

23rd Conference of the OIE Regional
Commission for Africa

**Veterinary Research Network : Role
and Involvement of Veterinary
Services in Africa**

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Introduction

- According to UN estimates, the **population of Africa** may reach **2.5 billion by 2050**.
- **Africa's** share of global **population** is projected to **grow** from **16% in 2015 to 25% in 2050**.

Consequences :

- Real needs of proteins of animal origin,
- Healthy population

Objectives

- To attain these, Africa need a **healthy and productive livestock** to contribute to food production, income generation, **safe trade** and poverty alleviation.
- However, there are **diseases** that **impact highly and negatively** the livestock due to direct morbidity and mortality along with those which impact the performance of this livestock throughout the continent.
- To overcome this situation of diseases pressure on African livestock or to mitigate it, **Research should be placed at a top position of veterinary global commitment.**

Research in Vet. Sciences in Africa

- **Veterinary services are essential to sustain research on animal health and wellbeing** of countries in Africa including genetics, to meet the objectives of the African Union for 2050,
- Research within African countries is known **to be weak** due to a lack of financial support, well trained technical personnel and appropriate infrastructures,
- Research should be implemented at different levels : national Institutes, Universities, etc. **taking into account the real and defined Veterinary Services' priorities.**

Definition of Priorities

- Vet. Sces will collecte data from its different departments : animal health, VPH, Zoonoses, One health, Vet drugs (Pharmacy), Aquatic animals diseases, etc.
- Effective collaboration with **OIE Focal Points** for their involvement and to work together,
- Involvement of **decentralised Vet. Services** to collect field data, local situation informations,
- Diagnostic laboratories,
- Collected data will be adequately analyzed and used to describe the disease situation within the country and to identify **key priorities**

Research Infrastructures

- Nowadays Research / Diagnostic Laboratories **must comply with the international standards on Biosecurity / Biosafety,**
- Lab buildings should be appropriately designed to respect the « one way flow », easy to clean, etc.
- Mainly Diagnostic Lab must apply the Quality management system with **the objective to be ISO 17025 accredited,**
- Equipments well maintained,
- Sustainability should be guaranteed

Research personnel

- Vet Education / ParaVet curriculum should include **research domains to sensitise young students,**
- Adequate personnel **well trained and motivated,**
- Ensure **Stability** of technical personnel in lab.,
- Sustainability by implementing a **training plan, replacement plan,** etc

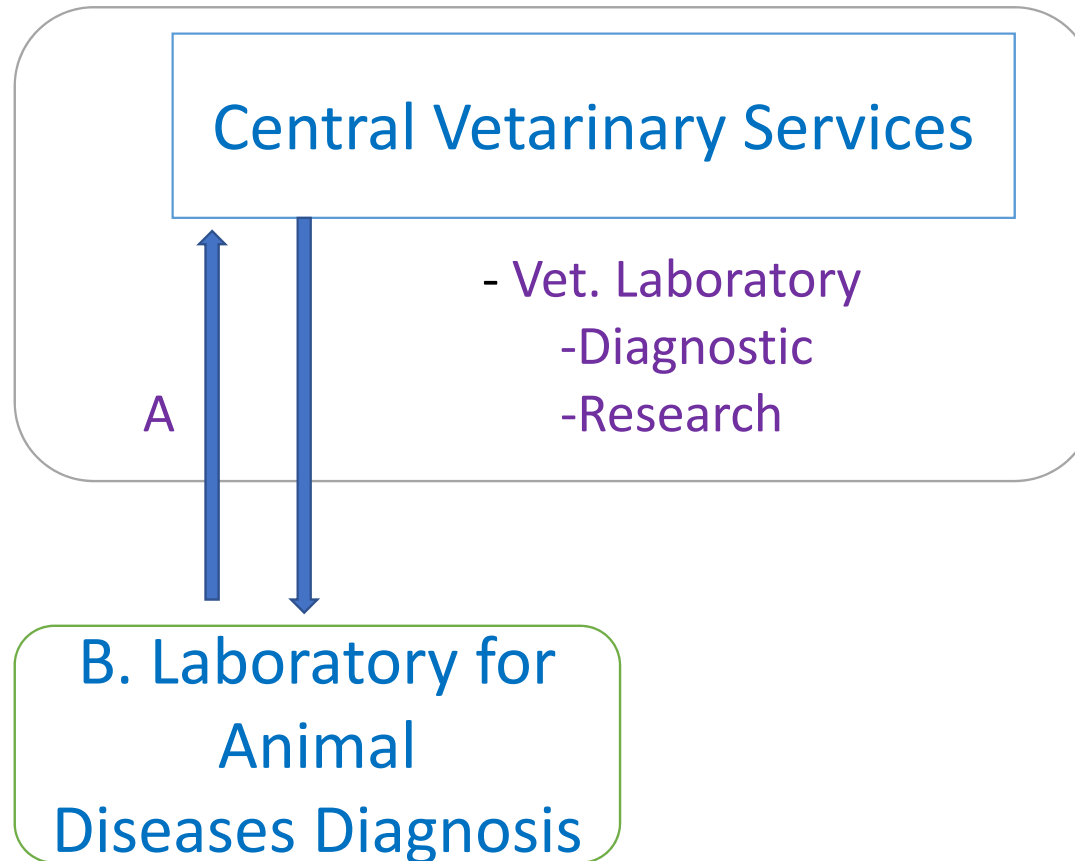
Veterinary Sces and National Research Institutes / Universities

- For this purpose, **these priorities should be known,**
- Strong Relationship should be **established** between National Vet. Sces and National Research Institutes / Universities,
- Meetings, workshops, information sharing, etc. will be instaured to build **the right link between partners,**
- Identified Priorities should be **translated into research projects**

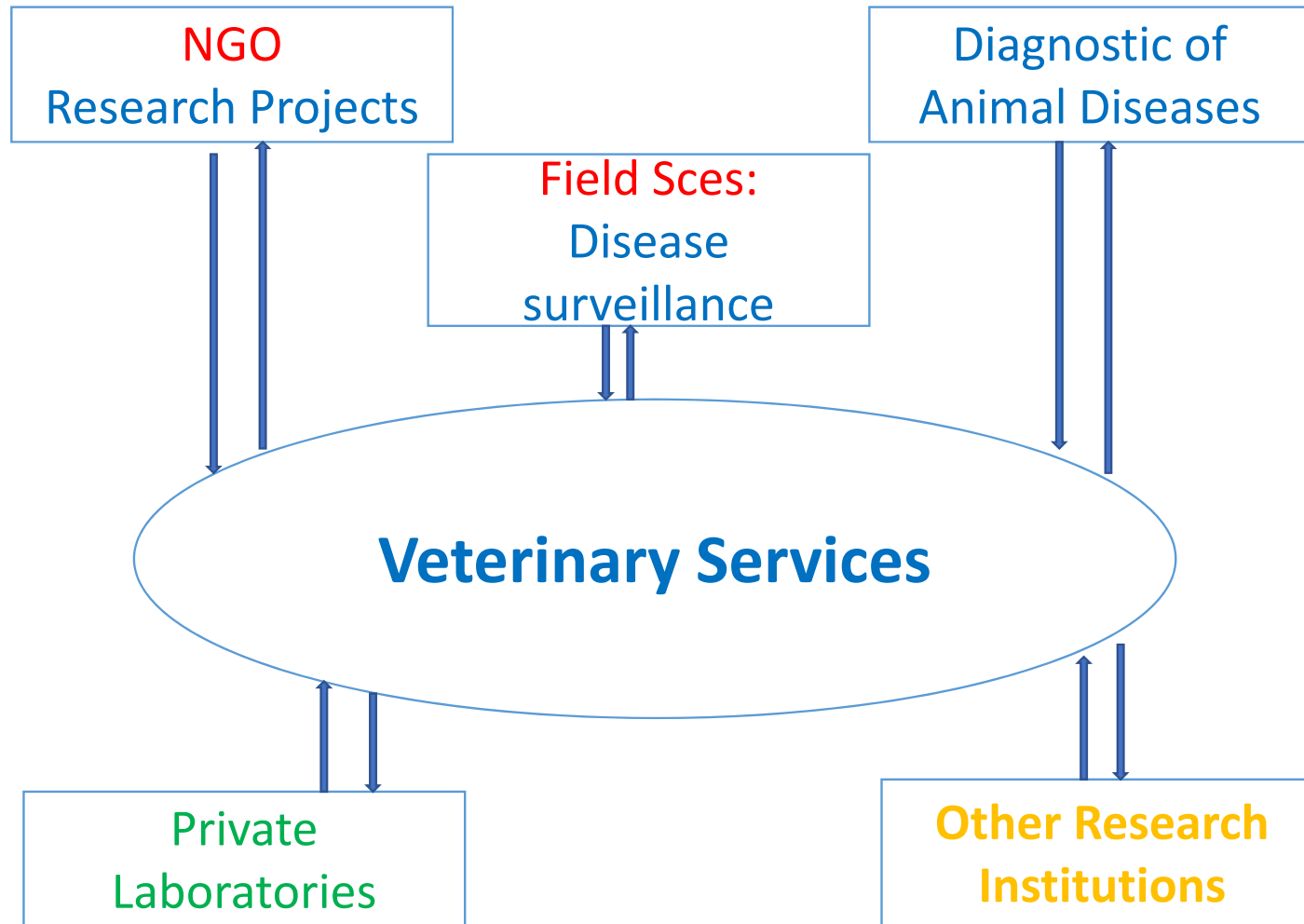
Organisation

- **A-Strong relationship** to be established between Central Vet Sces and Lab,
- B -Establishment of **official relationship such as MoU** with lab being outside Vet Sces' organisation

VETERINARY SERVICES



Establishment of Partnership



Research funding

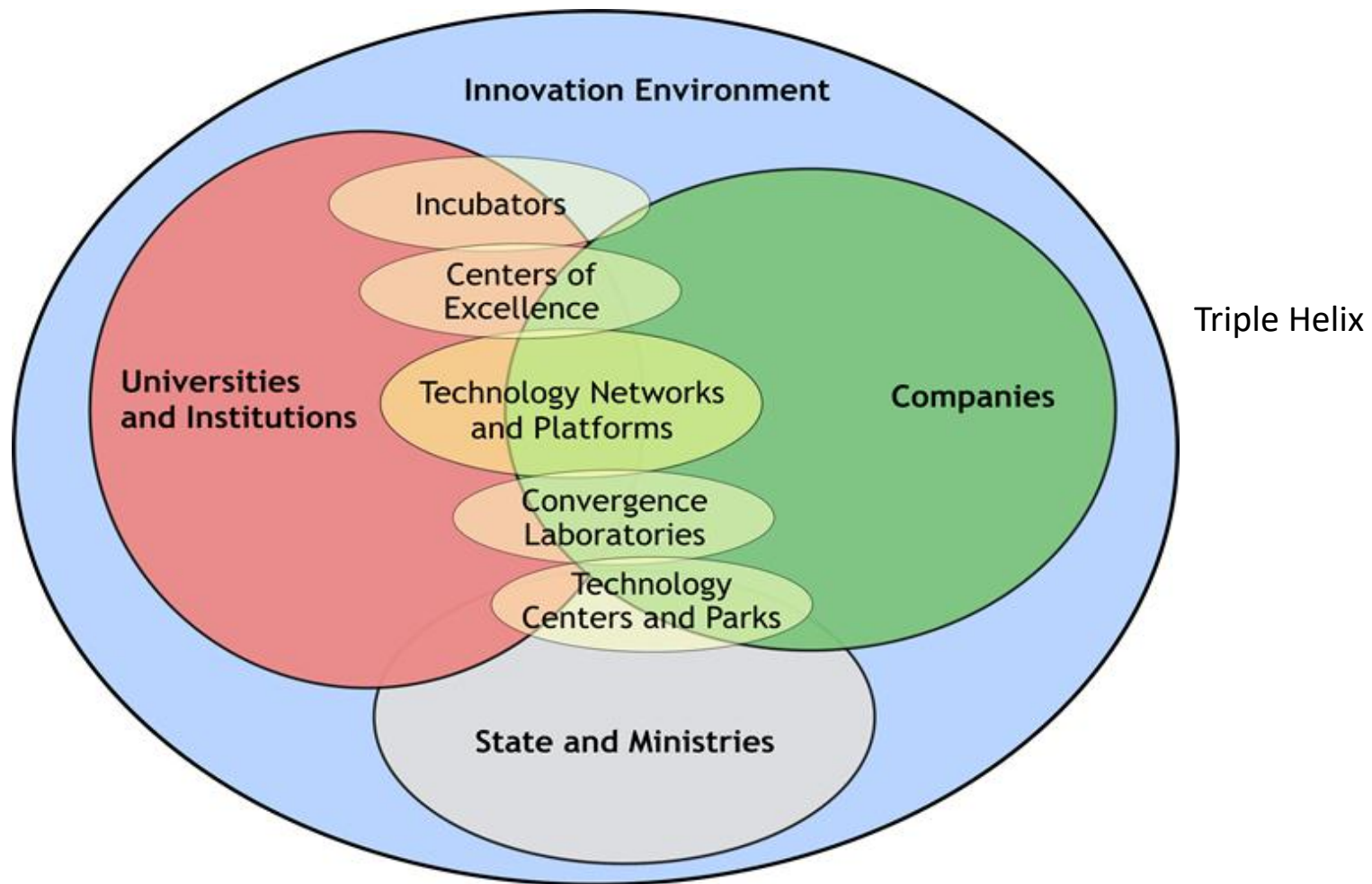
- **Key element of Research, worldwide,**
- Funding comes from diverse sources, mainly from :
 - Governments
 - Private sectors (private business, donations, etc.)
 - NGOs
- Usually through **a national / international Calls** for application of Research projects,
- **International call for application could not always be aligned with the national priorities!!!**
- **Government support is essential for national priorities as a funding starting point.**

Roles of Government

Role of the 3 main actors

- i. **Universities:** Education “Demand Driven”
- ii. **Government:** Research oriented on national priorities
 - Systems to enhance the Intellectual property, Standards & compétition
 - Funding of Universities and R&D
- iii. **Business:**
 - R&D for new products & innovation
 - Transform new ideas into new business: Facebook, Forever living Products, Uber, etc.

Roles of Government



Roles of GVT

- **Funding of relevant research** able to bring an added values to the country / populations,
- Intellectual specialisation,
- Applied reserach : demand driver research

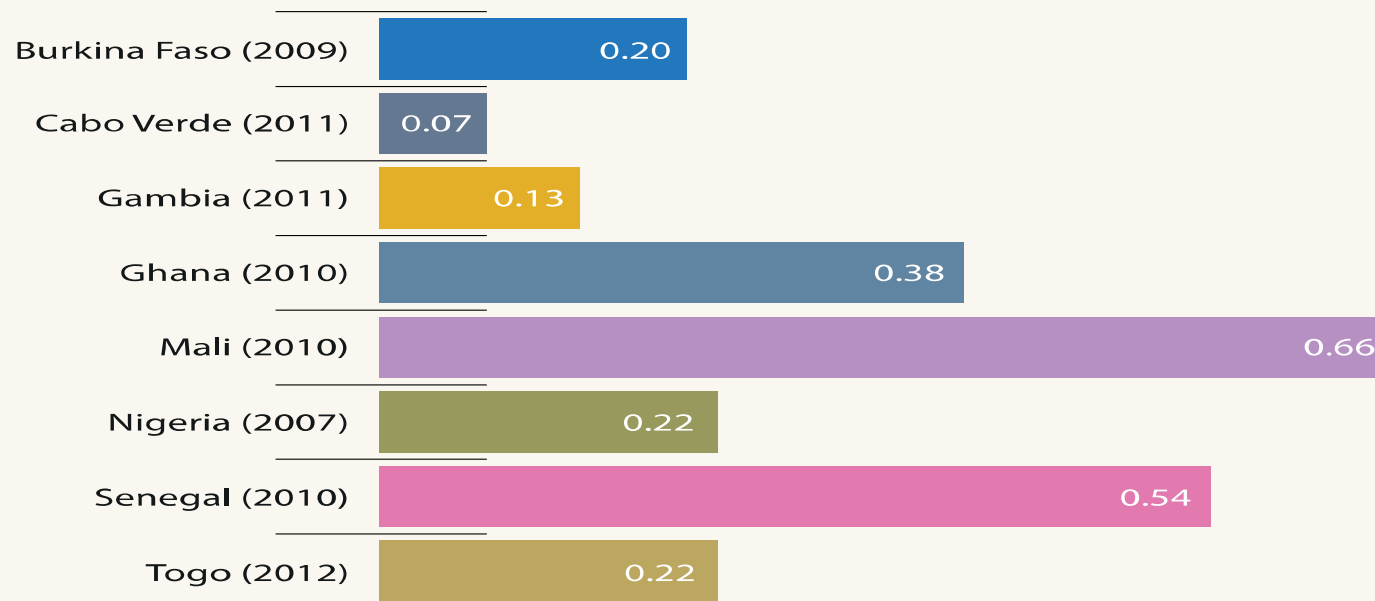
Case Study : Specialization, Short cycle Technologies, Technological Catch Up

- i. South Africa and Chile:* intellectual specialization and strong GVT commitment
- ii. Japan and South Korea:* short cycle technology and endogenous technological catch-up

Cas study1: Intellectual Specialization

Figure 18.4: **GERD/GDP ratio in West Africa, 2011 or closest year (%)**

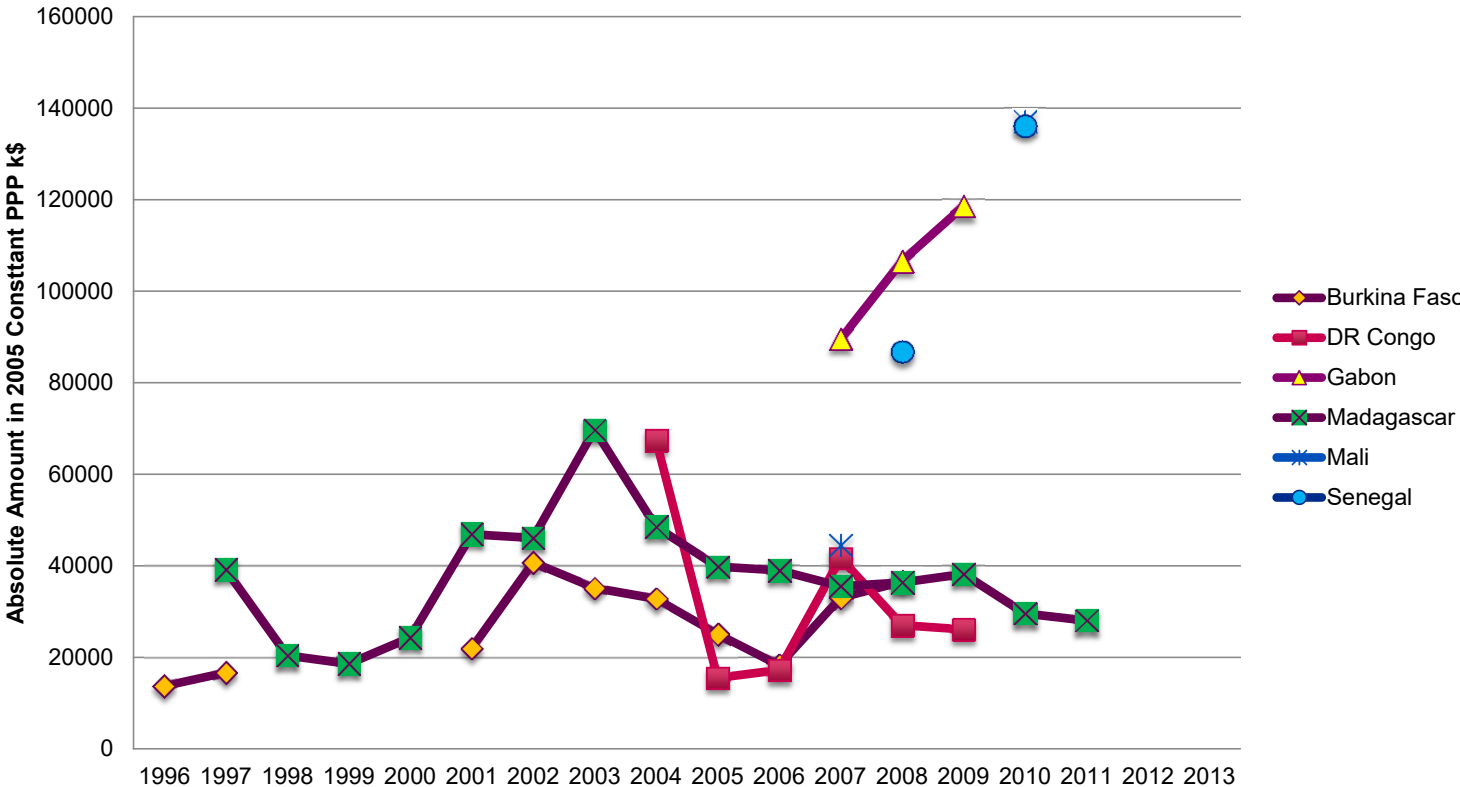
Selected countries



Source: UNESCO Institute for Statistics, January 2015

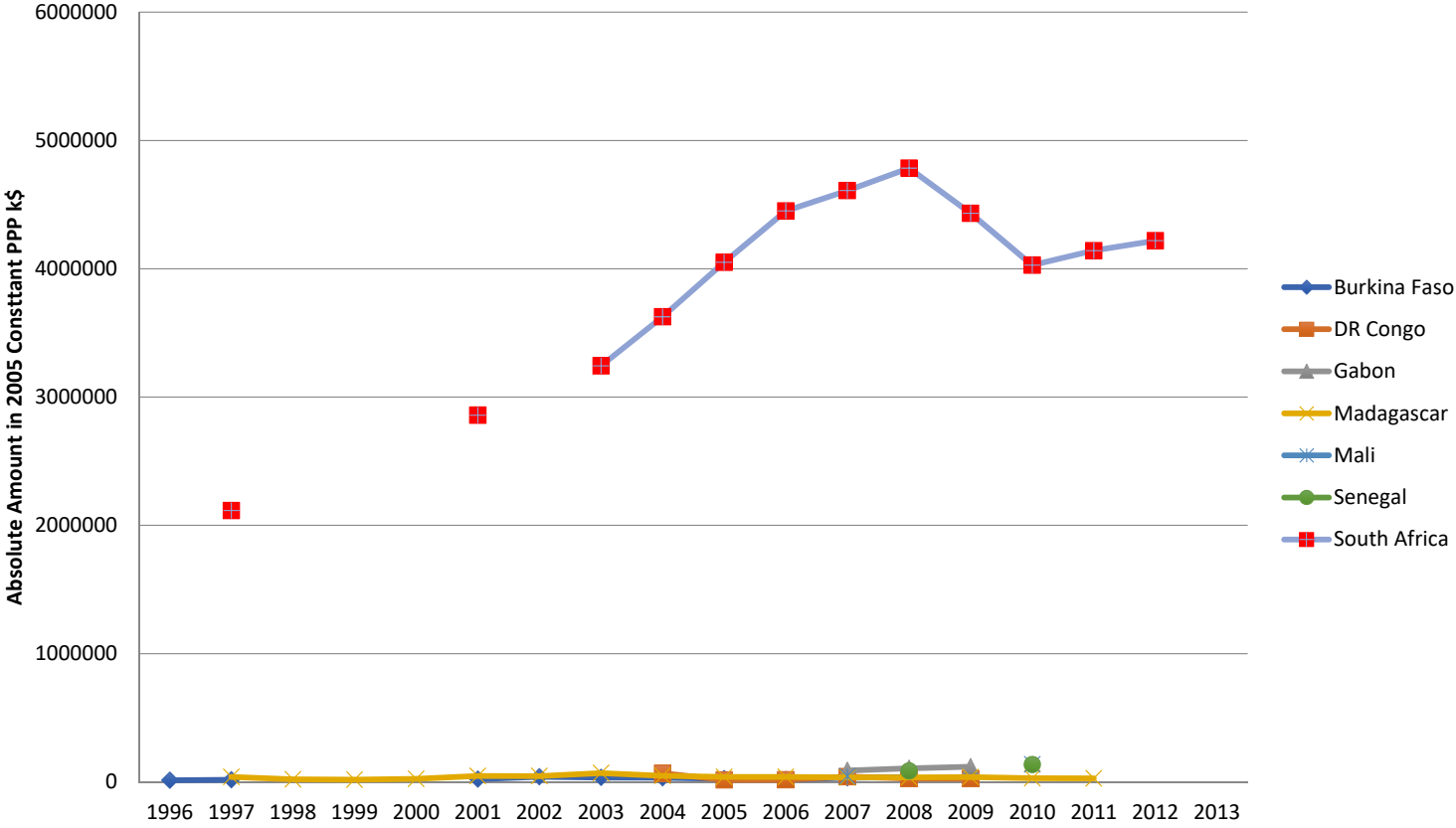
Cas study2: Intellectual Specialization

Figure 1: Evolution of Gross Expenditure in R&D (1996-2013)



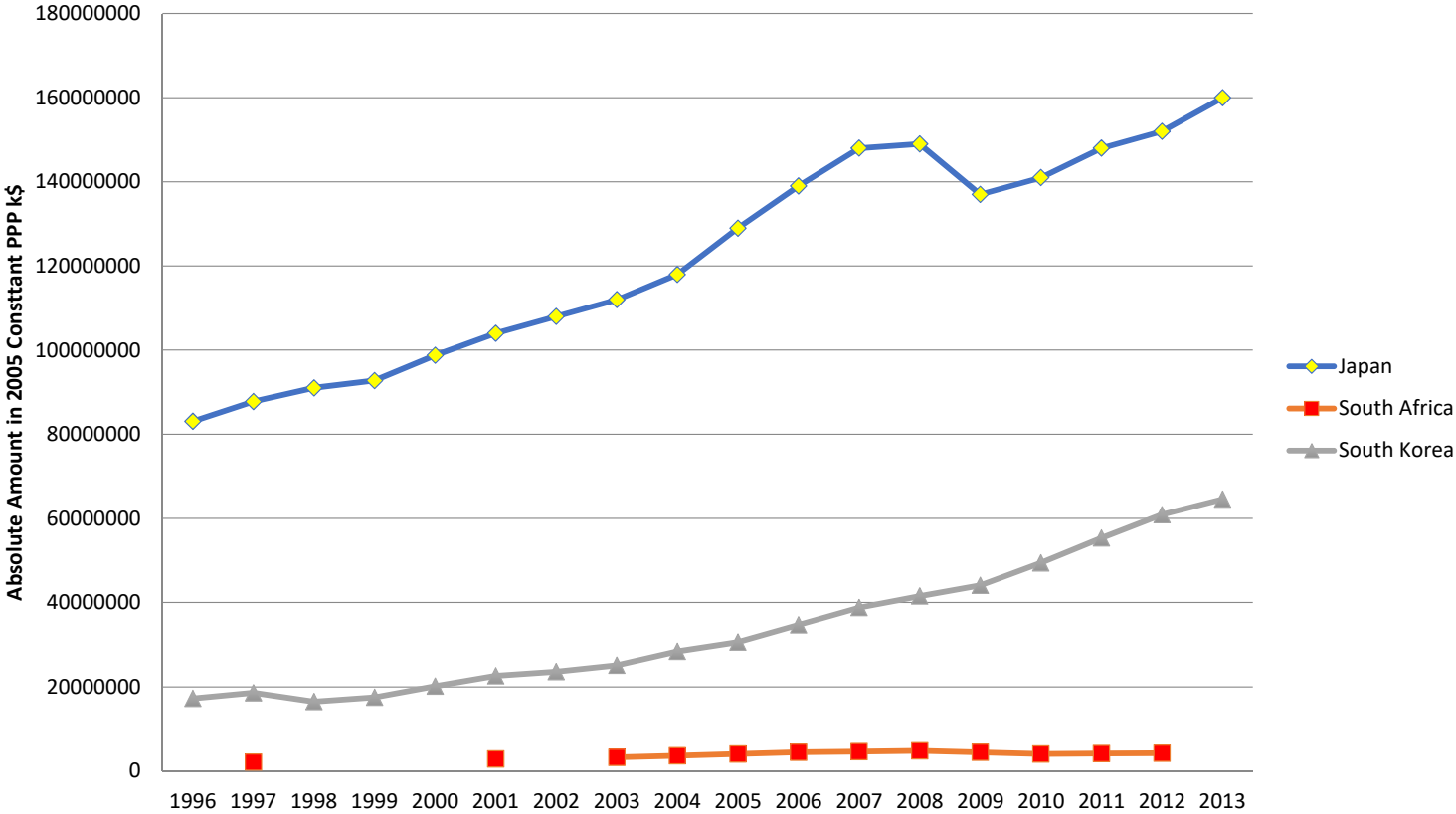
Cas study3: Intellectual Specialization

Figure 2: Evolution of Gross Expenditure in R&D (1996-2013)



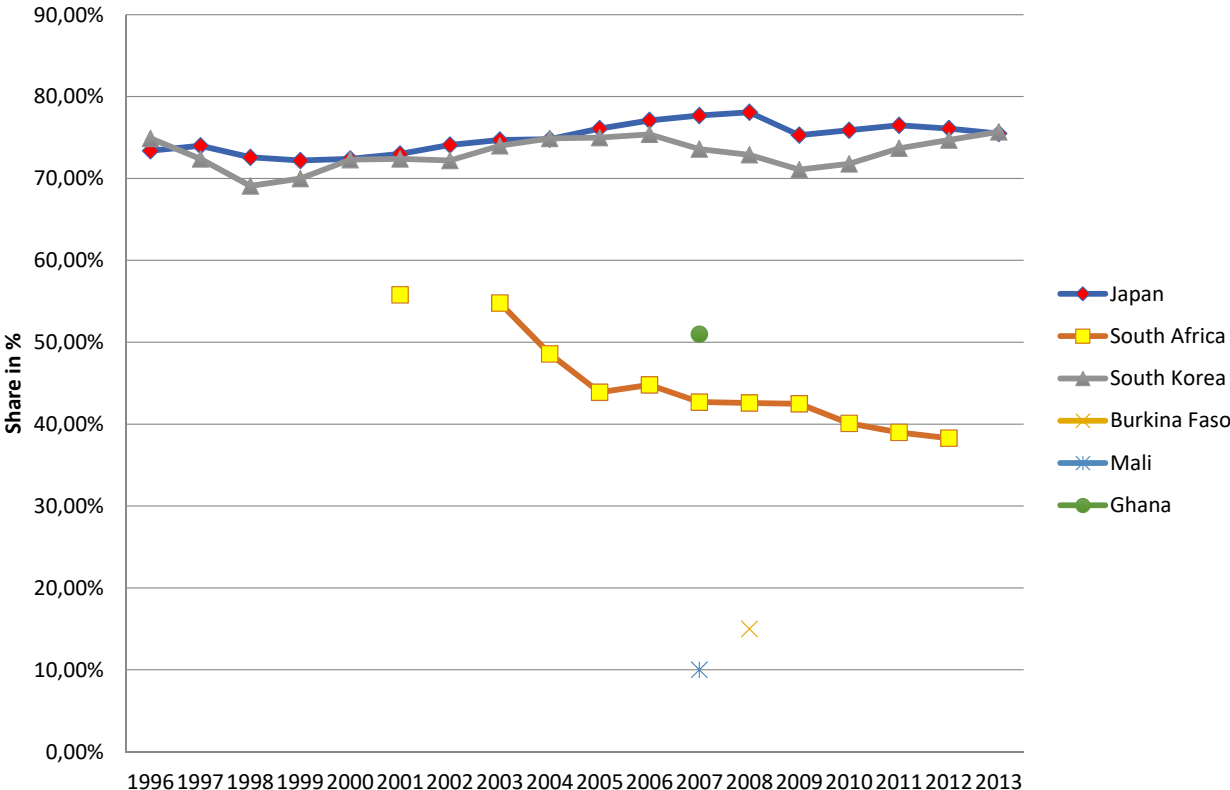
Cas study4: Intellectual Specialization

Figure 3: Evolution of Gross Expenditure in R&D (1996-2013)



Cas study5: Intellectual Specialization

Figure 4: Evolution of the Business financed R&D (1996-2013)



Research project's Implementation

- Agreement of the national Ethic Committee,
- Kick off Meeting / workshop to launch the project,
- Taking into account the concept of “**Biological threat reduction in relation to identification, assessment and management of Dual Use in the context of responsible conduct in research**”,
- During the course of Research period, **Review** should be carried out and **Update** (if necessary) should be implemented.

Results

- Results from research should be **communicated** to end-Users including farmers and all Veterinary field staff,
- Use to define adequate measures,
- Use for advocacy;
-
- Use by policy-makers,
- Large diffusion for **their implementation** if it is the case.

Veterinary Research Networking

- Research Network is built on solid existing Research Institutes / Universities,
- Using research projects of common interest,
- Synergy of various expertises and experiences to find solution of problems highlighted,
- Synergy of technical platform to implement the project,
- Usually funds come from international donors and after a call for application process.

Consequences :

- Establishment of strong partnership between Institutions from different African regions or within the same country,
- Establishment of **good relationship between Researchers,**
- In general, issues are correctly addressed and
- **Projects are well implemented**
- Results are as expected

Communication

- Results are communicated through various channels :
 - Regional meetings,
 - Regional workshops
 - Reports
- Appropriate channels and means should be used to communicate to farmers,
- Messages used for this communication should be well adapted to the audience.

Role of Vet Services

How Vet Services can be involved?

- Opened-mind Services onto external services such as Research Institutes, Universities,
- Communicate on their priorities and interests,
- Funding of specific research topics,
- Participate to research raising funds,
- Be **active member** of the network or observer.

How Vet. Services can use Results generated by Research?

- First, Should be informed on results generated,
- Internal seminars / meetings on the specific topics,
- Effective involvement of the specific OIE Focal point,
- Participation of these Researchers to help for better understanding of obtained results and how these can be correctly implemented

Examples of existing Research Networks

Regional Networks

- East African Vet Research Organisation
- Wildlife surveillance network ---- bush meat, hunting, etc
- AU-Pattec on African Tryp
- AU-PANVAC : Diagnostic reagents / Vaccines/ Vaccine Labs
- Africa – CDC
- CIRDES (BKF) on Tryp and parasitic diseases
- ERFAN (Enhance Reserach for Africa Network)

Specific networks

- PPR GREN (Global Research and Expertise Network)
 - ASF Alliance
 - RVF
 - Rabies
-
- These networks exist and results should be widely communicated and known to be used.

Conclusion

Challenges :

- i. **Brain Drain** (Fuite des cerveaux): → Motivation systems
- ii. **Brain Diversion** (Diversion Intellectuelle):
production et transmission of non relevant knowledge → demand driven research
- iii. **Brain Decay** (atrophie/désuétude intellectuelle):
vigorous updating → Training

Conclusion: what can Vet Sces do?

- Growth of African population and need of proteins of animal origin
- Pressure of animal diseases and need to control and to eradicate them
- Effective and adequate research to be supported and implemented in Africa
- Research programmes taking into account local situation

- Role of Veterinary Services in research in Africa
- Research funding
- Research sustainability
- Transparency and diffusion of Research results

Thank you for your kind attention