



Public-private partnership case study: The Global Alliance for Livestock Veterinary Medicines and the Centre for Ticks and Tick-Borne Diseases



- 1. Description of case study: what was the project or joint work – what was it aiming to achieve, what key activities were carried out and where (country, key target community of benefit).**

The aim of the intervention was to support the [Centre for Ticks and Tick-borne Diseases \(CTTBD\)](#), Lilongwe, Malawi to create a sustainable supply of a highly effective vaccine for East Coast Fever (ECF), a major livestock disease killing over a million cattle per annum in Africa. The resulting losses of ECF across 12 African countries amounts to hundreds of millions of dollars and are borne by those

who can least afford them, small-holder farmers and pastoralists. The target beneficiaries of the vaccine are smallholder livestock keepers who rely on their livestock for livelihood.

Process

The Nairobi-based International Livestock Research Institute (ILRI) which manufactured the vaccine took the decision not to continue its production. With funding from the Bill & Melinda Gates Foundation and the UK Government's Department for International Development (DFID), [GALVmed](#) and an array of partners supported successful technology transfer on the production of the vaccine from ILRI to CTTBD. Within the past financial year GALVmed has also facilitated the sale of over 0.5million doses of the ILRI batch.

The project sought to build upon the foundation of technical skills within CTTBD by:

- Investing in the upgrading of buildings and provision of necessary equipment
- Providing inputs in support of manufacturing and process improvement for East Coast Fever vaccine
- Facilitating preparation of ECF vaccine regulatory dossiers to support registration in all key countries
- Recruiting a business manager to develop a robust business plan to ensure sustainability
- Providing training in business & technical skills

In facilitating CTTBD to become a unique manufacturer of this vaccine, the project also sought to benefit the Malawian economy through the creation of valuable foreign exchange.

GALVmed Experience in this field

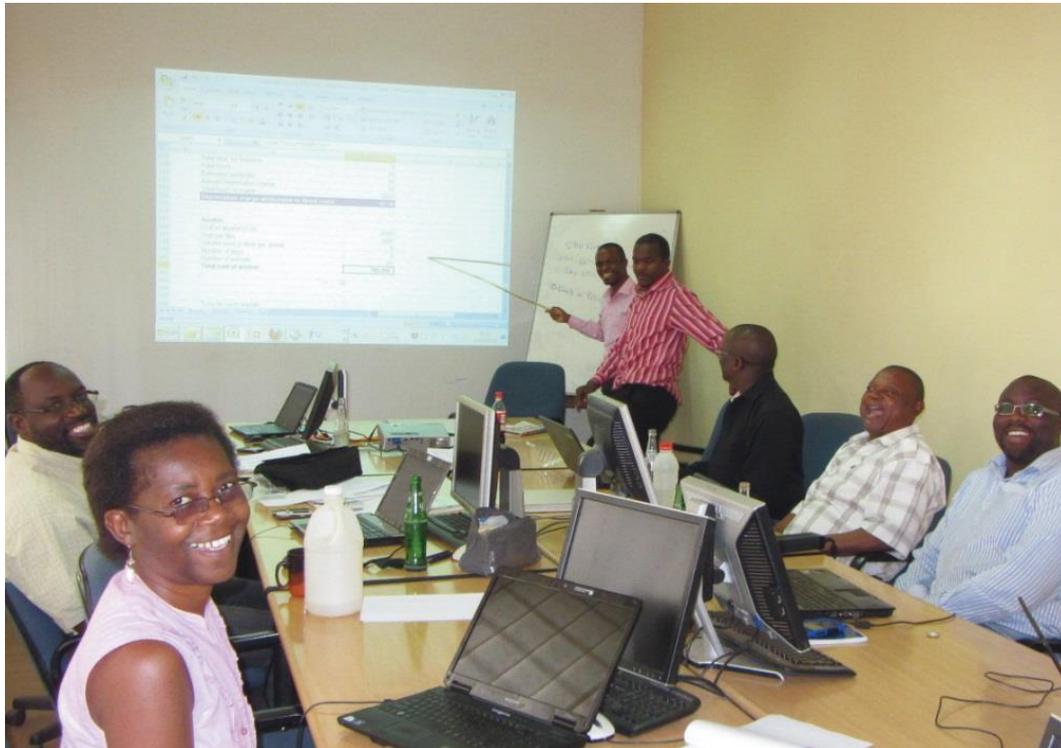
Working as a public-private global alliance, GALVmed has been awarded over £65 million since 2008 for the delivery of livestock and livelihood related projects. These projects have largely been funded through the UK Government's Department for International Development (DFID) and the Bill & Melinda Gates Foundation, for whom GALVmed is a trusted keystone partner.

In these projects, GALVmed develops new veterinary vaccines and medicines and then catalyses the market processes that enable these products to be widely available at affordable prices to some of the 900 million poor livestock farmers in the developing world who depend on livestock for their livelihoods. This ultimate reliance on market processes ensures that GALVmed's projects are sustainable and can stand alone without continued GALVmed support or donor funding.

Operating in this capacity, GALVmed's key capability is strong project management. The organisation is specifically structured to support the delivery of projects in a transparent, efficient and results orientated manner. This framework borrows extensively from the private sector pharmaceutical industry and made adaptable to suit the operational requirements of the African context with strong southern hemisphere leadership.

2. What were the outcomes/impact?

Buildings have been refurbished and necessary new equipment provided together with training in its maintenance and upkeep. Technology transfer to CTTBD has been successfully completed. A business manager has been recruited. CTTBD has now begun successfully producing ECF vaccine.



3. Were there things you didn't expect?

There have been challenges rather than surprises. As a wholly self-funded institution with technical rather than commercial expertise, the financial position of CTTBD was not strong and stands to benefit greatly from the ECF vaccine.

Staffing levels were not optimal on the technical and business fronts and we sought to help address this with the recruitment of a Strategic Business Manager and four technicians.

Prior to the intervention, marketing of the organisation had not been proactive and so engagement with external organisations and business development was not achieving its potential.

4. Take away message / key learning from the case study

Principles

- Focus on so-called neglected diseases
- Intervention must be sustainable
- Products are registered so governed, 'owned' nationally and can be commercialised
- Everything is achieved with and through partnership
- We do not give livestock vaccines, medicines or diagnostics away free as this can undermine sustainable markets

- Everyone in the value chain must make money (apart from GALVmed as it is not-for-profit)
- We don't want the intellectual property but we protect it on a pro-poor basis
- Close dialogue with CTTBD and working alongside CTTBD over a period of six years and embedding of a full-time member of staff in CTTBD

Output – Policies on Partnership and Intellectual Asset Management

Outcome – Effective & productive partnerships, joint ownership and local decision-making

Policy

Output – Facilitate the creation of an ECF Taskforce, respect and reflect the priorities of Malawian local and central government; work towards regional harmonisation of regulation.

Outcome – A manufacturer, accepted by the region, producing quality assured and sustainable supply of ECF vaccine. Vaccine was registered and crossed borders smoothly.

The Malawi Government was an instrumental player in the ECF Task Force, established by GALVmed, chaired by the African Union and comprising representatives of the governments of Malawi, Kenya, Tanzania and Uganda. In 2008 the ECF Task Force put out an invitation to tender for the production of the ECF vaccine, which was awarded to CTTBD.

The Malawi Government has continued to be supportive at central and district levels of GALVmed's capacity-building with CTTBD. The intervention respects the priorities of the Malawi Government and the stated policy of central and local government, corresponding with the following:

- The first of the six thematic areas of the "Malawi Growth and Development Strategy II" (MGDS II) – *Sustainable Economic Growth*.
- The first of MGDS II's nine key priority areas: *Agriculture and Food Security*.
- Two key priority areas highlighted by the Malawi Government: *Agricultural Development & Value Addition* and *Sustainable Economic Development which will generate income for Malawians*.
- Malawi's medium term strategy of accelerating and sustaining economic growth.
- *The Malawi Livestock Production and Development Policy*, which emphasises the need to produce healthy and disease-free cattle.
- Malawi's aims of balancing poverty reduction and improving food security through agriculture whilst stimulating sustainable economic growth.

Promotion

Output – Commercialisation team established. Promotional materials produced.

Outcome – Sales of the vaccine from Malawi increased; Foreign exchange generated; ECF vaccine widely available across target countries and uptake created.

This is a skill-sharing project founded on a strong bilateral relationship with dignified people-to-people links, which the project will enhance - strengthening the special relationship between the two nations.

Launch of the Centre for Ticks and Tick-Borne Diseases



Photo caption: Hon Dr Allan Chiyembekeza, Minister of Agriculture, Irrigation and Water Development, Malawi cuts the ribbon to mark the official launch of Centre for Ticks and Tick-Borne Disease, Malawi. Hon. Dr Bright Rwamirama, State Minister for Animal Industry, Uganda and H.E Tumusiime Rhoda Peace, Commissioner for Rural Economy and Agriculture, African Union look on.

In December 2014, the Malawi-based Centre for Ticks and Tick-Borne Diseases (CTTBD) was officially launched as the sole producer of the ECF Muguga Cocktail.

The centre, having undergone extensive collaboration with the Global Alliance for Livestock Veterinary Medicines (GALVmed), is now producing the ‘one shot for life’ Muguga Cocktail vaccine, originally developed by International Livestock Research Institute (ILRI) and its predecessor, the International Laboratory for Research on Animal Diseases (ILRAD) and the Kenya Agricultural Research institute – now known as the Kenya Agricultural and Livestock Research Organization (KALRO).

“Tick-borne diseases are known to be one of the major constraining factors to the development of the livestock industry especially in Africa. We are launching CTTBD at the right time to enhance the prevention of ECF in the region in order to realize the potential of the livestock industry and to protect human lives and address poverty,” said Dr Nkhwachi Gondwe, Acting Director of CTTBD.

The vaccine will be distributed in up to 11 countries in Eastern and Central Africa where the disease is endemic, killing one cow every 30 seconds and devastating the livelihoods of those who depend on livestock for survival.

The CTTBD is a very welcome addition to the fight against ECF. For three decades leading up to 2009, ECF was an economic and political disease with actors working independently and against each

other. This resulted in a relatively simple disease not controlled effectively and livestock keepers facing the results of an easily controllable disease.

CTTBD won the tender to produce the vaccine following a tendering process by the African Union Interafrican Bureau for Animal Resources (AU-IBAR) chaired ECF regional task force, comprising government representatives of the four countries currently using the ECF Muguga Cocktail vaccine (Malawi, Kenya, Tanzania and Uganda), GALVmed, ILRI and Pan-African Veterinary Vaccine Centre (PANVAC).

“Nearly 900 million people in Africa rely on livestock for their livelihoods. When they lose livestock, they lose their source of livelihoods which trickles down to the entire economy. The vaccine being manufactured by CTTBD is a one-time vaccination, protecting cattle for their entire life and securing this vital source of livelihood”, said Peter Jeffries, GALVmed’s Chief Executive Officer.

CTTBD has manufactured and sold animal vaccines for over 30 years. The centre, which was established by the African Union, produces quality-assured vaccines and offers training in epidemiology, livestock economics, tick-borne disease diagnostics, geographic information systems, risk analysis and control techniques for tick-borne diseases. It looks towards establishing itself as the “Centre of Excellence” for ticks and tick borne diseases on the African continent.

Apart from the Muguga cocktail vaccine, CTTBD produces two other ECF vaccine stocks – the Katete and Chitongo vaccine stabilates for the Zambian market, as well as kits for the lab diagnosis of ECF.

GALVmed has supported and invested significantly in CTTBD with funding from the Bill & Melinda Gates Foundation and the UK Government. This support is geared towards quality assured vaccine production and research leading to sustainable production of the ECF Muguga cocktail vaccine and potentially vaccines for other tick-borne diseases. GALVmed has also provided capacity building for the CTTBD staff to be well equipped to handle not only the production but also sale and delivery of the vaccine.

Read more on CTTBD and its progress.

Find out what everyone was talking about during the CTTBD launch.

Listen to a radio interview with the Malawi Minister of Agriculture and Irrigation Allan Chiyembekeza with Malawi Broadcast Company journalist Faith Mwafulirwa.

The Future

The next phase will also seek to enable young Malawians to undertake graduate placement programmes in CTTBD, while a field-based component will improve understanding of the vaccine in Malawian small-scale cattle farmers.

From an export market development perspective, the Malawian economy will benefit from a unique multi-million dollar export asset, generating foreign exchange from a much capacity-built biotech manufacturer in Malawi.

From an agricultural productivity perspective, cattle farmers in Malawi and other African countries will have access to a vaccine that provides effective lifelong protection against a disease, which otherwise results in mortality rates of up to 40%.

It is hoped that once the necessary commercialisation capabilities are held within CTTBD, sales revenue over the next three years (predominantly through export) will be in the region of US \$5 million.