation:

Sones, K. R. and Catley, A. (eds) (2003) Primary Animal Health Care in the 21st Century: Shaping the Rules, Policies and Institutions. Proceedings of an international conference held in Mombasa, Kenya, 15–18 October 2002. African Union/Interafrican Bureau for Animal Resources, Nairobi, Kenya.



Contents

Acknowledgements	v
Foreword	vii
Proceedings summary	1
About this report	1
Conference organisation	2
Conference outline	4
Setting the scene	5
The voices of livestock keepers	5
Evolution of animal health services in the Horn of Africa	8
Discovering the future: the business of paradigms®	9
Theme 1: General policy, legislation and institutional issues	11
Participatory approaches for influencing policies, processes and practices: lessons from north and south	11
Veterinary legal reform in Tanzania	13
Community animal health workers in Senegal: problems and prospects	15
The role of community animal health workers in Guinea: policy, regulations and institutional status	15
Working groups	16
Key challenges	18
Theme 2: Sustainability and privatisation	19
Community-based animal health workers and the veterinary profession in the context of African privatisation	19
Increasing the efficiency of livestock service delivery: the experience of Zambia	21
Sustainability and privatisation: the Zimbabwe experience	23
Effectiveness and financial viability of a privatised animal health delivery system	24
The impact of relief aid on community-based animal health programmes: the Kenyan experience	25
Working groups	26
Key challenges	28



Theme 3: International issues	29
The role of community-based programmes and participatory epidemiology in disease surveillance and international trade	29
The role of the Office International des Epizooties in animal health	33
Cross-border issues related to the provision of animal health services with reference to Kenya, Uganda, Ethiopia and Tanzania	33
Experiences with community-based and participatory methods for rinderpest surveillance in parts of southern Sudan	35
Key challenges	35
Theme 4: Making it happen	37
Advocating for the missing link in our change strategy	37
Primary animal health care in Ethiopia: the experience so far	38
Experiences of national agricultural research systems in the use of participatory approaches to animal health research in Kenya	40
Indonesia's experience in introducing a pro-poor focus in the livestock sector	41
Working groups	44
Conclusions and recommendations	47
Institutional change	47
Policies and legislation	48
Training and participatory approaches	48
Privatisation of veterinary services	49
Surveillance	49
Community animal health workers and services	49
Office International des Epizooties	50
Evaluation and impact	51
Comments on the conference by participants	51
Response of the Office International des Epizooties	56
Participants	61
Minibiographies of presenters	65
Abbreviations	67
A CD accompanies this report. See inside back cover	



Acknowledgements

DFID Department for
International
Development



AU/IBAR acknowledges the financial support for the conference provided by the Department for International Development (DFID), United Kingdom and the ACP-EU Technical Centre for Agricultural and Rural Co-operation (CTA), The Netherlands



Foreword

The World Organisation for Animal Health, also known as Office International des Epizooties (OIE), seeks to promote safe international trade in animals and animal products by developing sanitary standards and guaranteeing transparency of animal disease status worldwide. The OIE is committed to supporting the integration of developing countries into international trading systems, as demonstrated by the Doha Declaration of November 2001. As the relevant standard-setting organisation for animal health and zoonotic diseases, the OIE has an active and strong collaboration with the World Trade Organization and assists countries in meeting their obligations under the Sanitary and Phytosanitary Agreement. Increasingly, the OIE regards the evaluation of veterinary services as an important contribution to international trade.

With these objectives in mind, the OIE recognises the need to strengthen primary animal health services in marginalised areas of developing countries and to ensure adequate links between animal health stakeholders and national veterinary services. Specific challenges include appropriate policy and legislative reform to ensure that veterinary authorities can regulate and monitor the activities of veterinarians and para-professionals in the private sector while also fostering effective partnerships between the public and private sectors. Consequently, the OIE welcomed the invitation from the African Union/Interafrican Bureau for Animal Resources (AU/IBAR) to participate in this conference and to join the technical committee responsible for organising it. The OIE considers the conference to be timely and supports the thematic focus on policy and institutional change. The OIE also emphasises the need to build stronger disease surveillance systems in remote areas, to improve understanding of epizootic diseases in these areas and to promote appropriate action to control them.

This conference brought together senior veterinarians from twenty-one African countries with participants from Asia, Latin America, Europe and the United States of America. As such, the conference represented a



milestone in the development of quality primary-level animal health care services in developing countries. The post-conference evaluation, presented in these proceedings, clearly shows the impact of the conference on participants. The OIE has already acted on the relevant recommendations made during the conference by forming an *ad hoc* group to propose changes to the International Animal Health Code regarding the role of private veterinarians and para-professionals in disease surveillance. The group met in February 2003 and its recommendations will be considered by the Code Commission later this year.

The OIE congratulates AU/IBAR for organising a very successful and productive conference, and looks forward to future collaboration to improve veterinary services in Africa and to promote regional and international exports of livestock and livestock products from developing countries.

Dr Bernard Vallat
Director General
Office International des Epizooties
April 2003



Proceedings summary

About this report

The past 20 years have seen radical changes in the provision of veterinary services. Structural adjustment, privatisation and other factors have led to a new policy environment. While there are increasing opportunities to develop more sustainable, basic veterinary services in rural areas, there is also a need to ensure that new services help countries to sell livestock and livestock products in a global market.

In October 2002, an international conference on these issues was held in Mombasa, Kenya. The objectives of the conference were to:

- Review progress in formulating policies to support the provision of primary animal health care and legislation relevant to workers in the field.
- Identify the key lessons learned so far and make recommendations for further action to meet future policy and legislative needs.

More than one hundred participants attended the conference, with delegates coming from twenty-one African countries, Asia, the Middle East, South America, Europe and the USA. Participants represented a wide spectrum of animal health specialists, including senior government officers and researchers and representatives of various veterinary boards and associations, non-governmental organisations, international agencies and private-sector companies.



This report summarises the presentations, discussions and recommendations of the conference.



Conference organisation

The conference was organised by the African Union/Interafrican Bureau for Animal Resources (AU/IBAR). A technical committee was established to identify the main themes of the conference and to decide how best to stimulate discussion and interaction among participants.

Technical committee

Isolina Boto	Technical Centre for Agricultural and Rural Co-operation, The Netherlands
Andy Catley	African Union/Interafrican Bureau for Animal Resources, Kenya
Katinka de Balogh	Pro-Poor Livestock Policy Facility, Food and Agriculture Organization of the United Nations, Italy
Tim Leyland	African Union/Interafrican Bureau for Animal Resources, Kenya
Jotham Musiime	African Union/Interafrican Bureau for Animal Resources, Kenya
Milcah Ong'ayo	FARM-Africa, Kenya
Dil Peeling	Department for International Development, United Kingdom
Alejandro Schudel	Scientific and Technical Department, Office International des Epizooties, France
Keith Sones	Independent consultant, Kenya





Although billed as a conference, the meeting had more of a workshop flavour and comprised keynote presentations, case studies, working group sessions, commissioned and off-the-shelf videos and posters, and rapid surveys of participants' opinions. A team of facilitators was used to run the working groups.

Facilitators

Berhanu Admassu (Ethiopia)	Tim Leyland (Kenya)
Wolfgang Boehle (Germany)	Cheikh Ly (Senegal)
Andy Catley (Kenya)	Jeffrey Mariner (USA)
Katinka de Balogh (Italy)	George Okech (Kenya)
Bryony Jones (Kenya)	Dil Peeling (UK)
Flora Kasirye (Uganda)	Lindiwe Sibanda (Zimbabwe)
Cokro Leksmono (Indonesia)	John Young (UK)



Conference outline

Day 1	Setting the Scene Theme 1: General Policy, Legislation and Institutional Issues
Day 2	Theme 2: Sustainability and Privatisation
Day 3	Theme 3: International Issues
Day 4	Theme 4: Making It Happen

Introduction

Setting the scene

- Video: **The voices of livestock keepers**
- Opening presentation: **Evolution of animal health services in the Horn of Africa.** Trish Silkin and Flora Kasiryie
- Video: **Discovering the future: the business of paradigms®**

The voices of livestock keepers

It can be difficult to represent livestock keepers' views adequately at an international conference. To remind participants of some of these views, interviews had been conducted and filmed before the conference in Kenya, Mali and Ethiopia.

The key questions asked were:

- What kinds of veterinary service do you have at the moment?
- What kinds of veterinary service do you want?
- How do you feel about paying for services?

In West Pokot, Kenya and Mulu, Ethiopia, community-based animal health programmes had been established. In these places, people were also asked how they felt about these programmes.

Kajiado, Kenya (less than 100 km from Nairobi)



'The only time I see government veterinary services is during vaccination campaigns. Otherwise they are nowhere to be found.'

'When an animal is sick, it's very hard for me to know how to use a drug. When there is nobody to ask and nobody to help, I just take a risk and assume this amount of drug is enough, and I do it myself.'



'I would love to have a pastoralist vet who knows the life of our people and our situation.'

Kati, Mali

'The government veterinary service is not effective because it cannot store enough drugs to treat our animals. But some of us have learnt the basic things, like some treatments and vaccination, so there is no problem at that level. Even me, I know how to do some of it.'



'I'm convinced that if you could train someone to be a paravet, who would be well trained in our community and know how to use drugs properly, we would pay. This is precisely what we are asking for.'

'We need these veterinary workers to be well equipped and close to us. It is proximity that is important to us.'

Baringo District, Kenya (150 km north of Nakuru, Kenya's second largest town)

'A long time ago, vets used to come but now they don't. By the time you've found one the cow is dead. If a cow gets sick you have to go asking around for the medicine. Then you get the medicine and inject it. Sometimes it heals and sometimes it kills. What can we do?'



Mulu, Ethiopia

'Maybe once in a year vets came from the agricultural bureau on some field trip and treated a few animals. Other than that we just see the animals die.'





'Our life depends on animals. These diseases kill them and make them sick. If we need a vet, well, we live in areas like this! We can't get transport to town and it's difficult for us to drive sick animals there. But since the community animal health worker started working, they come to us. There has been a great improvement.'

'Before these people were trained, we used to lose a lot of animals at the time of disease outbreaks. But now we are better – the community animal health workers are here.'



West Pokot, Kenya

'Before, there was a big problem. Government officials used to come maybe once a year and vaccinate, and then vanish. Sometimes they wouldn't even vaccinate all the animals before they disappeared.'

'When we started selecting and training these community animal health workers, that's when we started seeing some light.'

'If you call the community animal health worker, it means that you're prepared to pay for the treatment. Everyone is aware that these drugs are not free of charge—everybody is paying for it. It has been agreed—no free treatment. That's what we are fighting for.'



'Before the community animal health worker came, there used to be a lot of diseases in this area, affecting the cattle, the goats, all the livestock. But since he came, the disease situation has improved.'

'Since the community animal health worker came, he has done well. We've not had any problem from him. We drink milk and eat good meat. When the calves are born, they are active and healthy.'





Evolution of animal health services in the Horn of Africa

Trish Silkin and Flora Kasirye

In the opening presentation Flora Kasirye reviewed a century of animal health service provision in the Horn of Africa.

In the colonial era there was a tradition of deploying non-professionals such as *guards* or *scouts* alongside veterinarians. These workers were selected from their communities and given basic training. After independence, a variety of diploma and certificate holders were trained to act as extension agents and help professional staff in a range of activities. Although governments had guaranteed employment to all veterinary workers, this practice came to an end during the 1980s and many diploma and certificate holders lost their jobs during re-structuring. At the same time, privatised clinical services began to replace the free, or heavily subsidised, veterinary services provided by governments.

As privatised services developed, it became apparent that the delivery of professional animal health services by qualified veterinarians was restricted to the vicinities of towns. Some of the ex-diploma and certificate holders went into illegal private practice, but in general the more remote pastoral areas of the region remained under-served. To help fill the gap in pastoral areas, non-governmental organisations (NGOs) established a variety of *paravet* systems, training workers who became known as *community-based animal health workers* (CAHWs). A CAHW was described thus:



Typically, he or she (usually he) is a herder, lives and moves with his community and has received short training courses to enable him to treat other people's animals. CAHWs supplement their income from livestock by selling drugs. There is no consensus as to whether they are a short-term stopgap measure until levels of development improve and allow a fully professional service, or whether they are expected to play a more permanent role. There is also a difference of view between NGOs and governments over definitions. Governments typically define 'community-based' largely according to the physical location of the worker within the community, while for NGOs community participation is key ...

In most countries in the Horn of Africa, legislation did not support either the development of CAHW programmes or private veterinary activities by diploma and certificate holders:

The proliferation of NGO activities in animal health led to a series of discussions on CAHWs in the veterinary associations and veterinary boards during the 1990s. Vets were somewhat on the defensive at this time as the ending of automatic government employment forced them into competition with all other categories of provider, not just CAHWs but diploma and certificate holders as well. Moreover, because the mandate of the veterinary associations and veterinary boards is to promote the interests of the profession and ensure compliance with professional standards, these bodies found it hard to accept NGO promotion of non-professional provision. The vets believed that promoting CAHWs would lead to drug abuse or unnecessary use of drugs and would result in drug resistance.



Countries in the Horn of Africa are reviewing the policies, legislation and institutions that affect animal health services. Although the debate on the use of CAHWs has not ended, they are now legally recognised in Eritrea, Ethiopia and Sudan:



They (governments) are making distinctions between public- and private-sector provision, all are involved in devolutionary processes, all are concerned to increase livestock exports and all are under pressure to reduce poverty ... All governments in the study appeared in different ways and from different motives to have a shared concern to encourage more service providers to operate in pastoral areas in order to deliver more effective services, leading to improved levels of animal health at the national level.

A further development is the opportunity to improve the financial sustainability and quality of CAHW programmes by linking them to private veterinary professionals:

There is now an interest in privatised delivery systems where a vet or animal health assistant will work through a network of CAHWs, both supplying them with drugs and providing supervision. A recent study of the economic viability of different types of private practice in pastoral areas in Kenya suggested that the animal health assistant/CAHW model of private practice (with supervision provided by district veterinary officers) was likely to be the most financially feasible model in the short run.

Discovering the future: the business of paradigms®

In this commercial training video, by Joel Barker, a paradigm was defined as a set of rules and regulations that serves two functions: first, it establishes boundaries and second, it tells us how to be successful at



solving problems that fall within those boundaries. *Paradigm paralysis* was characterised as the failure to recognise, and be willing to adopt, new paradigms. The Swiss watch industry in the 1960s was used as an example of an institution afflicted by a severe case of paradigm paralysis.

Until the 1960s, the Swiss watch industry dominated the world market, accounting for 65 per cent of all watches sold. At that time the Japanese made virtually no watches. In 1967 Swiss researchers developed a completely new type of timepiece—the quartz movement watch. The Swiss watch industry rejected the new idea; it didn't fit into their paradigm. According to that paradigm, which had served them well for a century, watches had to have bearings, gears and a mainspring, and the quartz watch had none of these. They concluded it could not represent the future of the watch industry and so they didn't even bother protecting the invention before displaying it as a curiosity at a trade fair a year later. However, Japanese entrepreneurs visiting the exhibition recognised the new invention for what it was—a great opportunity: indeed, the future. The Japanese went on to take over the global watch market, making watches that exploited the new technology. Meanwhile the Swiss share of the world watch market shrank to less than 10 per cent and 50 000 jobs were lost.



In this example, the danger of not being willing to embrace change was clearly illustrated. The message is that change can be good, indeed essential, and that, in a changing world, not changing is not a viable option. The relevance for the animal health sector is clear: the world has changed and though free or heavily subsidised provision of animal health services by the state is no longer an option, neither, in remote areas, are privatised, fully professional services. There is a

real need to consider alternatives and to embrace change as an opportunity, not a threat. The challenge is to find the best way of moving forward, accommodating the different, sometimes apparently contradictory, requirements of the various stakeholders.

Theme 1

General policy, legislation and institutional issues

- Keynote presentation: **Participatory approaches for influencing policies, processes and practices: lessons from north and south.** John Thompson
- Case study: **Veterinary legal reform in Tanzania.** A. P. Rutabanzibura
- Case study: **Community animal health workers in Senegal: problems and prospects.** Raphael Coly, Babacar Youm and Cheikh Ly
- Case study: **The role of community animal health workers in Guinea: policy, regulations and institutional status.** Mamadou Souaré
- Working Groups
- Key challenges

Participatory approaches for influencing policies, processes and practices: lessons from north and south

John Thompson

This keynote presentation gave an overview of the increasing role for and acceptance of community participation in development, including local involvement in policy reform processes. Participation as a core principle of sustainable development is now recognised:

At the dawn of the twenty-first century, approaches to ensure the active engagement of poor people in the development process have come of age. Participation in development has gained a new respectability and legitimacy, and with it the status of development orthodoxy.

It was suggested that the widespread adoption of people-centred development approaches constituted a 'long-awaited paradigm shift in development thinking'.





Drawing on experiences from integrated pest management and farmer field schools, the real impact of participatory approaches was demonstrated by reference to lessons learned in Asia, Africa, Europe and the USA. Other successful examples of community-based participatory approaches included watershed management, village land management, community water supply and sanitation, and sexual and reproductive health strategies.

Although there was much evidence of success at local level, there was increasing realisation that inappropriate policies often hindered community-based systems. Consequently, there was a clear need to ensure better links between communities and policy makers:

Making policy work for poor people and the environment remains a great challenge. Participation in the policy process can help—the question is how to make it happen.

In recent years, a number of international initiatives have sought to promote the involvement of poor people in national policy processes. These include the development of:

- Poverty reduction strategy papers (PRSPs)
- National sustainable development strategies (NSDSs)
- Participatory poverty assessments (PPAs)





The World Bank and the International Monetary Fund (IMF) endorsed the development of PRSPs for countries seeking to benefit from the enhanced heavily indebted poor countries (HIPC) initiative. Although the PRSPs were intended to provide real opportunities for people to be involved directly in policy making for national development, experience to date suggests that active participation in the PRS process by citizens has been patchy.

Country case studies indicate that an active, engaged civil society is helpful to creating a participatory PRS process, but is not enough in itself. Prior experience with participation does not appear to be heavily influencing the PRS process: 'the single most important factor in opening up space for participation in the PRS process is political will'.

Among the most recent trends is institutional reform, to enable community participation as a normal rather than a novel or unusual approach:

Growing pressure for institutional reform to make government service delivery more responsive to poor people's needs and priorities is converging with attempts to enable poor people to have more of a say in the policy process.

However, policy reform and institutional change to ensure a greater voice for poor people face a number of challenges. Not least, attitudes and behaviour among professionals remain conservative—we don't always practise what we preach and we seek to hold on to power.

Veterinary legal reform in Tanzania

A.P. Rutabanzibura

This Tanzanian study noted the difficulty of achieving reforms in law and policy. The existing legal framework was complicated, with many separate laws covering animal health and with some unclear, and apparently



contradictory, policies. For example, CAHWs have been working in Tanzania since the early 1990s but:

... Veterinary legislation has not yet been reformed to go hand in hand with these reforms ... There is still some reluctance to include community animal health workers within the reformed veterinary legal framework.



The Veterinary Surgeons Ordinance, still in force in Tanzania, recognises only one category of animal health provider, that is, holders of a degree in veterinary surgery. An amendment passed in 1963 allowed certain treatments, tests and operations to be carried out by non-professionals, but these are described only as 'anything done otherwise than for reward' (that is, not as a paid-for service). Also, the amendment did not cover lower cadres of livestock health service providers such as paravets and community-based animal health

workers working outside the government service and supervised by private veterinary surgeons. However, the process of reviewing the regulatory framework for the provision of animal health services is ongoing in Tanzania:

The trend therefore shows that the government is prepared to allow practice of some veterinary services by lower cadres than veterinary surgeons, but it is hesitating to make a policy commitment to this effect.

Constraints to including the delivery of primary animal health services in the Tanzanian legislation were identified as:

- Fear of dilution of the veterinary profession;
- Doubts as to the sustainability of having CAHWs operate in donor- and NGO-supported programmes;
- Unclear government policy: for example, the livestock development policy predicts that the privatisation of veterinary services and drug supply will be gradual, starting in urban and peri-urban areas, whereas in practice the government has ceased altogether to provide veterinary drugs and other services, which are now considered to be private goods.

The way forward had several interlinked objectives. These included creating efficient drug supply markets and strengthening the capacity and hence the role of CAHWs in rural areas, together with the regulatory framework for their activities. There was also a need to raise the productivity of livestock in pastoral areas so that pastoralists would be able to pay for the services they need.

Community animal health workers in Senegal: problems and prospects

Raphael Coly, Babacar Youm and Cheikh Ly

The case study of CAHWs in Senegal revealed a chaotic and controversial situation, with many players involved in the training and deployment of a host of competing, non-professional, animal health workers. Recommendations for improving the situation included better regulation and supervision, the involvement of professional organisations and private veterinarians and the development of support structures for pastoralists.

The role of community animal health workers in Guinea: policy, regulations and institutional status

Mamadou Souaré

In contrast, primary animal health care in Guinea seems to be very well organised. A series of reforms has taken place since 1989 that has drastically reduced the role of state veterinary services and promoted the development of the private sector, including private veterinary practitioners and CAHWs.

Today there are 12 000 CAHWs in the field, a figure that approximates to 1 CAHW for every 30 livestock owners or 300 cattle. CAHWs are effectively integrated into the primary animal health care system and provide valuable services to livestock keepers, mainly agropastoralists.





They are supervised and supported by both public and private veterinarians, and well organised stockbreeders' groups are involved in monitoring and evaluating their activities. A national workshop held in 1992 resulted in a harmonised approach to the training of CAHWs. Although the role of CAHWs was recognised in a ministerial decree in 1998, clearer legislation is now needed to ensure that the current high standards of supervision and control continue.

Working groups

Working groups identified the key desirable characteristics of a primary animal health care service as being:

- affordable;
- accessible (for advice and drugs);
- community-based;
- effective (its advice and drugs prevent or cure diseases and pests);
- high quality (it has the necessary expertise);
- sustainable;
- linked to other services.

However, the groups noted that these characteristics were seldom achieved, due to low priority given to primary animal health care by government, lack of resources, instability and insecurity, inappropriate attitudes of service providers, community indifference, weak civil society and weak marketing systems for livestock products.



Incoherent policies further complicated the situation. The top five problems of this kind were considered to be:

- Drugs are subject to inappropriate control by pharmacy boards (or similar), with vets not allowed to sell them wholesale.
- New measures have been introduced to contract out vets' activities to the private sector but there has been no corresponding reduction or restructuring of government veterinary services, with the result that users are paying twice for the service.
- Government and NGOs have different ways of defining CAHWs and different policies on CAHW activities.
- Government is promoting veterinary privatisation but without sufficient support for the improvement of livestock marketing.
- The guidance provided by the Office International des Epizooties (OIE) in the interests of creating high-quality veterinary services may not fit national pro-poor development policies.



The theme served to illustrate a series of paradoxes in relation to community animal health care:

- It is clearly desirable to engage poor people in the development and policy-making processes, using participatory approaches and opportunities presented by initiatives such as PRS processes. Yet potential stakeholders are often ill equipped to seize these opportunities and the attitudes and behaviour of professionals remain conservative.
- The process of legal reform needs to catch up with practice in the provision of primary animal health care. But many professionals remain unwilling to recognise and acknowledge the role of non-professionals.
- There is a need for harmonised approaches to community animal health care. This contrasts with a situation on the ground that often can only be described as chaotic.





Key challenges

The working groups that met after the scene setting and Theme 1 sessions focused on the question: *How can we improve the management of animal health in the community?* The key challenges identified were:

- The provision of high-quality primary animal health care must be a bottom-up process.
- Participatory approaches are crucial. They need to be further adapted and used more widely during the change process.
- There is a need to share learning across sectors and among countries.
- More use should be made of farmers' associations when dealing with livestock issues.
- Governments must deal with incoherence in their policies.
- There is a need to build the capacity of governments to manage policy change better.
- Senior political leaders and the community lack a common language.
- Communities have little or no knowledge or understanding of the PRS initiative.



Theme 2

Sustainability and privatisation

- Keynote presentation: **Community-based animal health workers and the veterinary profession in the context of African privatisation.** David K. Leonard, Cheikh Ly and Pamela Woods
- Case study: **Increasing the efficiency of livestock service delivery: the experience of Zambia.** Peter G. Sinyangwe and Nick J. L. Clinch
- Case study: **Sustainability and privatisation: the Zimbabwe experience.** Stuart K. Hargreaves
- Case study: **Effectiveness and financial viability of a privatised animal health delivery system.** Bonface Kaberia
- Case study: **The impact of relief aid on community-based animal health programmes: the Kenyan experience.** Yacob Aklilu
- Working Groups
- Key challenges

Community-based animal health workers and the veterinary profession in the context of African privatisation

David K. Leonard, Cheikh Ly and Pamela Woods

The presenters began by defining different types of veterinary medicine, veterinary practitioners and production systems thus:

Veterinary medicine	Curative Preventative Promotive
Veterinary practitioners	Doctors of veterinary medicine (DVM) Near-professionals (certificate and diploma holders) Auxiliaries, including CAHWs





Production systems

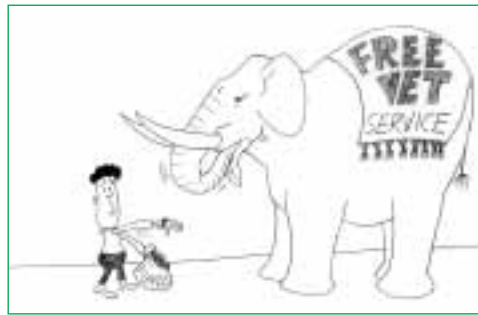
Pastoral

Traditional sedentary

Medium-value commercial

High-value commercial

After 20 years of economic crisis in Africa it is obvious that the state cannot provide all the animal health services to which it aspired in the heady days after independence. The crisis has, variously, left livestock producers without critical veterinary services altogether, exposed them to unregulated and unreliable pharmacists and practitioners in the informal sector, subjected them to unofficial charges by government practitioners or ushered in an era of open private practice supported by, and in partnership with, government.



Economics dictates that professional veterinary care will be too expensive in relation to the low-value animals kept by pastoralists in remote areas.

In these areas CAHWs are the best option. However:

The value of CAHWs probably depends overwhelmingly on the quality of the links they have with veterinary professionals ...

In Senegal it was found that the use of curative services doubled and the purchase of preventive measures increased by two to four times when producers were served by CAHWs with strong links with a veterinarian (employed by an NGO) in whom local people had confidence. A similar effect was observed in Zimbabwe, where near-professionals also have strong links with veterinarians. It was observed that links between vets and CAHWs were weak or became severed unless both parties genuinely needed each other.



The DVM relies on CAHWs and other near-professionals to provide routine, accessible and affordable care to livestock producers, to build a local reputation for reliability and to refer cases that are beyond their capability. The CAHW depends on the DVM for training and the supply of wholesale pharmaceuticals.



Finally, the presenters discussed the desirability of governments providing contracts to private veterinarians for preventive veterinary services (such as public immunisation campaigns) and for disease surveillance. They noted the substantial benefit of these contracts both in improving the financial viability of private veterinary practices outside higher-potential areas and in strengthening links between veterinarians and CAHWs.

The state has a critical role in the construction of appropriate veterinary systems for African livestock producers and in sustaining preventive measures. Private DVM, near-professionals and CAHWs, offering curative medicine for profit and providing prevention by state contract, are much the best system for accomplishing these objectives—particularly when they are strongly linked together through mutual referrals, the chain of pharmaceutical supply and the execution of *le mandat sanitaire* (the package of disease prevention measures that were previously the responsibility of government veterinary officers). The poor will be well served by such a system. Experience and theory are united on what needs to be done. We must continue the hard work of implementation.

Increasing the efficiency of livestock service delivery: the experience of Zambia

Peter G. Sinyangwe and Nick J.L. Clinch

Over the past decade Zambia has been in a state of transition, from monopolist public institutions to private sector led initiatives and free market policies. This case study reviewed the country's experience of these changes in relation to the livestock sector.



Zambia's animal health services have undergone major reform, with core function analysis an important part of the process. This has led to a re-appraisal in which the functions that are essentially government responsibilities are retained while others are left to the private sector (defined as including NGOs).

Government responsibilities have been reduced to regulatory functions and those technical services that are deemed a public good, such as tsetse fly control.

The realisation of the most cost-effective balance of livestock services delivery involves shifting the balance between delivery by the public and private sectors. Privatisation, the development of the private sector and the re-organisation of the state sector are all tools that can be used to achieve the desired balance.

Three types of activities have been recognised:

- Those that are the responsibility of the public sector and are implemented and paid for by government, for example disease surveillance.
- Those that are the responsibility of the public sector and are paid for, co-ordinated, regulated and monitored by government but implemented through contracts with the private sector or by public-private partnerships, for example vaccination campaigns for diseases of national importance, and tsetse control.
- Those that are the preserve of the private sector or of public-private partnerships and are paid for by the beneficiary, for example the supply of veterinary drugs or clinical treatments. The public sector provides the necessary enabling environment through regulation and monitoring.

The Zambian experience has demonstrated that change takes time. A great deal of effort has been put into developing policy, engaging the private sector and piloting new approaches (especially those involving the

private sector). However, this work has yet to be reflected in improved livestock services and health.

In terms of our school report: a lot of committed hard work in the right direction but not yet yielding significant improvements.

Sustainability and privatisation: the Zimbabwe experience

Stuart K. Hargreaves

Major changes to the livestock sector had also occurred in Zimbabwe, and in general the experience had been positive. It had been recognised that the state simply could not continue to provide the sector with the full range of free or subsidised services made available in the past. A key tool used in the reform process had been core function analysis. After much debate with stakeholders it had been agreed that the Veterinary Department had two core functions:

- **Regulatory services:** this is the prime function, involving the implementation of all the regulations specified by law, under the authority of the Government Veterinary Service. For veterinary staff to carry out their regulatory responsibilities, there must be adequate and appropriate legislation.
- **Technical services:** this is the provision of such technical services as are considered (at that time) to be a public good, such as
 - A diagnostic service for specific animal diseases;
 - Disease surveillance and control services for specific diseases (for example for trans-boundary and zoonotic diseases);
 - Control of specific pests, for example tsetse fly.

All other functions, for example training, extension, research and clinical services such as the dipping of cattle, were classified as being non-core activities, better done by other





organisations, either in government or in the private sector. If such services were retained in the Veterinary Department, cost recovery would be implemented.

The institutional reforms initiated in 1994 are still ongoing. Change must continue according to the needs of the livestock industry in general. However, in overview, the changes have brought only benefits, both to the department and to the private sector. Services have been streamlined and revenue collection improved. Stakeholders now accept that they need to participate and provide for or pay fully for non-core services.

Furthermore:

Farmers and stakeholders are very willing to pay for a service providing it is beneficial to their business and they can gain or profit from the service. Revolving funds have been established, where revenue is collected for services delivered and these have contributed significantly to the sustainability of the department's activities. However stakeholders need to be more actively involved in deciding how these funds are utilised.

Effectiveness and financial viability of a privatised animal health delivery system

Bonface Kaberia



This case study, from Meru in Kenya, looked in detail at the performance of a privatised animal health care system based on CAHWs linked to animal health assistants and veterinarians. The system was supported by an NGO, FARM-Africa.

Findings with regard to the system's effectiveness were that:

- The new system improved access to veterinary services for poor farmers. It was estimated that 46 per cent of households in the project area had used the system.
- The CAHWs, animal health assistants and veterinarians had clearly defined roles and complemented each other. The veterinarians provided services to farmers near towns and handled referred cases, while the CAHWs and animal health assistants covered more rural areas.

The CAHWs also made monthly disease reports and provided training to other farmers.

The following observations were made with regard to the system's financial viability:

- CAHWs were a cost-effective alternative to government veterinarians. For example, the cost of a government vet travelling 14 km by motorcycle to de-worm a cow was around four times that of a CAHW.
- For rural drug shops, operated by animal health assistants, the benefit–cost ratio varied from 1.0 to 1.4 and the net present value varied from UK£ 649 to UK£ 7069. It was noted that the worsening national economy in Kenya had affected business performance.

A key lesson learned was that farmers were willing to pay for services but that more supportive policies and laws were needed as a 'platform for the service to thrive.'

The impact of relief aid on community-based animal health programmes: the Kenyan experience

Yacob Aklilu

The threat that relief programmes can pose to ongoing community-based activities was described in this case study, which looked at the impact of interventions to combat drought in Kenya. Poorly designed and co-ordinated livestock and animal health interventions introduced as part of relief efforts during droughts can have highly detrimental effects on established community animal health care programmes, notably through the provision of free drugs.

The precarious situation in which community-based animal health programmes find themselves is further aggravated in times of natural calamities, such as drought, when new or expanded veterinary and other intervention programmes are initiated as part of the relief effort. The setbacks depend on the intensity and the duration of the drought, the types of interventions and how they are conducted and the point in the drought cycle at which the interventions are made. In this connection, two disruptions were observed during the 1999–2001 drought in Kenya. First, drugs were distributed either free or at highly subsidised prices.





Second, the income of CAHWs was affected for the duration of the drought.

Community-based animal health programmes are likely to be impacted by emergency relief aid, as drought or other natural calamities happen from time to time. Nevertheless, the impact of such interventions could be lessened or even used to strengthen these programmes if such activities are centrally co-ordinated and closely monitored and other non-veterinary interventions are deliberately geared to support emergency veterinary interventions.

Working groups

The working groups considered several topics related to the overall theme:

Ensuring that primary animal health care is safe and effective

Regulatory bodies should:

- Conduct core function analysis for primary animal health care. This exercise should be used to develop a deeper understanding among stakeholders as to each other's roles and responsibilities, with particular reference to those of livestock-keepers;
- Develop a comprehensive understanding of the international standards relating to the safety of animal health systems and incorporate primary animal health care into a strategic plan of action to achieve these standards.

Creating an enabling environment for the private sector

Suggestions included:

- Continue to raise understanding of privatisation at all levels, from government to livestock keepers;
- Provide clear definition and understanding of roles;
- Remove subsidies—free or subsidised drugs should not be the norm;
- Improve enabling policies and legislation;



- Encourage development outside the livestock sector, for example, better communications and transport infrastructure.



Meeting the needs of the poor

Poor livestock keepers:

- Have few animals;
- Rely more on sheep, goats and poultry than on cattle or camels;
- Are politically marginalised and food-insecure and tend to belong to female-headed households with limited access to grazing and water resources.



Special factors affecting the provision of primary animal health care to the poor include:

- Their location in remote areas with limited access to markets;
- The need to design services according to willingness and ability to pay;
- The reluctance of veterinarians to work in remote areas;
- Poor communications and road networks, affecting the delivery of inputs and services, as well as the delivery of produce to markets;
- Insecurity or conflict (in some areas).

The following were suggested as alternative approaches that would enable poor livestock keepers to benefit from primary animal health care services:

- Exploration of less expensive, alternative medicines such as generic drugs, validated ethno-veterinary medicines and smaller, more convenient drug packs;
- Improvement of livestock marketing, including market information and the provision of water sources and security along stock routes;
- Creation of community awareness of the principle of cost recovery and the need to pay for drugs;
- Looking for alternative methods of payment, such as payment in kind;
- Introduction of revolving funds managed by small groups or farmers' associations.





Consideration of the roles of the public and private sectors in respect to primary animal health care yielded the following observations:

- Clinical services are private goods;
- Preventive services, the facilitation of service provision and disease surveillance are public goods;
- Public–private good analysis is a useful tool;
- Some situations and services, such as treatment of cattle with trypanocidal drugs to control the reservoir of human-infective trypanosomes, are hard to classify;
- Some private-sector services are emerging in some countries to deal with public good problems;
- The government doesn't always have to pay for public good services.

Key challenges

The key challenges noted for this theme by the working groups were:

- Change is possible, though not easy;
- Change is a continuous process and all stakeholders should be involved in it;
- The poor are willing to pay for basic services but the problem is accessibility;
- There is a misconception that public good services should be free; this is not necessarily so.



Theme 3

International issues

- Keynote presentation: **The role of community-based programmes and participatory epidemiology in disease surveillance and international trade.** Jeffrey C. Mariner, Andy Catley and Cristóbal Zepeda
- Supplementary presentation: **The role of the Office International des Epizooties in animal health.** Alejandro Schudel
- Case study: **Cross-border issues related to the provision of animal health services with reference to Kenya, Uganda, Ethiopia and Tanzania.** Chris Rutebarika, Mohamed M. Bahari, Sileshi Zewdie, Bernard Mugenyó and Julius K. Kajume
- A second case study (not presented): **Experiences with community-based and participatory methods for rinderpest surveillance in parts of southern Sudan.** Bryony A. Jones, A.A. Araba, P. Koskei and S. Letereuwa
- Key challenges

The role of community-based programmes and participatory epidemiology in disease surveillance and international trade

Jeffrey C. Mariner, Andy Catley and Cristóbal Zepeda

Most African pastoralists are unable to take advantage of formal international markets in livestock and livestock products because their countries do not conform to the minimum standards, laid down by the World Trade Organization (WTO) and under the control of the OIE, in relation to animal disease surveillance.

The WTO Agreement on the Application of Sanitary and Phyto-sanitary Measures (the SPS Agreement) has established risk analysis as the basis for the regulation of international trade. The agreement has identified the OIE as the international body charged with drafting international standards for trade in animals and animal products, facilitating the exchange of animal health information and co-





ordinating trade risk analysis procedures. The overall goal is to enhance the safety and equality of access to markets by increasing the objectivity and transparency of trade decision making.

Many developing countries lack the resources to deploy enough professional-level workers in conventional surveillance systems, particularly in remote pastoral areas. However, in many of these countries there are networks of CAHWs who are capable of recognising the most important diseases that have an impact on international trade.

The starting point for all surveillance is field reports of outbreaks of disease. Throughout the world, the livestock owner and primary service providers are recognised as the principal source of disease reports and intelligence. A major constraint to western style disease surveillance in the developing world has been the limited availability of formal service providers and the existence of economic conditions that preclude the widespread presence of formally trained service providers. Further, there is often a significant communication gap between marginalised pastoral communities and conventional veterinary service providers.

CAHWs are being integrated into national animal disease surveillance systems, operating as their eyes and ears in remote areas. They are the essential link between livestock owning communities and professional veterinary services.

Livestock owners, especially pastoralists, have the ability to recognise and describe most diseases of concern in international trade.



A prerequisite for the integration of existing veterinary knowledge into surveillance systems is effective participatory practice. An attitude of respect for people and an appreciation of the value of farmers' knowledge are required of professionals if they desire the full and open sharing of information. Participatory training for veterinary staff is essential for the success of surveillance systems.

However, for the system to be sustainable, all members of the surveillance network must benefit. In the case of CAHWs the benefit can be in the form of timely advice on the treatment and prevention of priority diseases.

Disease reports from the field may be misinterpreted through misunderstanding local use of disease terms ... National surveillance staff should have an inventory of documents covering the existing veterinary knowledge of all communities in the country ... In the event that lexicons are not available from all major livestock owning cultures, surveillance staff should conduct participatory surveys to fill the gaps and, when necessary, use conventional veterinary investigation methods to relate local disease terminology to western terminology.



To meet the OIE criteria, the different members of the surveillance team must be legally accountable. However, in many countries paravets and CAHWs are not recognised in law—a key constraint that needs to be addressed. Another need is to develop internationally recognised definitions of paravets and CAHWs.

In their review of CAHW networks relating to the OIE guidelines for the evaluation of veterinary services, Leyland and Catley (2002)¹ noted that:

- The guidelines open the door for developing countries to demonstrate improved services and surveillance in marginalised areas through the use of CAHW systems.
- CAHWs can contribute to animal identification, tracing and movement control systems.
- In remote areas '... veterinary services need to show that, despite communication difficulties, they maintain "reliable knowledge of the state of animal health" and have the ability to implement "animal disease control programmes" in a given zone. Community-based animal health delivery systems have proved to be useful for improving both disease surveillance and disease control in such areas.'

¹ Leyland, T. and Catley, A. (2002) Community-based animal health delivery systems: Improving the quality of veterinary service delivery. World Veterinary Congress, Tunis, September 2002.



- CAHWs move with nomadic and transhumant pastoralists. They offer the opportunity to co-ordinate animal health surveillance and control across wide areas. They make unique contributions in border areas, across frontiers and in areas of insecurity where the activities of conventional service providers are often highly restricted or prohibited.
- In their role as carriers of extension messages, CAHWs promote compliance with drug withdrawal times and correct dose regimens.



The OIE recommends that national veterinary services develop operational plans with performance indicators. Many CAHW projects use operational plans and performance monitoring systems to assess whether or not their activities conform to minimum standards.

Community-based and participatory surveillance methods do not replace conventional surveillance and analytical capacities. They extend the capabilities of the system by enhancing the penetration of data collection activities into traditional communities, especially in remote areas.

The OIE guidelines state, 'Investigation of the suspicion of animal disease is one of the most important means of agent surveillance. International Animal Health Code 2002, Art. 1.3.6.2.' In order to investigate suspicious cases you must first detect them. CAHWs are local experts and the ground-level eyes and ears of a surveillance system in remote areas.



The goal of the SPS agreement and the OIE standards is to promote trade in a safe and transparent manner. Effective service delivery and surveillance systems are a prerequisite for participation in international trade. An important consideration is that the surveillance data provided for trade decision analysis should be sensitive, reliable and representative. A variety of complementary methods, adapted to the local environment, is required to reach these goals. It is doubtful that effective service delivery and surveillance systems can exist in extensive production systems without community-based and participatory systems. Appropriate combinations of participatory, laboratory-based and analytical epidemiology will result in the strongest overall surveillance system that best represents the true epidemiological picture.

The role of the Office International des Epizooties in animal health

Alejandro Schudel

This presentation reminded participants of the functions and structure of the OIE. It was suggested that CAHWs could be part of a national disease surveillance network. However, to meet OIE criteria, all components of the surveillance network had to be legally accountable and hence must be formally recognised through appropriate legislative reform:



Veterinary services should demonstrate that their human resource component includes an integral core of full-time civil service employees. This core must include graduate veterinarians. It should also include other qualified professional officers, administrative officials and technical support staff. This does not exclude the possibility of employing, in addition, part-time veterinary and para-veterinary staff and private-sector veterinarians. **It is essential that all the above categories of staff be subject to legal disciplinary provisions.** Data relating to the resource base of the veterinary services undergoing evaluation should be available. (OIE, Guidelines for the Evaluation of Veterinary Services)

Cross-border issues related to the provision of animal health services with reference to Kenya, Uganda, Ethiopia and Tanzania

Chris Rutebarika, Mohamed M. Bahari, Sileshi Zewdie, Bernard Mugenyi and Julius K. Kajume

This case study from East Africa drew attention to the special constraints facing the design of surveillance systems in trans-boundary areas, as mentioned in the keynote presentation. It was suggested that in these areas:



Communities are trapped in a vicious circle of poverty and insecurity due to persistent cattle rustling, counter-raids, shortfall in services and infrastructure provision, and absence of economic opportunities.

The vast size of many cross-border areas, their 'porous' borders and difficulties in enforcing the regulations controlling animal movements were also noted.

As disease surveillance is a core element of the Pan African Programme for the Control of Epizootics (PACE), countries need to find ways to strengthen the surveillance of epizootics in trans-boundary areas.

Regarding the role of CAHWs, it was noted that:

Community-based animal health care systems are in operation in nearly all the border areas of the four countries. In some of the areas they are perhaps the only available means of providing animal health services to livestock keepers.

CAHWs are key informants. They provide useful leads about livestock movements and other intelligence information on diseases, weather patterns, community perceptions on various issues, etc.

The presentation highlighted the importance of concerted approaches to the provision of animal health services in East Africa. Key recommendations included resolving cross-border conflicts, training CAHWs and linking them to district veterinary authorities, building local capacity for disease surveillance, contracting out surveillance activities, harmonising approaches in different countries and reviewing structures and services to ensure that they meet basic standards.

Experiences with community-based and participatory methods for rinderpest surveillance in parts of southern Sudan

Bryony A. Jones, A.A. Araba, P. Koskei and S. Letereuwa

A second case study (not presented) focused on the vast, remote area of southern Sudan. It concluded that the network of CAHWs was the key to identifying the last foci of rinderpest and verifying freedom from this disease in this area. Low literacy rates are common in southern Sudan and so pictorial reporting formats have been developed.



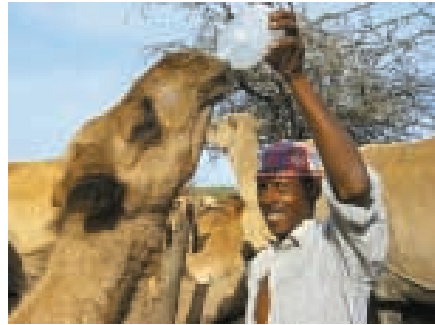
Key challenges

The key challenges noted for this theme during the plenary session were:

- There is considerable experience in the use of CAHWs in disease surveillance. This shows that they can be very useful in complementing and strengthening national surveillance systems.
- Given the importance of CAHWs in surveillance tasks, there is a need to recognise and develop the roles they can play.
- Participatory epidemiology is a useful approach. There is a need to build capacity so that the vets can use it and combine it with conventional methods.



- There is need for regional harmonisation of primary animal health care provision, particularly in cross-border areas.
- Governments should look at the options for increasing the incentives that will attract service providers to remote areas. One option is to offer long-term contracts for the sanitary mandate in such areas.



Theme 4

Making it happen

- Keynote presentation: **Advocating for the missing link in our change strategy.** Lindiwe Sibanda
- Case study: **Primary animal health care in Ethiopia: the experience so far.** Berhanu Admassu
- Case study: **Experiences of national agricultural research systems in the use of participatory approaches to animal health research in Kenya.** O.S. Okuthe, R. Kuloba, R.A. Emongor, R. N. Ngotho, S. Bukachi, S.O. Nyamwaro, G. Murila and H. Wamwayi.
- Case study: **Indonesia's experience in introducing a pro-poor focus in the livestock sector.** Cokro S. Leksmono and John Young
- Working Groups

Advocating for the missing link in our change strategy

Lindiwe Sibanda

This presentation described a set of people-centred actions aimed at influencing public policies, societal attitudes and socio-economic processes in relation to primary animal health care. The aim of the actions is to empower marginalised people to speak for themselves. Participation and communication are central to advocacy, but this essential link was noted to be 'often sadly absent'.

The challenge ahead was to ask ourselves how 'we can make it happen' not just as individuals but also at local, national and international levels. The discussion that followed highlighted the need for training in veterinary schools to prepare the next generation of veterinarians for the new paradigm.





Primary animal health care in Ethiopia: the experience so far

Berhanu Admassu



Ethiopia's support for the provision of community-based primary animal health care drew on experiences in the use of CAHWs in the Afar region in the early 1990s as part of the rinderpest eradication programme. The highly successful use of CAHWs was demonstrated by their capacity to organise communities and achieve higher levels of vaccination coverage, and greater vaccination efficiency, than conventional government vaccination teams. Although this raised the profile of CAHWs, in general the veterinary profession was anti-CAHWs and proponents were heavily criticised in forums such as the annual meetings of the Ethiopian Veterinary Association.

Over time, more Ethiopian veterinarians became involved in running CAHW projects and a critical mass of professional field experience began to form. At the same time, veterinary services began to be privatised, although at first this was largely limited to the main cities, such as Addis Ababa. A system of government based on regional autonomy was created and the veterinary service at federal level was demoted to the status of a small



departmental team of veterinarians. As time went by, the benefits of CAHW systems began to be better understood by veterinary professionals and there was a gradual shift in thinking within the Ethiopian Veterinary Association. Senior vets in the association began to lobby government and, although it took many years, CAHWs were eventually endorsed.

The agencies responsible for influencing or making policy on primary animal health care are now actively engaged in improving the quality of CAHW services. A national impact assessment team has been established, with representatives from the Ministry of Agriculture, the veterinary faculty, the national animal health research institute, NGOs and the private sector. This team, which reports directly to policy makers, is investigating specific issues related to the sustainability and quality of CAHW systems, including lack of supervision by veterinary professionals and lack of harmonised training curricula. However, the overall trends regarding the strengthening of CAHW approaches are positive. There are now around 1500 government- and NGO-trained CAHWs in Ethiopia.



A number of conditions have favoured the development of community-based animal health systems:

- Basic enabling policy and legislation are in place;
- Basic privatisation regulations have been developed;
- Private suppliers are importing drugs into the country;
- Private drug trading has started operating in some areas;
- There is collaboration with NGOs at federal, provincial and local levels;
- National minimum guidelines for the training of CAHWs have been developed;
- CAHWs are performing well;
- There is a willingness to use and an ability to pay for the services of CAHWs;
- Veterinary professionals now have more experience in managing community-based animal health care and the attitudes of these professionals have changed;
- There is some positive experience of linking CAHWs to private veterinary pharmacies.



It was concluded that, though much had been achieved, clearer, stronger policies and regulations were needed to facilitate the further development of community animal health care in Ethiopia. The promotion of participatory approaches was desirable to encourage better communication, co-operation and collaboration and to strengthen links at national, provincial and local levels.

Experiences of national agricultural research systems in the use of participatory approaches to animal health research in Kenya

O.S. Okuthe, R. Kuloba, R.A. Emongor, R.N. Ngotho, S. Bukachi, S.O. Nyamwaro, G. Murila and H. Wamwayi

This case study described how two national research institutes in Kenya had tried to adopt a more participatory approach to animal health research.



Although, traditionally, research had been laboratory based, it was realised that its impact on livestock keepers was poor. Simultaneously, a number of other factors led research institutes to try new ways of working with a focus on bottom-up, participatory approaches. These factors included pressure from donors, who wanted to see more impact from the projects they supported and a change in government policy giving greater attention to privatisation and cost sharing.

Scientists were initially sceptical about the new participatory approach:

Biophysical scientists had negative attitudes towards these (participatory) approaches. The scientists were initially apprehensive and reluctant to adopt these approaches as they considered them to be over-burdening and an interference with scientific etiquette ... They were also concerned that the results of qualitative studies carried out using participatory approaches would not be accepted for publication in scientific journals. They feared losing control of the research projects to other collaborators with comparative advantages in the use of participatory approaches.

To improve understanding of participatory research approaches, existing biophysical scientists were trained in them and social scientists were recruited to establish new socio-economic units in both institutes. To ensure the implementation of participatory research, competitive research funds were set up that actively encouraged participatory approaches. In addition, the performance appraisal criteria of scientists were altered so as to recognise and reward reports and publications written on the basis of participatory studies. Over time, participatory approaches were integrated into institutional mission statements and visions, and were assessed in project monitoring and evaluation processes. In short, participation became institutionalised. Senior managers who were committed to change oversaw this process and were instrumental in 'making it happen'.

Overall the adoption of participatory approaches to animal health research was judged to have had a positive impact:

Participatory approaches are now widely accepted tools for conducting research ... The attitude that communities had little to offer in technology development and dissemination has changed, and scientists have learnt that communities have a wealth of knowledge which can be used to enhance research outputs ... The use of participatory approaches has enhanced, strengthened and enriched data collection and analysis by involving all stakeholders in the information chain. Thus the data can feed into policy formulation and implementation for greater impact at the community level.



Despite the obvious advantages of participatory approaches, the process of change was difficult. The growing interest in participation within the development community in general meant that staff trained in participatory approaches often left the institutes for better-paid work with the private sector and international organisations.

Indonesia's experience in introducing a pro-poor focus in the livestock sector

Cokro S. Leksmono and John Young

This case study reported on the experiences of the Decentralised Livestock Services in Eastern Indonesia (DELIVERI) project. Besides helping the Government of Indonesia to reform the country's livestock services, the project's specific purpose was to:



... make livestock-related institutions more responsive to the needs of small-scale farmers, including the resource-poor, through the adoption and replication of more client-orientated and participatory approaches.

When DELIVERI started in 1996, government livestock services were highly centralised, bureaucratic and inefficient. The project's approach was to train government staff in participatory planning and training

methodologies and to establish pilot CAHW projects that would provide hands-on experience in community-based animal health care. From 1997, reforms introduced by the new government attempted to resurrect policies based on decentralisation, privatisation and participation. By then, DELIVERI was able to present the results of several successful pilot projects to the government. Key government officials championed the new participatory approach and there was suddenly a high demand for further training and information.

The DELIVERI project had profound institutional and economic impacts. Implementation of the CAHW projects was reported to have completely changed the delivery of clinical animal health services.



Local communities, who used to rely on the free but intermittent government service, welcomed the opportunity to take control of the service themselves. They became actively involved in planning, implementation and evaluation and were willing to pay for the service provided to them by members of their own community. The CAHWs were well motivated to provide a high-quality service and there was a significant increase in customer satisfaction with animal health services and an ever-increasing trend in the number of cases treated each month by the CAHWs.

Financial efficiency in treating animal disease also improved substantially:

In 1998 the cost to the government of treating one case was between IDR 111 000 and 212 000. In 2000, the CAHWs were providing the same service for between IDR 5000 and 35 000. The implementation of CAHW projects significantly reduced government spending. A cost-benefit analysis in 2000 showed a net present value of IDR 8896 million (discount rate 15 per cent), proving that the cost to the Department of

Livestock Services of establishing CAHWs was cheaper than that of continuing to provide the service itself.

The Indonesian experience shows that:

- Basic clinical animal health services can be successfully privatised and this can substantially improve the accessibility, quality and efficiency of the service;
- Involvement of local communities in the planning and implementation of animal health services can increase the self-reliance and decision-making capacity of individual livestock owners;
- CAHWs have an advantage over other animal health service providers in transaction costs and terms of remuneration. They are well suited to the needs of the rural poor.



The critical factors for the successful implementation of this CAHW approach were:

- The enthusiasm and active involvement of local communities, which were vital for the sustainability of the service;
- The participatory processes, which were built into the project's approach, seemed to attract the genuine interest and involvement of all participants;
- A favourable policy context, which enabled local communities' enthusiasm to flourish and provided support when needed;
- Close links with decision makers and managers, which created common understanding and facilitated the sharing of experience among all the parties involved in the pilot project, and also promoted replication of the project elsewhere in Indonesia.



The positive experience of CAHWs in Indonesia has encouraged policy makers to extend the community-based approach to other sectors, such as pest control and garbage collection.



Working groups

Group 1 considered the problem:

As livestock professionals, why don't we really embrace community participation?

The group identified the top ten reasons for weak community participation as follows:

- Professionals have negative attitudes about participation;
- Professionals lack the skills to really involve communities;
- Professionals work in institutions that don't reward them for doing participatory work;
- We fear a loss of power if we hand over more control to communities;
- Our resources are low and communities are many;
- We're not training the right people in participatory approaches;
- Everyone lacks confidence in policy makers, so why bother to get involved?
- Communities don't know that their voices are important;
- Community representation is weak;
- There are ethnic differences and mistrust between insiders and outsiders.



Solutions to these problems included:

At the professional level:

- Review institutional mandates, as the mission is to help livestock-rearing communities;
- Review procedures within institutions, so that outputs based on strong community participation are recognised and rewarded;
- Do more training of professionals;
- Carefully select the right people for training, that is, people with a natural aptitude for community work;
- Adapt university curricula to be more in line with participatory approaches and encourage top-rank university researchers to support community participation.



At the community level, lack of confidence in policy makers might be addressed by:

- Giving communities more choice in selecting their representatives;
- Involving communities at all stages of the project cycle;
- Creating commodity interest groups (for example, livestock producers' associations) to lobby for change;
- Inviting policy makers to spend more time at community level, listening to local opinions;
- Ensuring that communities realise that their voice is important;
- Raising awareness of policy making within communities.

Groups 2 and 3 considered:

What changes are needed at the national level to improve primary animal health services?

Group 2 identified the major factors as:

- Political will and prioritisation;
- Policy environment and legislation;
- Building capacity through partnerships and co-ordination.

Group 3 identified the constraints to change as:

- Lack of political will;



- The provision of subsidies;
- Vested interests;
- Fear of change;
- Lack of incentives to change;
- Conflicts of interest.

Possible solutions included:

- Farmer empowerment;
- Debt relief;
- Privatisation;
- Change of attitude;
- Creation of awareness and understanding;
- Ensuring veterinary services are strong and focused;
- Public-private links.



Group 4 considered:

What changes are needed at the international level to meet evolving international demands on developing countries' veterinary systems?

Major areas requiring change were:

- Rules and regulations, which require action from international institutions as well as regional and national bodies;
- Policies, which would involve OIE, regional and national bodies.

Possible action to improve matters includes:

- Grouping of countries to strengthen their influence on international agendas;
- Setting up of projects to strengthen existing regional institutions;
- Donor assistance in setting and propagating standards.



Conclusions and recommendations¹



Institutional change

The meeting recognises that while change at community level can be rapid, institutional change occurs at varying speeds and may be slow. However, once stakeholders have agreed the need for change, the process can be facilitated.

The meeting acknowledges that institutional changes are needed to improve animal health care services. We therefore recommend that: the formation and development of farmers' and herders' organisations be encouraged; international agencies, such as AU/IBAR, strengthen the capacity of national governments to understand and manage change in

¹ The conclusions and recommendations that appear here have been edited to improve their clarity but are otherwise the same as those circulated to conference participants in late 2002.



the livestock sector; and that national governments raise awareness of change and engage civil society to ensure participation in the process.

Policies and legislation

Policy formulation, co-ordination and management, together with legislative reform, are major challenges. There is a need to build the capacity of governments and other stakeholders in these areas.

The voices of smallholders and pastoralists are often not heard. There is a need to improve the capacity of governments to involve these livestock keepers in policy processes.

Livestock policy is largely formulated in isolation from national development strategies. Through initiatives such as the PRS process, and the New Economic Partnership for African Development (NEPAD), there is a need to raise the profile of the livestock sector and improve its integration with other sectors.

Training and participatory approaches

Veterinary curricula should be updated to respond to the new demands being placed on the profession. Topics that now need to be covered include privatisation, participatory approaches and the provision of primary animal health care.



Participatory epidemiology has proved to be a useful approach for national epidemiology services. We recommend building capacity to ensure that this approach is combined with conventional epidemiological methods.

Privatisation of veterinary services

The evidence suggests that, while most poor livestock keepers are willing to pay for high-quality animal health services, there is a need to increase their access to service providers.

The benefits of privatisation in the livestock sector have been poorly exploited. There is a need to improve understanding of privatisation and its benefits at all levels, from livestock keepers to local and central government and to define and articulate the roles of all stakeholders clearly.

Further, governments should look at increasing incentives to attract service providers to remote areas: for example, long-term contracts for surveillance and other responsibilities. The vital role of market access in making privatisation work for poor people must not be overlooked.

Surveillance

There is considerable evidence that community-based disease surveillance can be very useful in complementing and strengthening national disease surveillance systems. There is a need to recognise and develop the role it can play.



Community animal health workers and services

CAHWs are proving useful, but their management and integration into existing systems must be improved.



To strengthen the delivery of veterinary services, we must build and sustain more effective links between vets, paravets, CAHWs, farmers and farmers' organisations.



Regional integration and harmonisation of primary animal health services should be enhanced, particularly in cross-border areas.

Office International des Epizooties

The meeting asked the OIE to assist in clarifying the roles, links and regulations required to incorporate private veterinarians and para-veterinary staff (including CAHWs) into the structure of national veterinary services. The OIE was also asked to analyse current use of terminologies and to define the term 'para-veterinary professional'.

Evaluation

Evaluation and impact

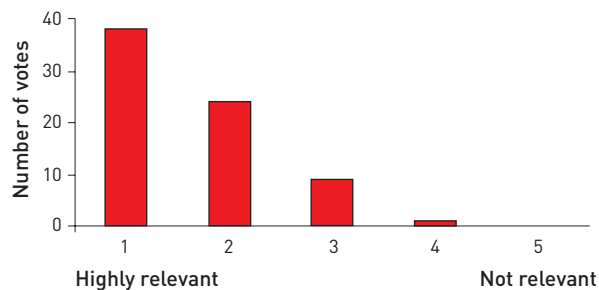
Comments on the conference by participants

Stuart Hargreaves, Director of Veterinary Services, Zimbabwe

'We are trying to fill the gap between the villager, the farmer and the formalised veterinary service and I think CAHWs play a very important role in filling that gap. It is interesting to see all the new ideas of how this can be achieved. Generally I think the conference was very positive. There's global acceptance for CAHWs and I've learnt a fair amount of new things which, when I return home, I'll certainly try to...implement.'



Were the conference objectives relevant to your work?



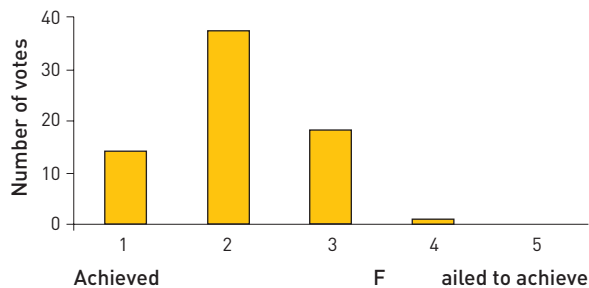


Tembile Songabe, University of Pretoria, South Africa



'The experience and frustration we are currently facing in getting these policies off the ground are not unique ...But the various mechanisms that other countries have in place [have much to teach us]... It's those lessons and those strategies that we have learnt and we are going to take back home.'

Were the conference objectives achieved?

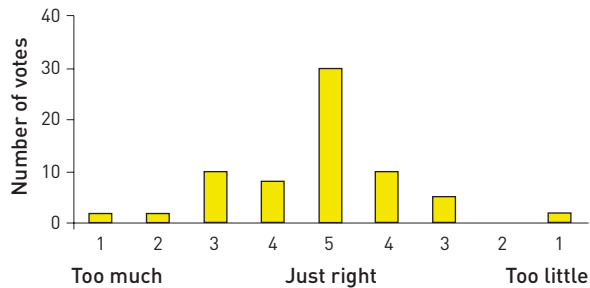


Eunice Forster, Director, Department of Livestock Services, The Gambia

'I think that animal health from now on will be better delivered because I'm going to involve the CAHWs in disease reporting and surveillance. I'm going back now and I'm going to reorganise my work plan, to ensure that I bring them on board. I organise them, I retrain them, so I can gain a lot from their experiences and they will serve my project better.'



Time allocated to presentations

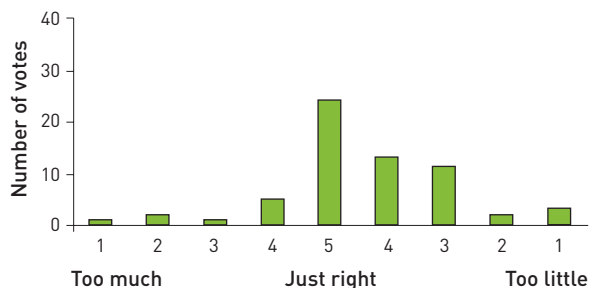


Bonaventure Mtei, Livestock Expert, SADC Secretariat

'The conference has been quite successful. We've been talking about these CAHWs for quite a long time and I think this is opening up ways to advance this concept further into implementation... At regional level we need to see how we can coordinate the national activities on primary animal health care. We need to see how we can harmonise the primary animal health care in the region.'



Time allocated for questions and discussion





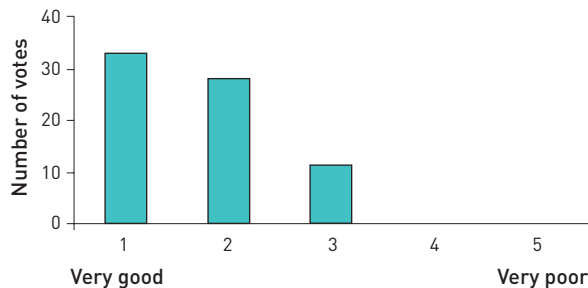
Ahmed Mustafa Hassan, Undersecretary, Ministry of Animal Resources, Sudan



'What I am going to take back to my country is the possibility of improving the veterinary service delivery...We have benefited from this approach in eradication of rinderpest in very difficult areas of Sudan...But we find the policy needs to be modernised, to be acceptable and even to be manageable, and to be included and integrated into the general national hierarchy and structures of government. This is a very

important and crucial issue on which we are going to consult the views and experiences of different countries and we are going to benefit from the outcome of this conference.'

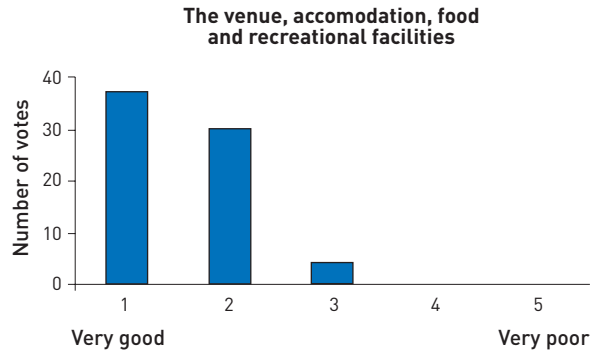
General organisation and logistics of conference



Getachew Abebe, Dean, Faculty of Veterinary Medicine, Addis Ababa University, Ethiopia

'The topics raised here have created awareness amongst conference participants and we have tried our best to see what are the differences in the different regions: the West African approach, the East African approach. As far as we are concerned in Ethiopia, we are going to see areas where CAHWs could be used more effectively.'

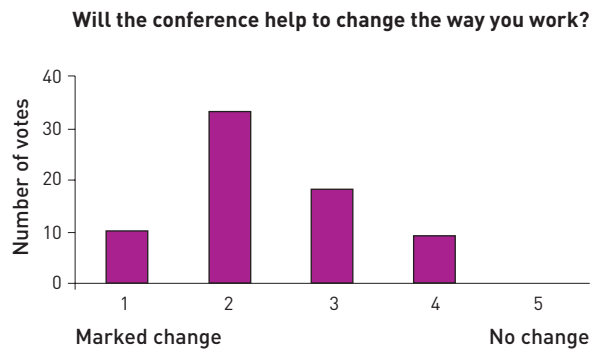




Fuad Aldomy, Director of Animal Resources, Jordan



'We are exchanging the experience of other countries, those that started 15–20 years before us—we started in the year 2000, our experience is only two years...The experience which I'm really going to have with me is to have legislation to deal with it...The CAHWs are not really legalised to do the work.'





John Thompson, Director, Sustainable Agriculture and Rural Livelihoods Programme, International Institute for Environment and Development, UK



'One of the best parts of the conference is the fact that you have this very diverse group of people coming at the issues from very different perspectives. What I've seen is movement through the week. Not that everyone buys the concept whole-heartedly, but there is a general understanding that this offers opportunities and that people are opening up spaces to experiment, to try out these ideas. Quite senior people are saying, "yes, we like the idea and we are going to endorse it, try it in our place". And so there has been the seeking out and finding of common ground and that has been one of the highlights, one of the achievements of the conference.'

Response of the Office International des Epizooties

The conference recommendations included one specifically addressed to the OIE, which read:

The meeting asked the OIE to assist in clarifying the roles, links and regulations required to incorporate private veterinarians and para-veterinary staff (including CAHWs) into the structure of national veterinary services. The OIE was also asked to analyse current use of terminologies and to define the term 'para-veterinary professional'.

As a direct result, in February 2003 OIE organised a working group charged with brainstorming on *the role of private veterinarians and para-professionals in the provision of animal health services*. This group included representatives from Africa, Asia, South America and Europe, as well as a representative of the whole veterinary profession (Chairman of the World Veterinary Association). The report from the group's first meeting follows.

The role of private veterinarians and para-professionals in the provision of animal health services

The OIE *ad hoc* group on the role of private veterinarians and para-professionals in the provision of animal health services held its first meeting at OIE headquarters on 10–11 February 2003. Members of the group were from both the public and private sectors, with representatives from Africa, the EU, South America and Southeast Asia.

The Director General of the OIE, Dr B. Vallat, indicated to the members that requests and recommendations had been received from various OIE regional commissions asking the OIE to address the issue of the use of private veterinarians and various categories of para-professionals by veterinary services, particularly in member countries where veterinary services may be under organisational or financial pressure.

Dr Vallat recalled the commitment made by the OIE and the other international organisations at Doha regarding capacity building in developing countries. He emphasised that the inclusion of private veterinarians and para-professionals needed to be done carefully, so as to ensure that standards were maintained and confidence in countries' ability to trade safely was not lost. He also noted that the standards developed would need to be applicable to all member countries.

The group's objective was to examine aspects of animal health service delivery (within its terms of reference) and to advise the OIE on how these may be used to improve the quality of veterinary services in OIE member countries. The terms of reference of the group were to:

- Define the functions and responsibilities of private veterinarians and para-professionals (including CAHWs), in the provision of animal health services;





- Provide guidelines on the roles, inter-relationships and regulations required to link them with official veterinary services.

The group proposed revised definitions for *official veterinarian* and *veterinary services* to incorporate private veterinarians and para-professionals (including CAHWs) and new definitions for *veterinarian*, *veterinary statutory body* and *para-professional*.

It defined a *para-professional* as a person who, for the purposes of the OIE Code, is authorised to carry out certain veterinary tasks (dependent upon the category of para-professional) in a country, through a licence from the veterinary statutory body, and delegated to them under the responsibility and direction of a registered or licensed veterinarian. The veterinary tasks authorised for each category of para-professional should be defined by the statutory body depending on qualifications and training, and according to need. Categories of para-professionals include veterinary nurses, veterinary technicians, CAHWs, food inspectors and livestock inspectors.



Recommendations

The *ad hoc* group recommended that:

- To ensure adherence to ethical codes and standards by veterinarians and para-professionals, a **veterinary statutory body** be established in each OIE member country and that the body be made responsible for the licensing and registration of veterinarians and para-professionals, and the setting and monitoring of professional standards and

discipline. Such a body would play a vital role in the organisation and delivery of quality veterinary services and in the maintenance of public confidence in such services.

- OIE regional commissions encourage the **harmonisation of registration and licensing** of veterinarians and eventually that of para-professionals on a regional rather than a country basis. Recognition of veterinary degrees on a regional basis could be a valuable tool in strengthening service delivery in the fields of animal health and veterinary public health.
- **Veterinary administrations** establish links to recognise and regulate trans-boundary veterinary activities, including the movement of veterinarians and para-professionals across national borders in certain areas of the world.
- In order to strengthen animal health and veterinary public health services through improved involvement of private veterinarians and para-professionals, veterinary administrations should build **official links** with service providers, particularly individual veterinarians and veterinary associations, but also with individual para-professionals, para-professional associations, NGOs and farmers' groups. Links between veterinary administrations and private veterinarians and para-professionals should take the form of contracts for the provision of specific services, such as disease monitoring and surveillance, animal vaccination, food inspection, and disease prevention and control.
- With regard to **veterinary public health controls**, the importance of livestock owners and their associations as the first line of defence in early warning, disease surveillance and food safety, and therefore as an essential link in animal health service delivery, should be stressed.
- Improvements be made at both undergraduate and postgraduate level to address current **inadequacies in veterinary training**.
- The **supply of veterinary medicines** that might impact on international trade (through residues of anti-microbials, hormones or insecticides) should be significantly tightened. Supply should be based on prior diagnosis





and specific treatment using licensed products and made only to clients whose livestock are under the care of a veterinarian (or para-professional working under the responsibility of the veterinarian).

The OIE believes that the recommendations arising from this meeting are very valuable and provide a sound basis for better including these professional groups in the activities of veterinary services of member countries and for making improvements to the OIE Animal Health Code.

The *ad hoc* group report will be submitted to the next meeting of the OIE Code Commission before examination and adoption by the International Committee.

Participants



Name

Capacity/institution

Abebe, Getachew	Dean, Faculty of Veterinary Medicine, Addis Ababa University, Ethiopia
Abiola, François Adébayo	Directeur, Ecole inter-états des sciences et médecine vétérinaires, Dakar, Sénégal
Admassu, Berhanu	CAPE, Ethiopia
Akabwai, Darlington	CAPE Unit, PACE, AU/IBAR
Aklilu, Yacob	CAPE Unit, PACE, AU/IBAR
Aldomy, Fuad	Director of Animal Resources, Ministry of Agriculture, Amman, Jordan
Bahari, Mohamed M.	National Project Co-ordinator, PACE, Tanzania
de Balogh, Katinka	FAO, Rome, Italy
Barqadle, Ahmed Warsame	Representative DVS, Somalia
Bisson, Andrew	FAO, TCE Operation Lifeline Sudan, Nairobi, Kenya
Boehle, Wolfgang	Facilitator, Le Vernoy, France
Bonnet, Pascal	ILRI, CIRAD-EMVT, Addis Ababa, Ethiopia
Bores, Nicole	CAPE Unit, PACE, AU/IBAR
Boto, Isolina	CTA, Wageningen, The Netherlands
Catley, Andy	CAPE Unit, PACE, AU/IBAR
Cheik, Mousa Ibrahim	Directeur de l'élevage et des pêches, Ministère de l'agriculture, de l'élevage et de la mer, Boulaos, Djibouti



Name	Capacity/institution (continued)
Chikungwa, Patrick	Chief Animal Health Officer, Department of Animal Health and Industry, Ministry of Agriculture, Malawi
Clinch, Nick	Co-ordinator, Technical Advisory Group, Animal Production and Health, Lusaka, Zambia
Diallo, Soumana	Chef de la Division prévention des risques, protection des animaux et des végétaux, Direction nationale de l'appui au monde rural, Ministère du développement rural, Bamako, Mali
Dinis, Joaquim Joao Massolari	National Directorate of Livestock, Luanda, Angola
Dulu, T. D.	VSDF Department of Veterinary Services, Nairobi, Kenya
Forster, Eunice	Director, Department of Livestock Services, Ministry of Agriculture, The Gambia
Gautier, Patrice	Chief Representative for Vietnam, Vétérinaires sans frontières, Hanoi, Vietnam
Godiah, Lawrence M.	KETRI, Nairobi, Kenya
Gradé, Jean T.	Ethno-veterinary Consultant, World Concern, Uganda
Grahn, Richard	CAPE Unit, PACE, AU/IBAR
Gregoire, Daniel	PACE Advisor, West and Central Africa, PACE Coordination, Bamako, Mali
Hadrill, David	Independent consultant, Brighton, UK
Hargreaves, Stuart K.	Director of Veterinary Services, Department of Veterinary Services, Harare, Zimbabwe
Hassan, Ahmed Mustafa	Undersecretary, Ministry of Animal Resources, Khartoum, Sudan
Hassan, Habiba S.	CAPE Unit, PACE, AU/IBAR
Hooton, Nicholas	ILRI (Smallholder Dairy Project), Nairobi, Kenya
Jones, Bryony	Vétérinaires sans frontières, Nairobi, Kenya
Kaberia, Bonface K.	Livestock Advisor, FARM-Africa, Nairobi, Kenya
Kagiko, Michael M.	Dean, Faculty of Veterinary Medicine, University of Nairobi, Kenya
Kajume, Julius K.	Independent consultant, Nairobi, Kenya
Kariuki, Joseph	Illustrator, Nairobi, Kenya
Kasirye, Florence	Dairy Development Authority, Kampala, Uganda
Kasirye, J.B.	Department of Livestock Health and Entomology, MAAIF, Entebbe, Uganda
Kifle, Ukubazghi	Veterinary Services Division, Ministry of Agriculture, Animal Resources Department, Mendefera, Eritrea
Kimaru, Judy	Project Manager, KVAPS, Nairobi, Kenya
Krause, Patrick	VETAID/ Vétérinaires sans frontières, Midlothian, Scotland
Kuloba, Robert	KETRI, Nairobi, Kenya
Kyewalabye, Elizabeth	Head of Department, Department of Veterinary Medicine, Makerere University, Kampala, Uganda
Langat, Joel K.	ARLMP, Nairobi, Kenya
Le Brun, Yvon	AU/IBAR, Nairobi, Kenya
Leksmono, C. S.	Student, University of Reading, UK
Leonard, David K.	University of California, Berkeley, USA



Name	Capacity/institution (continued)
Leyland, Tim Ly, Cheikh	CAPE Unit, PACE, AU/IBAR Service d'économie rurale et gestion, Ecole inter-états des sciences et médecine vétérinaires, Dakar, Sénégal
Mahler, Friedrich Makgatho, C.	Somali PACE Country Coordinator, EU, Nairobi, Kenya President of the OIE Regional Commission for Africa and Chief Director, Agricultural Production, Department of Agriculture, Boordfontein, South Africa
Mariner, Jeff	Feinstein International Famine Center, Tufts University, Fort Collins, USA
Massarelli, Andrea Matampash, Kenny Mathias, Evelyn	PACE Mid-term Review Panel Neighbours Initiative Alliance, Kajiado, Kenya Project Coordinator, League for Pastoral Peoples, Bergisch Gladbach, Germany
Mavale, Adolfo Paulo	National Directorate of Livestock, Ministry of Agriculture and Rural Development, Maputo, Mozambique
Mbugua, Susan W. Melewas, J. N.	Kenya Veterinary Board, Nairobi, Kenya Livestock Adviser, Ministry of Regional and Local Government, Dar es Salaam, Tanzania
Minjauw, Bruno Mlelwa, T. Ponella	ILRI (DFID-AHP), Nairobi, Kenya Tanzania Veterinary Board, Ministry of Water and Livestock Development, Dar es Salaam, Tanzania
Mtei, Bonaventure J. Mukaratirwa, Samson	SADC, Gaborone, Botswana Dean, Faculty of Veterinary Sciences, University of Zimbabwe, Harare, Zimbabwe
Mululuma, Gregory M.	Head, Private Sector Development Unit, Animal Production and Health Sub-programme, Department of Research and Specialist Services, Ministry of Agriculture and Cooperatives, Lusaka, Zambia
Musiime, Jotham T. Muzenda, Jackqeline Nalitolola, Steven Nthuli, J. P.	Director of Agriculture, AU/IBAR, Nairobi, Kenya Veterinary Services of Zimbabwe, Harare, Zimbabwe Project Veterinarian, Vetaid, Arusha, Tanzania Representing Director of Veterinary Services, Department of Veterinary Services, Ministry of Agriculture and Rural Development, Veterinary Research Laboratory, Nairobi, Kenya
Obed, Muriu Oduor, J.J. Okech, George Ong'ayo, Milcah Opasina, Benjamin A.	Project Advisor, Heifer Project International, Malindi, Kenya Marketing Manager, CEVA, Nairobi, Kenya Tufts/FAO TCE Operation Lifeline Sudan, Nairobi, Kenya FARM-Africa, Nairobi, Kenya Assistant Director, Department of Livestock and Pest Control Services, Federal Ministry of Agriculture and Rural Development, Abuja, Nigeria
Oyas, Harry Peeling, Dil	Ministry of Agriculture and Rural Development, Nairobi, Kenya DFID, UK



Name	Capacity/institution (continued)
Pratzelt, Ralf	INTERVET East Africa, Nairobi, Kenya
Romero-Prada, Jaime-Ricardo	Veterinary Faculty, Universidad Nacional de Colombia, Bogotá, Colombia
Rushton, Jonathan	CEVEP, La Paz, Bolivia
Rutabanzibura, A. P.	Ministry of Agriculture, Dar es Salaam, Tanzania
Rutebarika, Chris	PACE Country Co-ordinator, Livestock Health and Entomology, Ministry of Agriculture, Animal Industry and Fisheries, Entebbe, Uganda
Rwamushwa, Erastus B.	Assistant Commissioner, Ministry of Agriculture, Animal Industry and Fisheries, Entebbe, Uganda
Saïdou, Hamadou	Directeur des services vétérinaires, Ministère de l'élevage, des pêches et des industries animales, Yaoundé, Cameroun
Sancho, Loforte James	Livestock Restocking Coordinator, VETAID, Moçambique
Sarakikya, Franklin M. N.	Livestock Advisor, Ministry of Regional Administration and Local Government, Mwanza, Tanzania
Schudel, Alejandro	Head, Scientific and Technical Department, OIE, Paris, France
Sibanda, Lindiwe	Linds Agricultural Services (Pvt) Ltd, Harare, Zimbabwe
Sinyangwe, Peter G.	Ministry of Agriculture and Co-operatives, Lusaka, Zambia
Smith, Kevin	USAID/REDSO/ESA, Nairobi, Kenya
Snyder, Amuthenu Natangué	Director of Veterinary Services, Ministry of Agriculture, Water and Rural Development, Ondangua, Namibia
Songabe, Tembile	Veterinary Production and Ethology Section, Department of Animal Production, Faculty of Veterinary Science, University of Pretoria, Ondestepoort, South Africa
Souaré, Mamadou	PACE, Conakry, Guinea
Teshome, Hanna	SOS Sahel, Wollaita Sodo, Ethiopia
Thompson, John	Director, Sustainable Agriculture and Rural Livelihoods Programme, IIED, London, UK
Tibbo, Karen	FAO-PPLPF, Rome, Italy
van den Bossche, Peter	Institute of Tropical Medicine, Veterinary Department, Antwerpen, Belgium
Vivekanandan, P.	Herbal Healing for Animal Health, SEVA, Tamil Nadu, India
Wamwayi, Henry M.	Director, National Veterinary Research Centre, KARI, Nairobi, Kenya
Wollen, Terry S.	Heifer International, Little Rock, USA
Woods, Pam	Independent consultant, Harare, Zimbabwe
Young, John	Overseas Development Institute, London, UK



Minibiographies of presenters

Dr John Thompson is the Director of the Sustainable Agriculture and Rural Livelihoods Programme, International Institute for Environment and Development (IIED), London, UK.

A P Rutabanzibwa is a legal adviser to the Government of the Federal Republic of Tanzania. He played a key role in the stakeholder analysis and synthesis of new draft legislation concerning the delivery of animal health services in Tanzania.

Dr Cheikh Ly is a veterinarian and economist, who currently carries out his research and teaching from the École inter-états des sciences et médecine vétérinaires, Dakar, Senegal. Dr Ly has published widely on the privatisation of veterinary services in Africa and in particular on community-based animal health delivery systems.

Dr Mamadou Lamarana Souaré is the Privatisation Officer for the Pan African Programme for the Control of Epizootics (PACE) in Guinea. As well as engineering a highly successful privatisation scheme, Dr Souaré is an expert on the use of farmers' groups and CAHWs in the delivery of veterinary services.

Dr Florence Kasirye currently heads the Ugandan Dairy Development Authority. Dr Kasirye is an expert in veterinary policy development and institutional change, having carried out numerous studies on this whilst chairperson of the Ugandan Veterinary Association and based at the University of Makerere.

Dr Stuart Hargreaves is the Director of Veterinary Services in Zimbabwe and has in recent years guided his department's successful restructuring and process of institutional change. Dr Hargreaves is a member of several OIE *ad hoc* groups and is highly respected for his dedication to and impact on animal health control in Africa.

Dr Peter Sinyangwe is currently the Director of Research and Specialist Services in the Ministry of Agriculture and Co-operatives, Zambia. He has successfully overseen the restructuring and reorganisation of livestock services in Zambia.

Dr Nick Clinch is a Senior Consultant with RDP International B.V. He is currently Co-ordinator of the Technical Advisory Group, an independent group of technical assistants funded by the Government of The Netherlands and recruited to provide advisory services to the livestock sector in Zambia.



Dr Bonface Kaberia is the Livestock Adviser to FARM-Africa in Kenya. Dr Kaberia has been instrumental in establishing one of the first private veterinary practices that utilises CAHWs in Kenya.

Dr Yacob Aklilu is head of the Livelihoods and Projects Section within the Feinstein International Famine Center, Tufts University, Boston, USA. He is an agricultural economist currently working with AU/IBAR's CAPE Unit. Dr Aklilu is an expert in do-no-harm emergency relief for the livestock sector and also in livestock marketing and trade policy and practice.

Dr Jeffrey C. Mariner is seconded to the Feinstein International Famine Center, Tufts University through RDP Livestock Services, of The Netherlands. Dr Mariner is an epidemiologist and has been closely involved in community-based animal health delivery systems and rinderpest eradication for over fifteen years. He successfully developed and introduced heat-stable rinderpest vaccine to Africa and has recently pioneered the use of participatory disease surveillance in epizootic disease control.

Dr Alejandro Schudel is Head of the Scientific and Technical Department of the World Animal Health Organization (OIE). He currently chairs the PACE Programme's advisory committee. Dr Schudel previously directed the Institute of Virology and the Institute of Veterinary Research in Argentina.

Dr Chris Rutebarika is the Pan African Programme for the Control of Epizootics (PACE) Country Co-ordinator within the Livestock Health and Entomology Department of the Ministry of Agriculture, Animal Industry and Fisheries, Uganda.

Dr Bryony Jones is a veterinarian who currently works for VSF-Belgium as the Co-ordinator of the Fight Against Lineage I Rinderpest Project in southern Sudan. Dr Jones was previously the coordinator of the Operation Lifeline Sudan Livestock Programme, also in southern Sudan.

Lindiwe Sibanda is a Director of Linds Agricultural Services (Pvt) Ltd, an agri-business and rural development consultancy based in Harare, Zimbabwe. She has specialist knowledge and significant experience in organisational development.

Dr Henry Wamwayi is a veterinarian and the Director of the National Veterinary Research Centre (NVRC) of the Kenya Agricultural Research Institute (KARI).

Dr Berhanu Admassu works for the CAPE Unit of AU/IBAR, based in Addis Ababa, Ethiopia. Dr Berhanu was formerly the Pan African Rinderpest Campaign (PARC) Regional Co-ordinator covering the Afar region of Ethiopia and is currently the Chairman of the Ethiopian Veterinary Association.

Dr Cokro S. Leksmono from Indonesia is currently completing a PhD at the University of Reading, UK. Dr Leksmono has been closely involved in the successful introduction of primary animal health care and the restructuring of the veterinary services in Indonesia. He is now working for the Overseas Development Institute based in London, UK.



Abbreviations

AU/IBAR	African Union/Interafrican Bureau for Animal Resources
CAHW	Community-based animal health worker
CTA	ACP-EU (African, Caribbean and Pacific states – European Union) Technical Centre for Agricultural and Rural Co-operation, The Netherlands
DELIVERI	Decentralised Livestock Services in Eastern Indonesia
DVM	Doctor of veterinary medicine
HIPC	Heavily indebted poor countries
IMF	International Monetary Fund
NEPAD	New Economic Partnership for African Development
NGO	Non-governmental organisation
NSDS	National sustainable development strategies
OIE	Office International des Epizooties (World Animal Health Organization)
PACE	Pan African Programme for the Control of Epizootics
PPA	Participatory poverty assessment
PRS	Poverty reduction strategy
PRSP	Poverty reduction strategy paper
SPS	Sanitary and phytosanitary measures
WTO	World Trade Organization

CD and how to use it

This CD complements the printed summary proceedings. It contains full papers based on the presentations reviewed in the summary, which can be printed as required, together with video interviews with livestock keepers and key conference participants, photographs taken during the conference and other relevant information.

To start:

For Microsoft Windows™ users:

Insert the CD into your CD-ROM drive and it should run automatically.

If it doesn't start automatically:

1. Select START, RUN
2. Type D:\STARTpc.EXE (where D is the letter of your CD drive) and press Enter
3. The CD-ROM will then start.

Minimum system recommended:

Microsoft Windows™: Intel Pentium® 166 running Windows 95/98 or NT version 4.0 or later; 32 MB of RAM; sound card; CD-ROM drive; graphics card capable of displaying 16-bit colours at 800x600.

Please note the CD is not Apple Macintosh® compatible.

Credits:

Cartoons: Joseph Kariuki

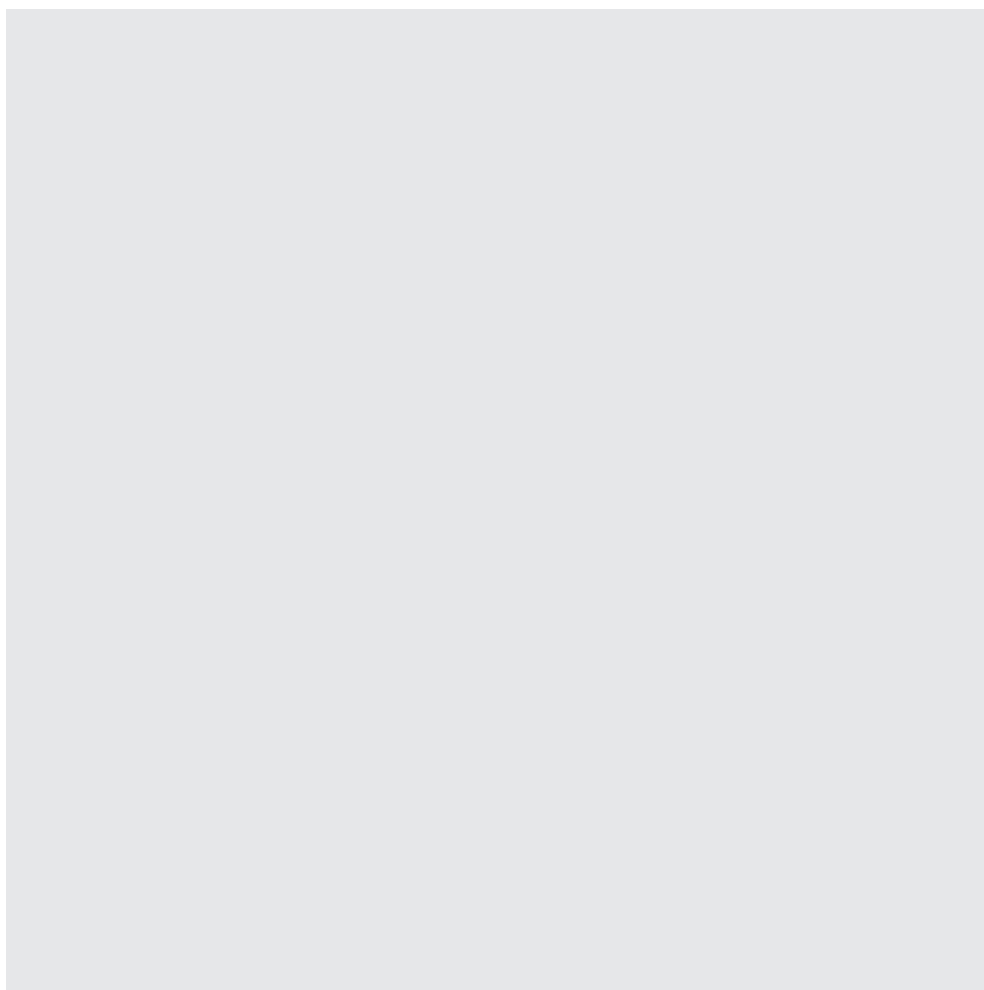
Photos: All images on pages 5–7 and 51–56: The Mediae Company, Nairobi, Kenya;
ANTHRA: page 16; AU/IBAR: pages 34,39, 57 and 58; Stephen Blakeway: page 33; Andy Catley: cover
and pages, 2, 8, 11, 12, 13, 17 (upper), 23, 24, 26 (lower), 27, 30, 31, 38 (upper), 41, 44, 46 and 49 (lower);
DELIVERI: pages 42 and 43 (lower); Mohammed Dirie: page 20; Dave Hastings: page 21; Tim Leyland:
page 29, 32 (lower), 35 and 40; Jeffrey Mariner: page 32 (upper) and 49 (upper); Gavin Thomson: page
43 (upper); Michael Wadleigh and Cleo Huggins: pages 9, 15, 17 (lower), 19, 25, 26 (upper), 28, 36 and
37; Alistair Short and Charles Hopkins: pages 18 and 38 (lower)

(if lower and upper is not specified for a page, all the photos on that page were from the same source)

Copy-editing: Simon Chater, Green Ink, with Ann Grand

Design and layout: Christel Blank, Green Ink

Printed at Pragati Offset Pvt. Ltd in collaboration with Sue Hainsworth





AU/IBAR, PO Box 30786, 00100 Nairobi, Kenya

Tel: +254 2 334550/251517/226651

Fax: +254 2 332046/226565