

BRIEFING NOTE ON

Establishment of a Southern Africa Centre for Infectious Diseases Surveillance (SACIDS)

1. Background

The Foresight study on human, animal and plant of infectious diseases has identified future (to 2030) drivers of infectious disease risks (economic and climate change), future disease threats and future science/technologies that will help to manage the risk of infectious diseases within the evolving societal context of culture, governance, economic trends and human practices. Among its conclusions are following issues that are most pertinent to Africa:

- Many existing diseases will remain important, but new diseases will emerge in the future – noting that in the last 25 to 30 years some 80% of new/emerging infectious diseases of humans had originated from animals;
- Major infectious diseases are endemic in Africa and Asia; They constitute a high risk for future marginalisation of Africa;
- Human mobility and access to international markets for African animal and plant commodities could be severely constrained by infectious diseases in Africa; and
- Substantial advances in infectious disease prevention and management will be made through integration of research across sectors (human, animal, plant) and disciplines (natural and social science);
- New technological systems for early detection, identification and monitoring of infectious diseases have the potential to transform our capabilities in managing future disease risks, especially if challenges of international development are met. This convergence of technologies for DIM offers opportunity for innovative approaches in managing infectious disease risks in Africa.
- Societal contexts will be crucial in realising the benefits of the new technological systems.

In the light of these conclusions, a series of meetings in Africa, including the Foresight Africa workshop in Entebbe, the AU meeting of Directors for Livestock Development in Kigali 2004, the Congress of African Scientists and Policy Makers (CASP) in Alexandria, Egypt, 2006, the AU-Foresight meeting in Pretoria, September 2007, and the FAO-SADC-OIE meeting of SADC Chief Veterinary Officers (CVOs) plus regional experts in infectious diseases of livestock, wildlife and humans (zoonoses) in Arusha, Tanzania, August, 2007, all pointed to the need for urgent action for inter-sectoral initiatives aimed at accelerating the capacity of African institutions for the detection, identification and monitoring of infectious diseases. A common thread is that such initiatives should be rooted in national systems for disease surveillance. In view of the convergence of technologies and the realisation that some 80% of newly emerging diseases of humans had been shown to have originated from animals, it has also been strongly recommended that such initiatives should foster inter-sectoral collaboration between the public health and animal health sectors.

These meetings and consultations culminated in a workshop in Pretoria from 22nd to 25th January 2008, which has outlined the Vision for a **Southern African Centre for Infectious Disease Surveillance (SACIDS)** as a virtual centre of academic and research institutions. The same workshop also recommended that in each participating country there should be a formal mechanism for promoting inter-sectoral collaboration on infectious diseases, as a national virtual centre for infectious diseases or **National Centre for Infectious Disease Surveillance (NatCIDS)**.

The January 2008 workshop of the initial SACIDS consortium members (i.e. academic and research medical and veterinary institutions of the Democratic Republic of Congo, Mozambique, Tanzania and South Africa) together with potential Northern Partners and potential technical and financial enablers, as well as 2 African plant disease specialists, defined the Vision. Mission and key Objectives of SACIDS as follows:

SACIDS Vision

A Southern African society protected from devastating infectious diseases affecting the health of humans, animals, i.e. both terrestrial and aquatic, and plants, i.e. crop, forest and ornamental, thereby promoting livelihoods, socio-economic development including market access and the environment

SACIDS Mission

To harness innovation in science and technology in order to improve Southern Africa's capacity (including human, financial and physical) to detect, identify and monitor infectious diseases of humans, animals, plants and their interactions in order to better manage the risk posed by them.

SACIDS Philosophy

Working towards One Africa, One Health

SACIDS OBJECTIVES

- To formulate One Health – One Medicine concept through promoting inter-sectoral collaboration through national and regional joint programmes linking public, animal and plant health.
- To improve the DIM of infectious diseases of humans, animals and plants by sharing relevant science and technologies
- To establish a standardized integrated disease surveillance and response system (IDSR) including early warning systems for infectious diseases in the region
- To establish Southern Africa-North smart partnerships
- To establish relevant research programmes that will enhance the effectiveness of national and regional operations for human, animal and plant health service delivery
- To identify existing training programmes and define needs for training and capacity building at all levels and address deficiencies
- To foster a culture of formal mentoring for young scientists and technicians
- To regularly audit capacity available within the consortium
- To create subject specialist consortia for academic and research institutions
- To establish a system of governance for SACIDS, including linkages with SADC, NEPAD and AU programmes on infectious diseases

Thus the SACIDS network will marshal the best available science that will enhance the region's capacity for the Detection, Identification and Monitoring of infectious diseases and thereby enhance national capacities for the surveillance of infectious diseases, including emerging and previously unknown diseases.

2. SACIDS Enabling Research Targets

The categories below are apart from such baseline studies as infectious disease burden in specific eco-systems and assessment of intervention strategies such as vaccinations or pest management.

High level DRIVER	Immediate DRIVER	Disease package	Justification
INTER-SPECIES INFECTION TRANSMISSION Human-livestock-wildlife interface	Ungulate	FMD Tb/Brucellosis African swine fever	Zoonotic Socio-economic impact
	Small mammals and birds	Haemorrhagic fevers Avian influenza Rabies	Socio-economic impact

High level DRIVER	Immediate DRIVER	Disease package	Justification
CLIMATE	Weather dependent vector-borne virals	RVF	Zoonotic Socio-economic impact
	Weather dependent vector-borne protozoon	Trypanosomosis Malaria Tick-borne diseases	Zoonotic Socio-economic impact
	Weather dependent vector-borne bacterial	Cholera Plague	Zoonotic Socio-economic impact
STRATEGIC	Human	HIV TB Malaria	Zoonotic Socio-economic impact
	Animal	FMD CBPP	Socio-economic impact
AFRICAN PLANT DIAGNOSITCS Mozambique South Africa Tanzania {Uganda Kenya Nigeria}	Stable food crops	Maize Sorghum Cassava Banana Cowpea	Food security Socio-economic

3. PILOT SACIDS CONSORTIUM MEMBER INSTITUTIONS

The following are the pilot institutions in southern Africa and their collaborating centres of science from the "North". A common feature of the piloting countries is that they each have both medical and veterinary university faculties in addition to national medical and veterinary research institutions. The institutions wish to collaborate in a One Health objective. It is expected that as SACIDS takes shape it will be joined by institutions from the other nine countries of southern Africa. Depending on the type of enabling project it is also envisaged that academic/research institutions from some of the epidemiologically linked countries of the East African Community will also progressively join the SACIDS initiative.



SACIDS is:

- A **ONE HEALTH** consortium of southern African medical and veterinary, academic and research institutions involved with infectious diseases (progressively also plant health)

In smart partnership with

- Centres of science in industrialised countries

Working towards: One Africa, One Health

Partner 1 – Tanzanian National Consortium

National Coordinator – Professor Mecky Matee, Head Dept Microbiology, Muhimbili University of Health and Allied Sciences, MUHAS, Dar es Salaam

- The National Institute for Medical Research (NIMR)
- Ifakara Health Research & Development Centre, Tanzania
- The Muhimbili University of Health and Allied Sciences (MUHAS)
- The Faculty of Veterinary Medicine, Sokoine University (FVM-SUA).
- The Central Veterinary Laboratory (CVL)
- The Tanzania Wildlife Research Institute (TAWIRI) and Tanzania National Parks (TANAPA)
- Tanzania Fisheries Research Institute (TAFIRI)
- The Institute of Resource Assessment (IRA), University of Dar es Salaam

Partner 2 – Democratic Republic of Congo National Consortium

National Coordinator – Dr Jean-Marie Kayembe Ntumba, Associate Dean, Faculty of Medicine Institute of Public Health Kinshasa

- The Institute of Public Health of the Faculty of Medicine of the University of Kinshasa;
- The Faculty of Veterinary Medicine of the University of Lubumbashi;
- National Institute for Biomedical Research (**INRB**)
- The Central Veterinary Laboratory in Kinshasa.
- National Institute for Nature Conservation (ICCN),

Partner 3 – Mozambique National Consortium

National Coordinator – Dr Luis Neves, Faculty of Veterinary Medicine, Eduardo Mondlane University

- Faculty of Medicine - Eduardo Mondlane University (FM-EMU)
- Faculty of Veterinary Medicine – Eduardo Mondlane University (FVM-EMU)
- Directorate of Animal Sciences – Institute of Agricultural Research of Mozambique - Ministry of Agriculture (DCA-IIAM)
- National Health Institute – Ministry of Health (INS)
- National Institute for Fisheries Inspection (INIP)

Partner 4 – Zambia National Consortium

National Coordinator – Dr. Aaron S. Mweene, Dean, School of Veterinary Medicine, University of Zambia.

- School of Veterinary Medicine, University of Zambia
- School of Medicine - University of Zambia
- Central Veterinary Research Institute (CVRI)
- Tropical Diseases Research Institute (TDRC)

Partner 5 – South African Institutes in the SACIDS Consortium

National Coordinator – Professor Musoke, Director OVI.

- National Institute for Communicable Diseases of the National Health Laboratory Service (NICD/NHLS), Johannesburg, South Africa
- Onderstepoort Veterinary Institute of the Agricultural Research Council (ARC-OVI), Pretoria
- Faculty of Veterinary Science University of Pretoria (FVS-UP), at Onderstepoort
- Stellenbosch University, Medical School, Cape Town

SACIDS Collaborating Institutions:

- The Royal Veterinary College, University of London,
- The London School of Hygiene and Tropical Medicine, University of London,
- The London International Development Centre, University of London
- The Centre for Infectious Diseases, University of Edinburgh,
- The International Livestock Research Institute (ILRI), Nairobi
- The Global Health and Security Initiative, Washington

4. Interim Secretariat:

The January 2008 workshop identified the Sokoine University of Agriculture, Morogoro, Tanzania to act as the interim location for the SACIDS Secretariat and elected Professor Mark Rweyemamu, a Tanzania, currently Part-time Professor of Transboundary and Emerging Infectious Diseases at Sokoine University and Visiting Professor at the Royal Veterinary College, University of London and who has been nominated as Extra-ordinary Professor at the Faculty of Veterinary Science, University of Pretoria, assisted by Professor Rudovick Kazwala¹ of Sokoine University, Professor Barry Schoub, the Director of the National Institute for Communicable Diseases of South Africa and Professor Anthony Musoke, the Director of Onderstepoort Veterinary Institute, Pretoria to galvanise resource mobilisation in the first instance for setting up an interim Secretariat of SACIDS.

The specific objective of the assistance is to finance preparatory activities critical to a successful establishment of SACIDS with its governance system and a permanent Secretariat.

5. Expected outputs:

- SACIDS constitution developed and approved
- SACIDS Secretariat established
- SACIDS membership institutions identified and enrolled
- Modalities of sharing DIM of major infectious diseases in the region established
- A Governance structure for SACIDS agreed to (at least in principle) by medical, veterinary and plant academic and research institutions of SADC Member States and the relevant regional organs such as the Secretariats of SADC, NEPAD and/or AU
- Resources for SACIDS' maintenance and programme of activities for subsequent 2 years mobilised

¹ Professor Kazwala, has since been replaced as Deputy Director (Veterinary) by Professor Dominic Kamarage, Deputy Vice-Chancellor (Academic) of Sokoine University, Morogoro, Tanzania

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Director, SACIDS
Part-time Professor, Sokoine University of Agriculture,
Morogoro, Tanzania, and
Visiting Professor, Royal Veterinary College,
University of London, UK

Professor Barry Schoub
Deputy Director (Medical), SACIDS
Professor and Executive Director,
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Diseases,
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Deputy Vice-Chancellor (Academic),
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