HEALTHY LIVESTOCK BETTER LIVES

How GALVmed is transforming animal health

GALVmed

Protecting Livestock – Improving Human Lives

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Executive summary

GALVmed's ultimate goal is to improve the livelihoods of hundreds of millions of small-scale livestock producers in sub-Saharan Africa and South Asia. We are doing this by helping to bring about the effective control of livestock diseases using vaccines and other veterinary products, which farmers purchase at market prices. This report reflects on the progress we and our partners have made since the organisation was established in 2005.

During the early years, our focus was primarily on research and development (R&D), and this led to the creation of new vaccines that would never have been developed without our support. R&D has always been a major component of our work, but our focus on creating functional and sustainable markets in animal health has deepened over the years. We also place a strong emphasis on creating an enabling environment, which not only helps private-sector companies get their products to the people who really need them, but leads to policy changes that help to establish sustainable markets, as well as better access to, and adoption of, veterinary products.

The results speak for themselves. From 2014 to 2025, GALVmed's partners sold 3.8 billion doses of livestock vaccines and animal health products during the lifetime of its projects. Based on modelling assumptions concerning herd size, animal replacement rates and the yearly dosing requirements, this corresponds to a cumulative estimate of approximately 8.6 million cumulative annual farmer customers across Africa and South Asia.

Everything that we have achieved has been through our 300-plus partners, which range from multinational pharmaceutical companies to local non-governmental organisations, and from universities and research institutions to governments and regulatory authorities. We are greatly indebted to them, as we are to the organisations that have funded our work. The Gates Foundation and the UK Foreign, Commonwealth & Development Office (FCDO) deserve special mention. They have shown great commitment to our mission, recognising that the real impact of GALVmed's work often comes years after projects have ended.

GALVmed's major **achievements**

Approximately

8.6 MILLION

cumulative annual customers over the period 2014 - 2015. This measure does not currently account for the same customer buying products year after year, and therefore contains an element of double-counting for multi-year time series

Approximately

US$157.9 MILLION

in poultry deaths averted, from 2014 to 2025

3.8 BILLION

doses of livestock vaccines, therapeutics and other animal health products sold to small-scale producers across Africa and South Asia from 2014 to 2025

16 PRODUCTS

taken to **full development** since 2010

24 PRODUCTS

registered to date under the Mutual Recognition Procedure (MRP)

US$583.2 MILLION

in total net economic benefits to small-scale producers from the sale of vaccines and animal health products. Of this, **US$260.1 million** represents additional net economic benefit generated through GALVmed's efforts to expand market availability and catalyse new adoption

CHAPTER 1

GALVMED'S HISTORY AND EVOLUTION

It is impossible to exaggerate the importance of livestock farming in Africa and South Asia, the geographical focus of GALVmed's activities during our first two decades. Livestock production provides food, jobs and income for an estimated 268 million people in 36 African countries[1]. Around four-fifths of the animals belong to small-scale livestock producers who depend on livestock for their livelihoods.

Globally, livestock production is the highest-value farming subsector, accounting for 40% of agricultural Gross Domestic Product[2]. This figure is likely to increase as populations in the Global South become larger, wealthier and more urbanised. Demand for livestock products such as milk, meat and eggs is predicted to triple in sub-Saharan Africa by 2050[3]. This is potentially good news for African livestock producers. But it comes with a serious caveat: productivity will need to significantly increase if producers are to satisfy growing demand and, at the same time, improve their livelihoods.

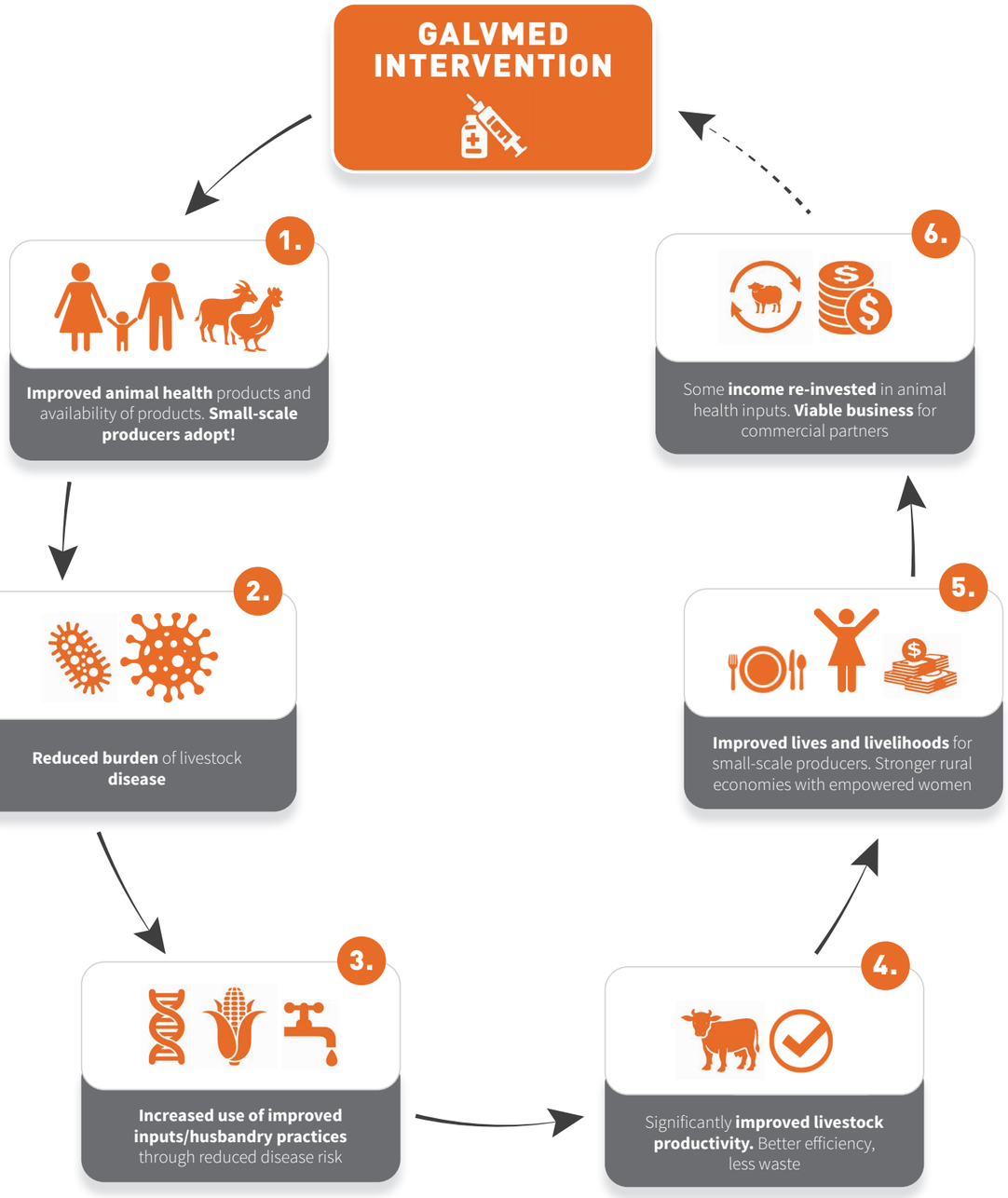
In sub-Saharan Africa, livestock productivity is far lower than it is in the developed world. For example, between 1961 and 2021, milk yields rose from just 153 to 315 kilograms per cow per year in Ethiopia. The equivalent figures for North America were 3,230 and 10,502 kilograms respectively[4]. Likewise, productivity of rangeland cattle in sub-Saharan Africa is far below that in Europe. The same applies for most other types of livestock.

A number of factors are responsible for low productivity, one of which is disease. Livestock diseases not only have a negative impact on national economies and the welfare of livestock farmers, they also frequently threaten human health as well. Some 20% of ruminants and over 50% of poultry die prematurely each year in developing countries, at least half because of infectious diseases, causing losses worth some US$300 billion[5]. Trypanosomosis, for instance, costs livestock keepers in East Africa an estimated US$2 billion a year.

GALVmed's main activities encompass research and development (R&D), commercial development, improving regulatory systems, and monitoring and evaluation. Our ultimate aim is to bring about transformational market change by creating space for the private sector to sell animal health products that help small-scale livestock producers reduce livestock mortality and morbidity, and increase their productivity and incomes. We also help the public sector strengthen animal health and livestock systems in order to reduce the prevalence of disease.

GALVmed has had considerable success in achieving this, particularly in the poultry sector. Our focus over the next five years is on the creation of sustainable markets for animal health products in the ruminant livestock sector in sub-Saharan Africa.

Virtuous cycle of adoption



GALVmed's interventions improve access to animal health products, leading small-scale producers to adopt better practices, reduce disease and increase livestock productivity. The resulting gains in income and livelihoods strengthen rural economies and are partly reinvested into animal health, creating a self-reinforcing cycle of sustainable impact.

GALVmed's **evolution**

GALVmed was established in 2005 with core funding from the UK Department for International Development (DFID). "At the time, DFID helped to set up two not-for-profit organisations aimed at addressing what we saw as market failures in the development and delivery of new innovative technology" says Alan Tollervey, senior livelihoods adviser to the Foreign, Commonwealth & Development Office (FCDO), into which DFID was incorporated in 2020. One of these organisations was GALVmed.

"Vaccines, therapeutics and other products weren't being created for developing countries, and when they did exist, they weren't getting to the people who needed them," says Tollervey. "GALVmed was set up to address this problem." DFID believed that innovation – in this instance in veterinary products – could drive poverty reduction.

GALVmed has sought to de-risk product development by encouraging private-sector companies to undertake activities that they would not have undertaken otherwise, and to work in countries previously deemed too challenging. "There was little incentive for companies to develop vaccines for neglected diseases that affected small-scale producers, and that's where we came in," says Lois Muraguri, GALVmed CEO. "There are some products that would never have seen the light of day without our intervention and support."

Three years after GALVmed was set up, we received our first major grant from DFID and the Bill & Melinda Gates Foundation (now the Gates Foundation) to implement the first Protecting Livestock, Improving Human Life Programme (PL1). "When the Foundation came on board it really turbo-charged GALVmed," recalls Tollervey. He believes that the strong links with industry – most of GALVmed's senior staff had worked for veterinary pharmaceutical companies – helped to ensure the organisation's success and durability.

From the outset, GALVmed worked with a range of partners to produce different products. This modus operandi has continued over the years, one of the more recent examples being the first Veterinary Innovations Transforming Animal Health & Livelihoods (VITAL 1) programme, described on page 20. VITAL 1 provided support to four animal health businesses to develop multivalent vaccines capable of conferring immunity against several diseases, and also involved the commercialisation of new products.

GALVmed has a long history of work on regulatory and policy issues. For example, we played a key role in helping to establish the Mutual Recognition Procedure (MRP) for the registration of new animal health products in the East African Community (see page 30). This is making it easier for companies to register products such as new vaccines.

There is now a stronger focus than in our early years on commercial development and establishing viable supply chains linking manufacturers with farmers – in other words, going the last mile. A particularly good example is provided by the Promoting and Enabling Vaccination Efficiently Now and Tomorrow (PREVENT) programme in Africa, managed by Ceva Animal Health and described on page 18.

Our **partners**

Key to GALVmed's success has been our understanding of how to work with both the public and private sectors without alienating either of them. "It's always important to involve public-sector organisations up front when you are developing new projects," explains Board Chair Isabelle Dieuzy-Labaye. Private-sector companies funded to develop projects by GALVmed always have to work with the public sector at some point, so it is better to create good relationships from the outset.

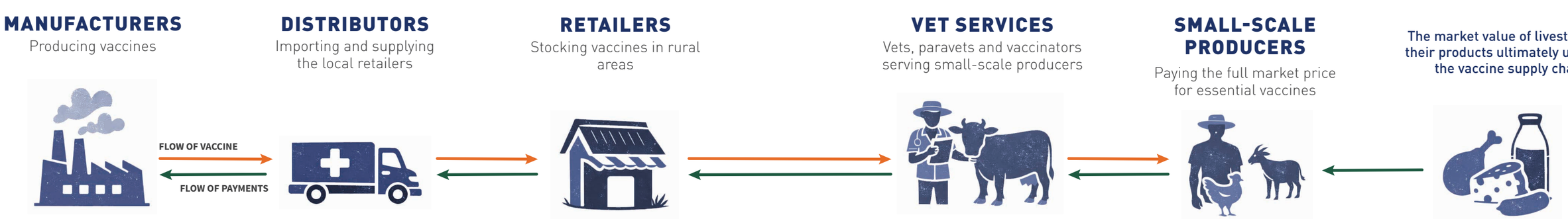
In the decades since GALVmed was established, there has been a change in the way we are viewed by both the private and public sectors. "We were initially seen by the public sector as a promoter of the private sector, while the private sector saw us as allies of the public sector – that meant that both viewed us with some suspicion," says Dieuzy-Labaye. "But we are now seen as a neutral partner, as a convener, facilitator and catalyst."

She gives the example of the vaccines promoted to tackle Newcastle Disease in poultry in South Asia and sub-Saharan Africa. "Vaccination is widely accepted as the best way of improving flock health and farmers are happy to do it, as it is easy, cheap and effective," she says. As a result, there is now a thriving commercial poultry supply chain extending from vaccine manufacturers to distributors, retailers, veterinarians and farmers.

"We are now building a clearer idea about what farmers need – their views are often very different from those of scientists – and we have a much more farmer-centric approach than we did at the outset," adds Schumacher. The ultimate aim is always the same: to turn farmers from project beneficiaries into knowledgeable customers and successful entrepreneurs.

GALVmed's projects are largely private sector driven, the aim being to bolster the private sector in order to foster transformational change in the animal health sector. "Ultimately, the idea is to create flourishing businesses, which are sustainable and no longer dependent on funding from us or anybody else," says former CEO Carolin Schumacher.

"My vision of GALVmed is this," says Neil Gammon, GALVmed Senior Director for Funder Relations & Development: "You'll see a goatherd in a remote corner of Nigeria with maybe 20 goats – they are the endpoint of the GALVmed story. What we are doing is leveraging a great range of different talents from all across the world – from universities, research organisations, vaccine development companies, distributors, governments and regulatory authorities – to tackle neglected diseases, and ensure that this goatherd has healthy and productive animals." This strategy leads to higher incomes, stronger rural economies, better diets, improved healthcare and better education for children.



The private-sector-driven vaccine supply chain, ensuring commercially sustainable outcomes that will continue delivering vaccines to small-scale farmers long after GALVmed's withdrawal from a project. Along the value chain, we have worked with numerous partners to bring the benefits of animal health to small-scale producers.

Funding **strategy**

Since GALVmed was established in 2005, we have had two principal funders, the Gates Foundation and the UK DFID (later FCDO), with the Gates Foundation providing some four-fifths of funds. The relationship, according to Nick Juleff, Gates Foundation Deputy Director for Agricultural Development, has always been one of two partners working closely together. “We see GALVmed as an extension of the Gates Foundation’s Livestock and Aquaculture pillar, and GALVmed is one of our strongest and longest-standing partners.”

“We see livestock not just as an asset, but a powerful economic driver that can help to tackle poverty at both the individual and national level,” says Juleff. “GALVmed is well positioned to bring about transformational change in the agricultural sector. Initially, it was all about developing products. Now it’s very much about country-specific policy, identifying and addressing bottlenecks and making markets function.”

GALVmed uses a blended push-pull funding approach that is grounded in long-term, trusted partnerships. Most funding is delivered through the “push” mechanisms, whereby GALVmed works closely with private-sector companies and other partners, often over many years, to develop products such as vaccines or diagnostic kits. Funding is milestone based, with payments released as partners achieve agreed technical and development objectives.

In contrast, funding under the “pull” mechanism involves providing prizes or incentives that encourage companies to develop much-needed products. There are two significant examples of this, both supported by AgResults, a consortium of funders. One example is a US$30 million prize competition that seeks to incentivise companies to develop a vaccine against Brucellosis in small ruminants.

The other is a competition that encourages the development of Foot and Mouth Disease vaccines compatible with strains of the virus circulating in Eastern Africa. Both are described on page 25.

The years to come

When GALVmed was established, it was assumed that this would be a time-bound initiative; that there would be a beginning, a middle and an end, the latter coming when we had conducted a significant body of work and fulfilled our mission, perhaps after 15 or 20 years. However, it soon became apparent that the organisation would require a longer time frame to achieve our goals.

For most of GALVmed’s existence, we have operated in both sub-Saharan Africa and South Asia. However, the decision was recently taken to focus for at least the next five years on sub-Saharan Africa. This is in part due to the relative maturity of animal health markets in South Asia. A growing and increasingly capable private sector in South Asia is already achieving many of GALVmed’s objectives, including improving access to animal health products for small-scale producers. This does not necessarily mean that GALVmed will not work in South Asia at some point in the future, but any such involvement will be based on identifying clear areas of innovation where we can add distinctive value and deliver significant impact.

It is widely acknowledged that GALVmed has become a key player in our field. “If it wasn’t for GALVmed, I don’t know where the animal health ecosystem would be in Africa,” says Liezl Kock, the Global Programmes Manager for HealthforAnimals, the animal health industry’s trade association.

“I view them as my colleagues and we work together as though we were part of the same organisation.” As GALVmed has no financial interest in selling products or getting them registered, and we are not subject to any of the restrictions facing government organisations, or indeed private-sector companies, we are ideally placed to act as a key facilitator in the sector.

Product **development**

Between 2011 and 2024, GALVmed helped to support the development and registration of 16 new products, most of which are vaccines designed to tackle some of the most serious diseases affecting small-scale producers in Africa and South Asia. The most recent innovations are multivalent vaccines, which provide immunity to several diseases. For example, the vaccine developed by the Jordan Bio-Industries Centre under the VITAL 1 programme protects small ruminants against Contagious Caprine Pleuropneumonia, Sheep and Goat Pox, and Peste des Petits Ruminants.

“GALVmed have positioned themselves in the innovation pipeline,” says Alan Tollervey of FCDO. “They are clear about what the problems are that they’re trying to solve and they have a theory of change based on evidence. The economic value of GALVmed’s products in the market significantly outweighs investment.” This is one measure of the organisation’s success. The FCDO believes that over the last 20 years empirical evidence supports the case for continued UK government investment in vaccine development through GALVmed.

Measuring **impact**

Rather than functioning solely as a retrospective assessment unit, GALVmed's Monitoring and Evaluation (M&E) operates as an innovation partner, supporting strategic learning and decision-making both retrospectively and prospectively within GALVmed and contributing evidence and insight to funders and other organisations working in the livestock development space. Underpinned by dedicated Board-level oversight, the M&E function brings rigour and external expertise into how impact is understood, challenged and learned from.

Together with partners, the M&E team has developed models that assess the impact of GALVmed's work, evolving from early static models to more dynamic production models that better reflect how change unfolds over time. This includes measuring the legacy and catalytic effects of GALVmed's work after projects end, reflecting GALVmed's role in enabling partner-led scale, expansion into new geographies, and broader product availability for small-scale livestock producers beyond the life of individual projects.

Alongside this, the M&E team applies a wider, systems-level lens, examining transformational market systems change in the livestock health sector – an emerging area of evaluation where evidence remains limited – to better understand how GALVmed's contribution interacts with other actors, incentives and conditions in livestock health markets. This helps situate our impact within a broader context, recognising that lasting change depends on how multiple efforts combine over time.

Then there is the crucial issue of awareness. Creating new vaccines is one thing; making farmers aware of their existence so that they buy and use them is another. "Many of the people we are dealing with have to be convinced of the benefits of vaccines," says Board Chair Isabelle Dieuzy-Labaye. "We have to prove to them that the vaccines are not only good for their animals, but will help them to make more money." The success of many GALVmed projects relies on comprehensive awareness and adoption campaigns.

Finally, there is the last A: affordability. Small-scale producers will not buy vaccines and other veterinary products if they cannot afford them. That is, in part, the reason behind providing subsidies early in the adoption cycle. This is a way of "priming the pump" and encouraging small-scale producers to adopt and purchase new products.

To sum up, getting animal health product to farmers involves four key elements: the product must be available and accessible to farmers, who need to be aware of its benefits and have the means to buy it.

CHAPTER 2

IN SEARCH OF SOLUTIONS

The seven stories in this chapter fall under five main themes.

1. De-risking innovation for neglected livestock diseases

This is how GALVmed makes “impossible” products possible. GALVmed takes a degree of risk that neither governments nor the private sector can bear alone, enabling the development of products to tackle diseases that disproportionately affect small-scale livestock producers. At least two of the stories below – developing combination vaccines, and new products to treat Trypanosomosis – fall under this theme. They involve early-stage R&D where no commercial incentive exists, relatively high levels of technical and financial risk, and long timelines before their impact is apparent. De-risking innovation also involves innovative funding mechanisms, such as the AgResults projects encouraging the development of new vaccines.

2. Building sustainable markets rather than one-off projects

The success of a project is not just about delivery, but making sure that the products developed continue to be made available over time and that their adoption is sustained long after GALVmed ceases to exist. Several of the stories below illustrate the importance of this theme, including the development of vaccines for backyard poultry, the PREVENT programme to increase the availability of vaccinated day-old chicks, and the AgResults cost-share prize for developing new vaccines for Foot and Mouth Disease.

3. Putting farmers at the centre of everything we do

GALVmed is always focused on improving animal healthcare for farmers, as well as technical excellence. Our aim is to design solutions that align with real-world farmer context and behaviour, and to make sure they take into account how farmers manage animals, make decisions and perceive risk and value. The stories that fit naturally under this theme include developing vaccines for backyard poultry, increasing the availability of vaccinated day-old chicks, developing combination vaccines, and introducing diagnostics to improve the treatment of livestock diseases.

4. Strengthening the enabling environment

GALVmed sees regulation, policy-making and diagnostics and surveillance as public goods. We know that products alone cannot transform systems for delivering animal healthcare. The enabling environment often determines whether small-scale farmers and producers have access to the products and services they need. Several of the stories below come under this theme, including the creation of the MRP in East Africa, OneLab diagnostics in Senegal, regulatory support for combination vaccines, and the creation of industry associations.

5. Acting as a neutral convener and catalyst

GALVmed recognises the importance of aligning with both the public and private sectors and with other players in the field of animal health. This theme helps to explain how we work and defines who we are. GALVmed’s impact comes from our ability to bring together unlikely partners and align incentives across the animal health ecosystem. Several of the stories that follow fall naturally under this theme, including the multi-partner consortium developing products to treat Trypanosomosis, prize competitions to develop new vaccines, regulatory harmonisation efforts in East Africa, and partnerships between the private sector, governments and farmers to increase poultry vaccination levels in hatcheries.

STORY 1

Transforming backyard poultry keeping

Tens of millions of small-scale producers in sub-Saharan Africa and South Asia keep small flocks of mostly free-range chickens in their backyards and fields. Left unvaccinated, these chickens often succumb to diseases, one of the most serious being the highly contagious Newcastle Disease.

Helping farmers to protect their livestock and poultry from disease was the core objective of GALVmed's first two 5-year programmes, Protecting Livestock, Improving Human Life 1 (PL1), launched in 2008, and PL2, which began five years later. There were two main activities. The first involved the development of new products, including poultry vaccines; the second focused on developing markets and linking manufacturers to farmers.

Two vaccines have had a transformative impact on backyard poultry keeping in India and Africa. GALVmed provided funds that enabled Hester Biosciences Ltd in India to acquire the technology to manufacture a vaccine for the LaSota strain of the virus. We also supported the manufacture in Morocco of an I-2 strain vaccine by M.C.I. Santé Animale for use in Africa. Their thermotolerance makes these vaccines ideal for use in remote areas where it is difficult to maintain a cold chain, and they are relatively easy to administer as eyedrops.

During PL2, there was a strong focus on developing supply chains linking the manufacturers to the farmers. Community vaccinators played a critical role. They were responsible for delivering vaccines and overcoming the logistical challenges of collection, storage and last-mile delivery. The farmers were charged a small fee to cover the cost of the vaccine and the work of the community vaccinators, ensuring that this became a viable business. Over 10,000 vaccinators were identified and trained in collaboration with NGOs and local organisations.

Five years after the projects ended, during which period they received no further support, GALVmed's M&E team looked at the vaccine supply chain in three states in India. Over half the rural retailers were still stocking and selling Newcastle Disease vaccines, and 58% of surveyed vaccinators were still vaccinating poultry. **"Often, in the world of development, projects collapse when the funding stops," says Neil Gammon of GALVmed. "Five years after the project ended, the vaccinators were still going around on foot and bike and vaccinating farmers' backyard poultry. The programme had stood the test of time and was sustainable."**

In a separate survey, households that used poultry vaccines reported:

50% HIGHER **Monthly incomes** than those not using vaccines

Various analyses have found that the average flock size increased after the introduction of Newcastle Disease vaccines, for example from 21.7 birds to 42.3 birds in a project area in Tanzania – and this within just 16 months.

"One of the things we discovered is that there is much bigger potential for transformational change when we move into a space where there was nothing before," says former GALVmed CEO Carolin Schumacher. "That's what happened with the development and introduction of the Newcastle Disease vaccine." It was a game changer for small-scale poultry farmers and helped to create viable businesses for the manufacturers, distributors, retailers and vaccinators.

Illustrating changes in the small-scale poultry sector by comparing GALVmed's first poultry project with our most recent project.

FIRST POULTRY PROJECT 2011–2012
Field-based vaccination

- 1 poultry vaccine
- **~ 311,000 doses sold**
- Means of achieving vaccine sales: **90 vaccinators trained**

831 X MORE VACCINES SOLD

LAST POULTRY PROJECT 2021–2025
Hatchery-based vaccination

- 5 poultry vaccines
- **~ 581 million doses administered**
- Means of achieving vaccine sales: **48 hatcheries**
- Modernising vaccine standards to reflect industry best practice

New vaccine leads to better income.

Silanti Linda lives in a village near Ranchi, the capital city of Jharkhand state in India. Her family is part of a tribal community that has traditionally depended on farmland and forests. However, reduced productivity and deforestation are forcing them to seek additional sources of income.

Before the introduction of the LaSota vaccine against Newcastle Disease, Silanti never had more than three or four chickens at any one time. Since she began using the vaccine she has established a flock of 40–45 chickens. As a result, her monthly income is now 33% more than the average in the area. The additional income not only means she can spend more on food, it also means she can provide a better education for her only child and take care of the family's medical expenses.

STORY 2
Targeting the hatcheries

Just under four-fifths of chicken meat produced in Africa comes from specialised broiler production systems[6]. Cheap to buy and quick to rear – producers can get 6–7 batches a year – chickens offer livestock producers of all sizes a relatively easy way to improve their incomes and diets, providing they can afford bought-in feed and control diseases.

Until recently, one of the problems in the industry has been a lack of farmer awareness about the benefits of buying vaccinated day-old chicks. Lack of demand meant that hatcheries had little commercial incentive to invest in new vaccination technologies. As a result, the burden of vaccinating chickens fell on the farmers themselves. However, vaccinating chickens individually is not an easy task.

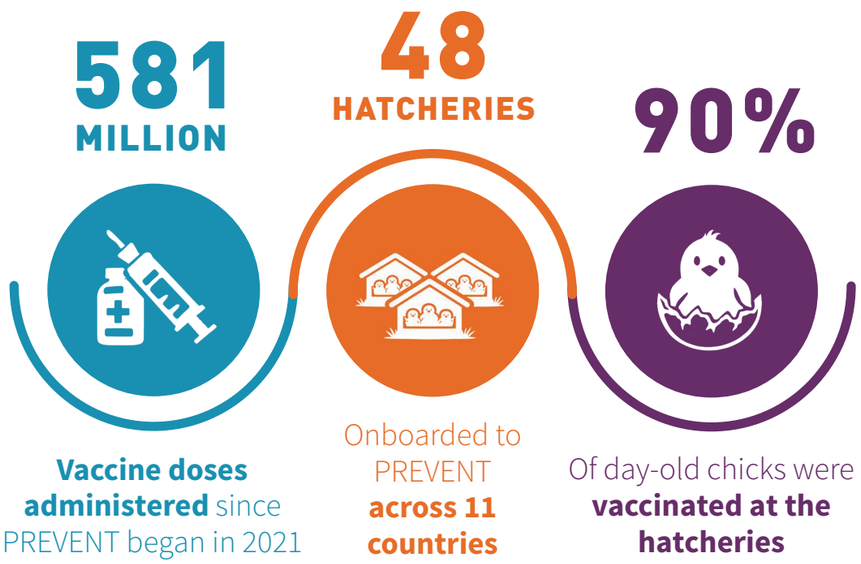
In 2021, GALVmed with the support of the Gates Foundation invited Ceva Animal Health, who had conceived of the idea, to establish the four-year project Promoting and Enabling Vaccination Efficiently, Now and Tomorrow (PREVENT) in 11 sub-Saharan African countries. The aim was to encourage medium-sized hatcheries to produce high-quality, vaccinated day-old chicks for sale.

There were two main work streams. The first involved the provision of vaccination equipment and improved facilities for the hatcheries. Once this was achieved, Ceva was able to supply a range of vaccines, using products they had already used successfully elsewhere. The vaccines could either be applied to the day-old chicks as eyedrops or as a mist spray.

"The funding provided by GALVmed helped to de-risk our investment," explains Pierre-Marie Borne, who oversaw the project for Ceva. "It helped us to prime the pump. But it wasn't just about improving vaccination facilities and supplying vaccines, we also had to train teams of field technicians." Over the course of the project, 225 field technicians were provided with training. Of these, 70 conducted over 20,000 farm visits and held almost 2,000 farmer meetings, attended by 23,000 women and 20,000 men.

The increase in farmer demand for vaccinated day-old chicks had a dramatic impact on the hatcheries, which rapidly stepped up production. Between 2021 and 2025, 48 hatcheries produced more than 215 million day-old chicks, of which 90% were vaccinated, with a total of over 580 million vaccine doses administered. The net economic benefit over the course of the project has been calculated at US$43 million.

According to Marie Ducrotoy, Head of Strategic Institutional Alliances at Ceva and manager of PREVENT, the project has helped to extend the benefits of hatchery vaccination to small-scale farmers. "Ceva is sustaining this momentum by investing in hatchery-based vaccination as a proven, scalable solution to boost flock health, reduce losses and improve the long-term productivity of Africa's poultry sector," she says.



The benefits of buying vaccinated chicks.

In Chanya village, Iringa, Tanzania, Helena Kindole proudly shows off her new chicken house, built with the profits earned from her small poultry business. She buys vaccinated day-old chicks from a hatchery and sells them at a young age. In rural Tanzania, women like Helena are beginning to think more boldly about the opportunities that can improve their livelihoods, status and influence. Poultry production is one of these.

The opportunity to buy vaccinated day-old chicks at the hatchery has enabled her to expand her business, as she no longer has to worry about losing her flock to preventable diseases.

STORY 3

Developing vaccines for multiple diseases

There are few better examples of de-risking private-sector investment than the GALVmed-funded projects that have led to the creation of vaccines providing immunity for two or more diseases. The multivalent, or combination, vaccines developed under the VITAL 1 programme could revolutionise disease control in sub-Saharan Africa over the coming years.

“One of the things we learned from previous programmes,” says GALVmed CEO Lois Muraguri,” is that the single-disease approach implemented by governments doesn’t reflect the realities of life at the farm level.” Small-scale livestock producers have to cope with a whole range of diseases and conditions. Furthermore, the clinical manifestations – such as a runny nose or lethargy or reproductive problems – can frequently be caused by more than one disease. As a result, it is in the farmers’ best interests to routinely vaccinate their livestock against a suite of diseases, ideally at the same time, as cost-effectively as possible.

Unlike poultry, which can be vaccinated relatively easily in large numbers in a fixed location such as a broiler hatchery, ruminants generally have to be vaccinated outdoors. “The vaccines themselves may be cheap, but running costs for ruminant vaccination programmes tend to be high,” says Dr Khalid Saeed, a consulting specialist with the Jordan Bio-Industries Center (JOVAC), an animal health company that has developed a multivalent vaccine under the VITAL 1 programme.

He estimates that a vaccination team consisting of one vet, three paravets and a driver in East Africa will cost up to US$160 a day, while the vaccine developed by JOVAC is relatively cheap, at US$0.28 per dose. This explains why multivalent vaccines are so attractive. Animals are inoculated against two or three diseases with a single dose, rather than one, and farmers require fewer visits from vaccination teams, thus reducing the cost of vaccination. One of the great advantages of using multivalent vaccines is that they improve commercial viability in low-margin markets and justify private-sector investment. They can also reduce dependency on low-volume monovalent vaccines. This aligns with GALVmed’s role in shaping markets.

Under the VITAL 1 programme, funded by the Gates Foundation and FCDO, three companies have developed multivalent vaccines to tackle six infectious diseases. The vaccines brought to full development and registration consist of the one developed by JOVAC for Contagious Caprine Pleuropneumonia, Sheep and Goat Pox, and Peste des Petits Ruminants; a vaccine developed by Hester for Newcastle Disease and Infectious Bursal Disease; another by Hester for Peste des Petits Ruminants and Sheep and Goat Pox; and a fourth developed by M.C.I. Santé Animale for Contagious Bovine Pleuropneumonia, Lumpy Skin Disease and concurrent Rift Valley Fever.

The five big benefits of multivalent vaccines for livestock vaccination in Africa.

Integrated disease control: targeting multiple livestock diseases at the same time reduces immunity gaps and aligns protection, **supporting resilience.**

Differential diagnosis problem solver: multiple pathogens can cause similar symptoms and diagnosis is difficult. Multivalents **cut through this problem** by covering a broad spectrum of a given syndrome (e.g. respiratory).

Field administration enabler: the physical process of vaccinating hundreds of animals a day is logistically challenging and low-pay work. Multivalents can make the process **235% more efficient.**

Vaccine cost reducer: the cost to the small-scale producers for multivalent vaccines will typically be in the region of **85% less** as compared to the sum of the constituent monovalent vaccines.

Fridge space provider: in remote rural areas, cold chain facilities are scarce and the multivalents typically occupy **65% less** fridge space than monovalents.

Public-sector budgets in Africa are inadequate to achieve widespread vaccination coverage, and the VITAL programmes illustrates the importance of getting the private sector more involved in developing and supplying vaccines and animal health products. Until now, the public sector has been largely responsible for delivering vaccinations for notifiable ruminant diseases – in other words, diseases where there is a legal obligation to inform government authorities – and when it does so the vaccines are often subsidised or free of charge, undermining the development of a sustainable market. This will change with private-sector involvement.

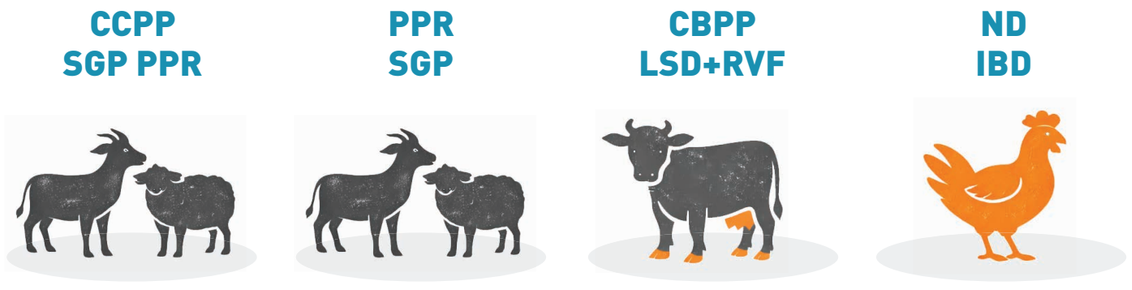
In 2025, several countries announced plans to vaccinate the full population of cattle as well as sheep and goats. However, the existing capacity of state-owned laboratories, in their current condition, is insufficient to meet targets of this scale. Ambitious programmes of this nature are unlikely to be achieved without the involvement of the private sector.

By mid-2025, an initial order for the new multivalent vaccine had been received by one of GALVmed partners, and other countries signalled that they could require doses on a nationwide scale. This highlights the strong potential demand for multivalent vaccines across multiple markets. Meeting this demand will depend not only on the ability of manufacturers to produce sufficient quantities of high-quality vaccines, but also on comprehensive awareness and marketing programmes, as well as reliable supply chains and logistics systems, including effective cold chain management to maintain vaccine quality up to the point of delivery.

“VITAL 1 has been very successful in terms of developing new products,” says Nick Juleff of the Gates Foundation. “The question now is: can GALVmed and its partners scale up the use of the multivalent vaccines and challenge the idea that governments should be the ones to manufacture and provide ruminant vaccines?”

Combination vaccines are a viable and cost-effective solution. They offer protection against multiple diseases at the same time, reducing animal stress, costs and labour.

GALVmed and partners have developed four combination vaccines, tackling multiple diseases:



Contagious Bovine Pleuropneumonia (CBPP), Contagious Caprine Pleuropneumonia (CCPP), Infectious Bursal Disease (IBD), Lumpy Skin Disease (LSD), Newcastle Disease (ND), Peste des Petits Ruminants (PPR), Rift Valley Fever (RVF), Sheep and Goat Pox (SGP).

STORY 4

Tackling Trypanosomosis – worth the risk

10,000
COMPOUNDS SCREENED

20
COMPOUNDS ASSESSED IN CLINICAL TRIALS

Almost a quarter of the funds GALVmed have been devoted to tackling Animal African Trypanosomosis. Also known as Tryps or nagana, this parasitic disease transmitted by tsetse flies has had a devastating impact on livestock farming in some 37 countries in sub-Saharan Africa. GALVmed’s Tryps project is a good example of a potentially high-impact strategy that involves a significant level of financial risk. It also exemplifies our ability to bring together large numbers of private pharmaceutical companies, public research agencies, contract research organisations and universities to solve a specific problem.

In 2011, DFID (now FCDO) provided GALVmed with an £8 million grant to work on four key pillars to combat the disease: a vaccine, a new therapeutic, pen-side diagnostics and baseline epidemiological data. Five years later, the Gates Foundation joined the Tryps project, and there have subsequently been other major grants bringing the total investment to over US$70 million.

The primary focus has been on the development of novel therapeutics. The drugs currently available for the treatment of Trypanosomosis already represent one of the largest segments in the animal health market in Africa, with sales amounting to an estimated US$20–90 million a year[7]. However, the three most commonly used trypanocides were developed over half a century ago and their use is deeply problematic for two main reasons.

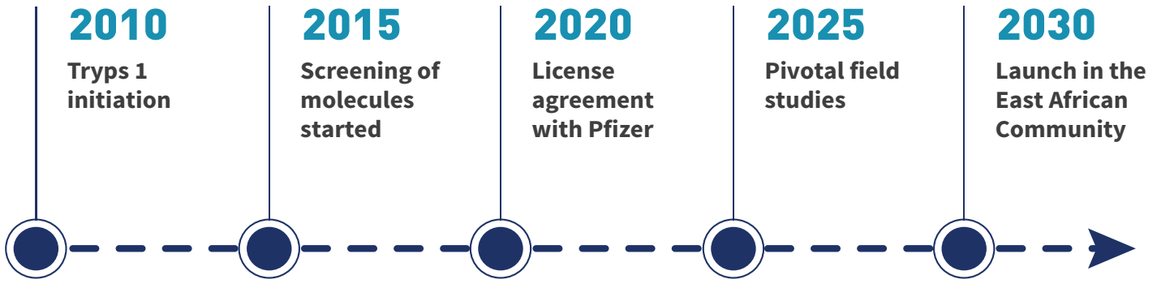
First, there are increasing reports of resistance. Matters have been made worse by the widespread availability of substandard and counterfeit products. Second, the existing drugs have narrow therapeutic windows, meaning the dose has to be just right: too little and the drug does not work, too much and the drug can quickly become toxic, posing a significant risk to animal and human health.

This is one of the main reasons why the Gates Foundation was keen to get involved in this big challenge. The Gates Foundation agreed with co-funder DFID that there was an urgent need to develop a new drug that was not only an effective parasiticide, but safe to use, for animals, humans and the environment.

The Tryps project has benefited from research carried out on Human African Trypanosomosis, or sleeping sickness. A consortium of academics, pharmaceutical companies and not-for-profit organisations developed a new pipeline of highly effective candidates for treating the human disease. Drawing on their experience, the Tryps project screened over 10,000 compounds in the search for candidates that could provide a single-dose, long-lasting, potent therapeutic.

Through these global collaborations, GALVmed has sought to develop a better product for reducing the impact of this major African cattle disease. After some 14 years, the project has surpassed significant technical challenges. The next objective will be to support the regulatory and commercial aspects, paving the way for market entry.

Timeline of activities for the Trypanosomosis programme



STORY 5
Prizes and incentives

The vast majority of GALVmed projects have been funded with grants. However, two innovative ventures use an alternative funding model that involves pay-for-results prizes for developing new vaccines. Both are funded by AgResults, a collaboration between the Gates Foundation and the governments of Australia, Canada and the UK (the US helped to set up AgResults but is no longer involved). GALVmed functions as the project manager for both prizes.

The US$30 million Brucellosis Vaccine Prize launched in 2016 to stimulate the development of an efficacious, safe and affordable vaccine for the strain of the pathogen *Brucella melitensis* causing Brucellosis in sheep and goats. Current vaccines are far from satisfactory as they are unsafe for pregnant animals, vary in their efficacy, and can be harmful to humans.

The first phase of the competition resulted in US$100,000 being awarded to 10 different organisations on four continents so they could develop their ideas and submit an initial application. The second phase – “the solving phase” – involved a payout of US$1 million to the first four companies that provided satisfactory proof of concept for their vaccine design and met the efficacy and safety requirements. The first company to develop and register a new vaccine will receive US$20 million. At the time of this publication, the project still has two years left to run.

The success of the second pay-for-results prize competition, the AgResults Foot and Mouth Disease Vaccine Challenge Project, is already assured. The first phase of this eight-year, US$17.34 million competition focused on the development of new quadrivalent vaccines providing immunity against all four strains of Foot and Mouth Disease (FMD) circulating in Burundi, Ethiopia, Kenya, Rwanda, Tanzania and Uganda.

FMD is so infectious that even small outbreaks can lead to immediate restrictions on the movement of live animals and trade in animal-based products. Besides presenting a constant global threat to trade and national economies, FMD can have a disastrous impact on farmers’ livelihoods and food security.

FMD costs Africa some
US$2.3 BILLION
per year in economic losses.

The competition has already led to the development and registration of a new vaccine meeting all the requirements of the Target Product Profile by the Moroccan state-owned Société de Productions Biologiques et Pharmaceutiques (BIOPHARMA). One additional quadrivalent vaccine was going through the regulatory approval process as this publication went to press.

The second phase of the project is the cost-share phase designed to drive uptake and distribution of the new FMD vaccines. A total of US$15.8 million has been allocated to fund a portion of the selling price of vaccines that meet all the AgResults eligibility criteria. AgResults provides the cost-share funding to manufacturers on behalf of public- and private-sector buyers who buy directly from the manufacturers. The ultimate aim of the project is to create a sustainable market for new quadrivalent vaccines for FMD.

Donors are very enthusiastic about this model of funding and it could be replicated for other diseases," says Isabelle Dieuzy-Labaye, GALVmed Board Chair. "These prizes show companies that there are opportunities for good R&D, and the cost-share mechanism can help to commercialise the products that they develop."

The damage caused by Foot and Mouth Disease

Foot and Mouth Disease (FMD) has had a devastating impact on Lawrence Njane, who took up dairy farming in Kiambu County, Kenya, some 20 years ago after retiring from the civil service. In 2019, a particularly devasting outbreak swept through his village, destroying many livestock businesses.

Prior to the outbreak Lawrence owned 14 cows. After losing four calves and selling off non-productive animals, he was left with just two cows. His milk production fell from 70 litres per day to a mere 18 litres. "Prior to the outbreak, I was averaging an income of about 80,000 Kenya shillings [US$ 730] a month," says Lawrence. "I was servicing a bank loan which I had taken to buy some land. Now I am averaging just 14,000 Kenya shillings [US$ 127]. This disease has set me back drastically. If there was a vaccine that could protect my cows from FMD, why would I not buy it after sinking my life savings into this business?"

STORY 6
Diagnosis and surveillance

The misuse and overuse of antimicrobial drugs in humans and animals has created a global emergency. Antimicrobial resistance was responsible for an estimated 1.27 million global human deaths in 2019, and contributed to a further 4.95 million deaths. The World Bank estimates that antimicrobial resistance could result in US$1 trillion of additional healthcare costs by 2050[8].

The misuse of antibiotics by livestock owners is particularly problematic in many developing countries, where small-scale farmers and producers, desperate to treat their sick animals, buy and use antibiotics without any diagnostic identification of the bacteria they are trying to treat. A GALVmed-funded project in Senegal, managed by Laprovet, a subsidiary of Ceva Animal Health, has helped to tackle this problem.

"In the past, most farmers would go to the nearest retailers when their chickens were sick, and the retailers would give them antibiotics without knowing what antibiotics were appropriate," says Ceva's Pierre-Marie Borne. "It was heads or tails whether they gave the right one. It might work, or the chickens might die." Frequently, chicken farmers would lose up to half their birds every year; now, thanks largely to the Laprovet OneLab Initiative launched in 2021, 90–95% of the birds survive.

Working closely with private veterinarians, the OneLab Initiative paid for the establishment of a network of small laboratories with diagnostic tools that allow for the quick detection of bacterial infections. This enables vets to recommend the most appropriate treatment for infected flocks, ensuring that farmers use the correct antibiotics, thus reducing the risk of further antimicrobial resistance.

The OneLab Initiative has conducted over 1,800 tests. This has greatly reduced overreliance on antibiotics by farmers. Besides determining what drugs, if any, farmers should use, the data have provided valuable insights into the general levels of resistance to antibiotics in the region, with half the tested bacteria being resistant to the most commonly used antibiotics.

1,800 TESTS

Conducted in **OneLab.**

90–95% BIRDS SURVIVE

Since **Laprovet OneLab Initiative,** launched in 2021.

“Before OneLab, when our chickens were dying, the veterinarians had to grope around,” recalls Senegalese poultry farmer Fatou Cissé. “For example, they would prescribe a treatment and during the course of the treatment you would realise that the mortality rate hadn’t dropped. But now they can properly diagnose our chickens and offer the appropriate treatment.”

During recent years, new variants of key poultry pathogens have been identified in the northern hemisphere, including Avian Influenza and new Infectious Bursal Disease isolates that can no longer be controlled by current vaccines. Fortunately, an extensive laboratory network, and associated disease surveillance systems funded by industry and government agencies, have been quick to identify the new variants.

The same is not the case in sub-Saharan Africa, largely due to the lack of surveillance systems and laboratories with the diagnostic equipment and skills to conduct tests. As a result, the response to disease outbreaks has been fragmented and inadequate. GALVmed’s Enhancing Disease Surveillance for African Poultry (EDSAP) project, launched in 2024, is designed to counter this problem by supporting the expansion of laboratory capacity at three large poultry production companies in Ethiopia, Tanzania and Nigeria.

“In the past, if one of the companies had an outbreak of disease, they had to send samples to be tested in South Africa,” says Steve Wilson, Director of R&D at GALVmed. “It could take two weeks before they got the results back, by which time they might have had to cull 2,000, 3,000, 5,000 birds, because they didn’t know how to treat them.” Now, laboratories are able to swiftly identify viral diseases, such as new variants of Avian Flu or Infectious Bursal Disease, and introduce the appropriate treatment.

The new laboratories also have a key role to play in providing accurate surveillance data, which can feed into national and regional poultry disease surveillance systems and contribute to decision-making on vaccine registrations, other disease preventative activities and the reduction of antimicrobial resistance.

Tackling tick-borne diseases with **better diagnostics and surveillance**

Sub-Saharan Africa is facing an unprecedented crisis in tick-borne diseases, which cause high levels of mortality and reduced productivity. Economic losses, both at the national and individual level, can be devastating. For example, East Coast fever is responsible for an estimated US$500 million a year of economic losses in East, Central and Southern Africa. Changing climatic conditions, poor herd management, and the unregulated use of acaricides leading to high levels of resistance have contributed to the surge in tick-borne diseases.

GALVmed is supporting two projects whose objective is to improve the management of tick-borne diseases and lead to the more effective use of acaricides.

The Managing Animal Health and Acaricides for Better Africa (MAHABA) project was launched in 2021 by GALVmed and Elanco Animal Health. The project has helped to develop a clearer understanding of acaricide usage and acaricide resistance in Uganda and Nigeria. It has educated large numbers of small-scale livestock producers on the effective use of acaricides and methods to counter resistance, and established a digital platform for use by small-scale producers and animal health workers. Ultimately, this should lead to significant gains in livestock productivity.

Another tick-related project was established in 2024. The Monitoring of Ticks and Acaricide Resistance in Uganda (MoTAR) project is supported by GALVmed and implemented by Makerere University’s College of Veterinary Medicine, Animal Resources and Biosecurity (CoVAB). It has two principal aims. One is to establish a national acaricide resistance information system for use by veterinary authorities and others involved in the livestock industry. The other is to set up a network of laboratories that can deliver the necessary resistance testing and diagnostic services. The first of these, a newly upgraded research centre for tropical diseases and tick control at CoVAB, was officially inaugurated in August 2025.

“So far, the results have been very promising and eventually we should see nine new labs or upgraded labs across the cattle belt in Uganda,” says Karelle de Luca, Head of R&D at GALVmed. “These will play a crucial role in diagnosing tick-borne diseases, tracking acaricide resistance and generating data to inform national policy.”

STORY 7

Reforming the regulatory system

Developing a new vaccine or a new drug is just the first stage of the long journey required to get an animal health product from the manufacturer to the farmer. Once a product has been developed, companies have to get it licensed for use in the countries where they hope to sell it. In sub-Saharan Africa, obtaining licences is time-consuming, bureaucratic and expensive, as products have to go through separate registration processes in each country.

“Product registration has always been one of the biggest barriers to getting veterinary products to livestock producers in Africa,” says Lois Muraguri. Before she became GALVmed’s CEO in 2025, she oversaw GALVmed’s regulatory activities, which included establishing the Mutual Recognition Procedure (MRP) for the East African Community (EAC). This has been designed to revolutionise the regulatory system for veterinary medicines in the region.

The MRP was established in 2014 with the twin objectives of harmonising the technical requirements for registration of veterinary products in the EAC and coordinating the registration process. Companies still need to submit dossiers and samples to all the countries where they intend to apply for a licence, but once this is done, the registration process is the same for all countries and is coordinated by the MRP coordinator. This saves considerable time and allows the applicants to use their resources more efficiently.

The system is working well, but there have been some teething problems. “One of the main barriers has been communication with the regulators,” says Liezl Kock, the Global Programmes Manager for HealthforAnimals. “The companies often can’t get rapid answers to questions they ask the regulators, and the evaluators employed by the regulators are often hugely overworked.” It can also be difficult for companies with offices in Europe to find good in-country technical representatives to deal with the regulatory authorities.

Despite the challenges the MRP has faced, Kock considers it a great success story. The appointment of Dr Adelaide Ayoyi as full-time coordinator has had a very positive impact, according to Kock. Dr Ayoyi is an experienced regulator, having set up the department of product registration at the Kenya Veterinary Medicines Directorate (KVMD).

“She works with regulators as well as the companies, and that has greatly improved communication,” says Kock. “She is also getting different countries to work together more closely and to trust each other’s evaluations.” This is helping to speed up the registration process.

Milestones in the establishment of the **Mutual Recognition Procedure for veterinary medicines** in the East African Community

8 COUNTRIES

Burundi, Democratic Republic of the Congo, Kenya, Rwanda, Somalia, South Sudan, Tanzania, Uganda

2010
OIE-GALVmed Continental workshop

2011
Founding meeting with EA region regulators

2012
Key technical documents harmonised

2013
Meeting with heads of National Regulatory Authorities (NRAs) and EAC

2014
EAC Council of Ministers endorses concept of MRP

2015
EAC establishes Technical Working Group

2016
Council of Ministers directs implementation of MRP and harmonised Good Manufacturing Practice (GMP) guidelines

2017
EAC directive to NRAs to initiate MRP and to set up coordination office. First vaccine submitted

2018
First vaccine registered

Council of Ministers directs MRP to include pharma

2019
Council of Minsters directs MRP to include ectoparasiticides, vet devices and nutrients

2020
Activities affected by COVID-19

2021
Document reviews online and capacity building for FMD dossier evaluation for the senior assessors

2022
First pharma registered

2023
Harmonised Guidelines developed for ectoparasiticides

2024
Adoption and launch of ectoparasiticides guidelines

2025
Adoption of guidelines for GMP inspection

The Office International des Epizooties (OIE) became World Organization for Animal Health (WOAH).

Thanks to the MRP, the regulatory guidelines devised for the region are now being used at the national level. This means that all the countries are on the same page when it comes to assessing new vaccines and drugs. “GALVmed has played a key role not just in providing funds to develop MRP, but in terms of training regulatory staff and building capacity,” says Fahari Marwa, head of agriculture and food security at the EAC. There are regular workshops, online and in person, which bring together representatives of industry, the regulatory authorities and the EAC.

The EAC had received **57 applications** under the MRP

24

of which had been approved

Most were vaccines. In 2024, companies were allowed to submit veterinary ectoparasiticides – drugs to control vectors like ticks – for approval under the MRP, and harmonised guidelines have now been developed for licencing veterinary medical devices, nutrients and aquatic animal medicines. Animal health companies are not obliged to use the MRP. However, HealthforAnimals and industry bodies like the Veterinary Input Suppliers Association of Kenya (VISAK) encourage them to do so.

Many companies, **one voice**

“One of our main objectives is to work closely with the government to facilitate the trade in safe, efficacious, high-quality veterinary medicines,” says Maurice Ogutu, Vice-chair of the Veterinary Input Suppliers Association of Kenya (VISAK), whose 40 or so members consist of manufacturers, importers and distributors of animal health products and equipment.

The organisation was established in 2019, at the instigation of GALVmed and with GALVmed support. VISAK is now making a significant contribution to policy-making. “We are also working closely with the Veterinary Medical Directorate, the regulatory authority in Kenya, to fast-track the registration of veterinary medicines,” explains Ogutu. VISAK is promoting a transparent and efficient system of registration that will help to address the influx of substandard and counterfeit products that plague the animal health sector. This will greatly benefit small-scale livestock producers.

According to Ogutu, VISAK members are embracing the MRP for the registration of veterinary products. “For us, GALVmed has been very significant in two ways. First, they have helped set up our industry association, and we are now much better organised and speak with one voice. That will benefit small-scale producers. And second, GALVmed has helped to strengthen the regulatory authorities – that has been very important as it eases one of the most significant business barriers.”

Market intelligence **matters**

The lack of good market data for animal health products in sub-Saharan Africa is a major barrier to investment. “Companies in Europe have excellent access to data, and this helps to guide their investment,” says Enrique Hernández Pando, Head of Commercial Development and Impact at GALVmed. “It is a very different story in sub-Saharan Africa. The lack of good data means that companies have to base their market decisions on their own intelligence and own assumptions.” As a result, many choose not to invest in the region at all, or to limit or drip-feed their investments.

To tackle this problem, GALVmed has been working with AgNexus Africa, a Kenyan market research company, to assist in the further development and expansion of their market intelligence platform. Drawing on data from a panel of agro-dealers and retailers in Kenya, AgNexus Africa is now providing companies with current market data and projections of future market potential for a range of animal health products. AgNexus Africa has also launched a parallel initiative, with GALVmed support, to professionalise and digitalise retailer-based market data.

By the end of 2025, some 10 companies – mostly local, but including some multinationals – were paying AgNexus Africa a subscription for access to its data. They are now using this market intelligence to guide their decisions and future commercial strategies. “The data is helping companies to identify market gaps and opportunities, such as the potential to develop new vaccines or other products,” says Pando. AgNexus Africa is currently expanding its geographical coverage to Tanzania and Nigeria. Pando foresees the day when other companies, offering similar services, could enter the market.

CHAPTER 3

LESSONS LEARNED

Achievements are the most visible measure of progress and impact, but GALVmed's successes stories tell only part of the story. The occasional failures have been important too. Learning from past mistakes, as well as successes, has helped us improve our performance, whether it comes to supporting R&D, working in the policy field, or ensuring that new products reach the people for whom they are intended.

Before looking at the key lessons learned over the past 20 years, it is worth making two points. First, developing new products in the pharmaceutical industry is inherently risky. For the companies that fail to take any risks, there will be few, if any, rewards. Pierre-Marie Borne, a former board member at GALVmed and a senior public affairs manager at Ceva, likens the industry to a game of poker. The person who leaves the table with his pockets full will be the one who has taken calculated risks.

Lesson 1: Provide a targeted package of support

A key lesson learned by GALVmed is that private-sector companies will nearly always need help to get their new products, such as vaccines, de-wormers and anti-tick treatments, to small-scale livestock producers. "We can't just jump in the backseat of the car and leave them to do all the driving," says Neil Gammon.

There are certain things that private-sector companies need help with when tackling new markets. For example, if they have to negotiate with the regulatory authorities, or if they need to leverage other agricultural development initiatives, then they will need a trusted organisation like GALVmed to act as a facilitator. In order to get their products to large numbers of new customers in rural areas, 'boots on the ground' are required to deliver the initial marketing (awareness, access, affordability and advantage) activities. Once this initial 'big push' has been achieved, the private sector can deliver without further assistance.

In VITAL 1, with the major proportion of the budget being allocated to the highly successful R&D programme, too much was attempted with the limited commercial development budget. Five different models were tested and three of these involved new businesses. While some attrition had been anticipated, it was higher than expected – exacerbated by the COVID-19 pandemic – and only two models, both with established animal health companies, achieved their target levels of sales. Both of these also missed their customer reach targets by a wide margin because the overall package of support did not enable them to penetrate the farming systems with smaller livestock holdings. In hindsight, had GALVmed focused on just one or two new initiatives, rather than five, then a much more comprehensive package of support could have been provided and considerably more achieved.

Lesson 2: Know when to pull the plug on a project

"One thing we have learnt is that when we fail, we need to recognise failure and fail fast," says former GALVmed CEO Carolin Schumacher. The longer a failing project continues, the more resources will be wasted.

The important thing is knowing when to pull the plug. With product development, GALVmed follows the industry standard norm of having a Target Product Profile (TPP) to guide the development process. If certain criteria are not met, this may represent a 'no-go' against the TPP, and further development work would cease. This has occurred several times in GALVmed's R&D portfolio.

In commercial development, and without the prescriptive TPP framework, it can be harder to know when to shut down a project. It is a more subjective call, but it does happen. For example, in VITAL 1 GALVmed supported a start-up company in Tanzania to establish and scale up a new animal health inputs distribution enterprise for last-mile delivery through a team of veterinary para-professionals. In its second year, it became clear that the project would not achieve it targets, so GALVmed pulled the funding.

Lesson 3: Work with the right partners

Choosing the right partners is absolutely critical for success. In our early years, GALVmed did not know the market as well as we do today and achieved mixed results. Now, we tend to pick our partners more carefully, looking for ones with a proven track record and strategic commitment. We have found that medium-sized regional companies, often based in emerging market countries – such as the ones who developed vaccines under VITAL 1 – tend to be highly motivated and agile when it comes to getting their products to small-scale livestock producers.

GALVmed has become more cautious about establishing partnerships with large-scale, multinational companies on the one hand, and small start-ups on the other. This does not mean that we exclude either, but experience suggests that partnerships developed with these two extremes of the commercial world are often less strategically focused on the African market, or less able to operate in the African ecosystem, than regional companies embedded in our target countries.

Another lesson learned is that it makes no sense to enter into partnership with companies who have an unsatisfactory track record. Or as the Gates Foundation's Nick Juleff says: "Don't work with companies that have already failed three times, and expect them to be successful on this occasion."

Lesson 4: Research and development should be demand driven

In GALVmed's early years, the development of new products was guided by assumptions, often based on partial evidence, about what was needed in the field. This was inevitable as both scientists and GALVmed had a relatively limited understanding about the disease burden in sub-Saharan Africa and South Asia, and lacked good data on which to base decisions about what was needed.

Projects supported by GALVmed should address the needs of the customers who are choosing to pay for their products. This means paying greater attention to the results of rapid adoption studies that identify potential customers and their needs. Early insight into the results of these studies will enable GALVmed to guide and refine our partners' messaging and marketing activities, and hence achieve greater uptake. In future GALVmed will focus on the confirmed needs of small-scale producers, which is why the key focus of VITAL 2 is on developing ruminant vaccines for sub-Saharan Africa.

Lesson 5: Make the most of GALVmed's legacy impact

GALVmed's legacy impact – the knock-on effect of the projects it has supported – remains under-explored and under-reported. More could be done to establish exactly how influential GALVmed's work has been, and this would provide further proof to our donors, partners and farmers in Africa that they are getting a good return on their investments.

One example will suffice. There is enough anecdotal evidence to show that our projects designed to improve poultry health and tackle Newcastle Disease had a significant impact on the activities of organisations and companies that were not part of the projects. They could see that vaccine supply chains were making good profits for the manufacturers, distributors, retailers, veterinarians and others, and at the same time satisfying farmer demand. GALVmed should do more to highlight legacy impacts like these.

CHAPTER 4

LOOKING TO THE FUTURE

The landscape in which GALVmed will be operating in the coming years will be very different from the one that has shaped our development over the past two decades. Most obviously, major international donors including the US have recently reduced the amount of finance allocated for development assistance. This will lead to greater competition for donor funding, and some of the organisations with whom we have traditionally collaborated may well be affected.

Animal health is becoming a more complex issue, with climate change and other factors causing shifts in the geographic distribution of certain diseases. For example, Lumpy Skin Disease and African Swine Fever have recently moved into Europe. This will have an impact on the way GALVmed operates. At the same time, we are seeing a significant shift towards localisation, with African institutions playing an increasingly prominent role. We will have to work more closely with these institutions in the coming years and take into account their policies on animal health issues.

“During the early years, GALVmed’s main focus was on product development and innovation,” says CEO Lois Muraguri. “We are still heavily involved in product development, but we are also having to take greater account of how the markets have changed and what sort of interventions are most appropriate.” The focus in future will increasingly be on working towards transformational market change. GALVmed’s long-term impact will be driven by partnerships with a range of organisations, rather than stand-alone interventions, and there will be greater emphasis on developing regulatory capacity and harmonisation, on listening to customers and improving last-mile delivery, and on strengthening national animal health systems.

One of GALVmed’s great strengths has been our ability to act as a bridge between science and policy, between the public and private sectors, and between innovation and real-world delivery. GALVmed is now seen not just as a project implementer but a thought leader, which is why we now collaborate with specialised agencies in the African Union and the World Organisation for Animal Health (WOAH). We will continue to develop and strengthen working relationships with national and international institutions.

GALVmed’s ambition is very simple: one day, we hope we will be able to close our doors for good. This will only be achieved when the market for animal health products functions effectively and a whole range of animal health products reach small-scale livestock producers, enabling them to increase their productivity and incomes; when diseases that currently cause huge hardship are no longer major threats to the livestock industry; when businesses all along the supply chain make a profit from supplying the needs of farmers; and when efficient regulatory systems mean that new drugs and vaccines replace substandard and counterfeit products and swiftly become available to the people who need them.

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