



BILL & MELINDA GATES FOUNDATION
LANDSCAPING LIVESTOCK POLICY ISSUES AND ORGANIZATIONS

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TABLE OF ABBREVIATIONS

Term	Definition
BRAC Tanzania	(Bangladesh Rural Advancement Committee) Tanzania
BAIF Development Research Foundation	(formerly Bharatiya Agro Industries Foundation) Development Research Foundation
GALVmed	Global Alliance for Livestock Veterinary Medicines
AU-IBAR	African Union Inter African Bureau for Animal Resources
COMESA	Common Market for Eastern and Southern Africa
CIWF	Compassion in World Farming
CARE Bangladesh	Cooperative for Assistance and Relief Everywhere - Bangladesh
DFID	Department for International Development
DFZ	Disease Free Zone
EAC	East African Community
ECOWAS	Economic Community of West African States
EADP	Emergency Animal Disease Preparedness
FAO	Food and Agriculture Organization of the United Nations
H5N1 HPAI	H5N1 highly pathogenic avian influenza
IGAD	Intergovernmental Authority on Development
IFPRI	International Food Policy Research Institute
IFAD	International Fund for Agriculture Development
ILRI	International Livestock Research Institute
LITA	Livestock Training Agency
LGA	Local Government Authority
MIRA	Micro Reforms for African Agribusiness
MIT	Ministry of International Trade
MLFD	Ministry of Livestock and Fisheries
NEMC	National Environmental Management Council
PANVAC	Pan African Veterinary Vaccine Centre
PPLPI	Prop-Poor Livestock Policy Initiative
REC	Regional Economic Communities
SIDAI	Sidai Africa, a social enterprise in the livestock sector in Kenya
SADC	Southern African Development Community
SNV	Stichting Nederlandse Vrijwilligers (Dutch Development Agency)
TDB	Tanzania Dairy Development Board
TFDA	Tanzania Food and Drug Authority
TSB	Tanzania Standards Bureau

Term	Definition
TVLA	Tanzania Veterinary Laboratory Agency
BMGF	The Bill and Melinda Gates Foundation
USAID	United States Agency for International Development
WB	World Bank Group
OIE	World Organization for Animal Health

1. INTRODUCTION

This report has been produced by Cambridge Economic Policy Associates (CEPA) as part of work carried out between June and December 2013 for the Bill and Melinda Gates Foundation (hereafter referred to as “the Foundation”) to address the livestock policy constraints faced by smallholders and pastoralists in the Foundations priority geographies¹.

1.1. Objective of this report

CEPA has been commissioned by the Foundation to complete work designed to inform the Foundation’s understanding of potential grant-making opportunities in the livestock policy space. In response to the Terms of Reference (ToR) for this assignment this report:

- Identifies the key policy constraints that affect smallholder and pastoralists’ uptake of animal health technologies and improved genetics and access to output markets, and the extent to which institutions are currently working to address them.
- Provides some country-specific analysis of the key livestock policy constraints affecting pastoralists and smallholders in Tanzania and South Asia, with a particular focus on those constraints that limit private sector investment in the livestock policy space. This analysis is based on the findings of our field-visit to Tanzania, consultations with stakeholders and own desk-based research.

1.2. Structure of the report

The report is structured as follows:

- Section 2 summarises the policy constraints that we have identified in the process of completing this report, and considers the extent to which the existing institutions operating in the livestock policy space are working to address them in a systematic way.
- Section 3 focuses on selected policy issues in more detail to draw out the impact on limiting private sector investment in the livestock sector.
- Section 4 provides a summary of our findings together with the conclusions.

The main report is complemented by a series of annexes:

- Annex A sets out the findings from our three-day country visit to Tanzania.
- Annex B sets out the findings from our analysis on policy constraints in the South Asia region.
- Annex C presents a list of consultations carried out during the assignment.

¹ The Foundation’s priority geographies are: Ghana, Nigeria, Burkina Faso, Mali, Ethiopia, Tanzania, Uganda, Bangladesh, and the Indian states of Bihar and Odisha.

2. PRIORITY POLICY ISSUES AND INSTITUTIONS

This section provides a summary of the priority policy/ regulatory constraints that we have identified throughout the process of completing this study which affect smallholder and pastoralists uptake of animal health technologies and improved genetics, as well as their access to output markets.

2.1. Priority policy constraints identified during study

This list has been informed by our desk-based research; information provided to us by the Foundation through calls with their Genetics, Animal Health and Markets and Trade teams; calls with a wide variety of stakeholders; and our field visit to Tanzania. The policy issues are presented for each of the Foundation's targeted sectors (animal health, genetics and markets) using the categories shown in Table 2.1 below.

Table 2.1: Categories used to map policy constraints

Category	Description of category
Policy issue/ constraint	Identified policy issue/ constraint
Description	A brief summary of the identified policy issue/ constraint
Type of policy constraint	A categorisation of the identified policy issue/ constraint using the following categories: <ul style="list-style-type: none"> • Missing/ unclear policy– a clearly defined policy/ regulation does not exist. • Implementation constraints – a relevant policy is in place, but government lacks the capacity to implement it effectively. • Disproportionate policy/ regulation – the policy imposes excessive constraints on the local market, or has not been effectively structured or tailored for on-the-ground application. • Economically flawed policy – the policy lacks an economic/ public policy rationale for stimulating private sector investment in the livestock sector.
Technical nature of the constraint	The technical issue leading to the constraint
Impact on smallholders/ pastoralists	A brief description of how the identified policy constraint affects smallholders/ pastoralists
Geography	The geographical region to which the identified policy constraint corresponds
Livestock sector	A categorization of which of the Foundation's priority livestock the issue corresponds to, using the following categories: <ul style="list-style-type: none"> • Cattle (dairy and beef)/ dairy (dairy only) • Small ruminants • Poultry
Institutions	A list of the institutions known either to be currently working to address the policy constraint.

Table 2.2: Policy issues map

	Policy issue/ constraint	Description	Type of constraint	Technical categorisation	Impact on smallholders	Geography	Livestock sector	Institutions
Animal health								
1.	Weak enforcement of animal health product standards	Weak in-country mechanisms to enforce existing standards for animal health products. The lack of appropriate legal authority and budget to enforce safety standards results in counterfeit drugs, vitamins and vaccines.	<ul style="list-style-type: none"> • Implementation constraints 	Regulation of the standards of animal health products	Smallholders cannot access quality animal health products	Sub-Saharan Africa, South Asia	<ul style="list-style-type: none"> • Cattle • Small ruminants • Poultry 	OIE
2.	Confusion around veterinarians' roles	A lack of clarity about roles for public and private veterinarians and uncertainty about limits of animal health accreditation mandates (i.e. where certain veterinarians and para-vets have the right to practice) restricts access to animal health services in rural areas.	<ul style="list-style-type: none"> • Implementation constraints • Missing/ unclear policy 	Access to animal health products/ services	Part withdrawal of public provision combined with limited private sector participation has reduced smallholders' access to animal health services in rural areas	Sub-Saharan Africa, South Asia	<ul style="list-style-type: none"> • Cattle • Small ruminants • Poultry 	SIDAI, WB, IFAD
3.	Limited population of qualified veterinarians	There is limited availability of qualified veterinarians due to inadequacies in certification policies and poor definition around where responsibilities lie between the public and private sectors.	<ul style="list-style-type: none"> • Missing/ unclear policy 	Access to quality animal health products/ services	Smallholders rely on either unqualified animal health workers, or cannot access veterinary services, or there is incomplete service provision in rural areas	Sub-Saharan Africa, South Asia	<ul style="list-style-type: none"> • Cattle • Small ruminants • Poultry 	
4.	Poor quality of veterinary services due to a lack of standards	Poor quality veterinary services persist as a result of a lack of safety standards regulating veterinary practices. This results in both the provision of some poor-quality services and the complete lack of provision of other services.	<ul style="list-style-type: none"> • Missing/ unclear policy 	Quality of animal health products/ services	Smallholders cannot access quality veterinary services because of a lack of defined service standards	Sub-Saharan Africa, South Asia	<ul style="list-style-type: none"> • Cattle • Small ruminants • Poultry 	OIE

	Policy issue/ constraint	Description	Type of constraint	Technical categorisation	Impact on smallholders	Geography	Livestock sector	Institutions
5.	Restrictions on vaccine imports and promotion of inferior, locally-produced vaccines	Governments have restrictions on vaccine imports in place in order to promote use of domestically-produced (or regionally-produced) vaccines, despite a lack of production capacity to meet demand.	<ul style="list-style-type: none"> Economically flawed policy Implementation constraints 	Regulation of animal health products	Smallholders cannot access quality vaccines and/or are forced to use inferior domestically/regionally-produced vaccines	Sub-Saharan Africa, South Asia	<ul style="list-style-type: none"> Cattle Small ruminants Poultry 	GALVmed
6.	Inadequate infrastructure resulting in incorrect diagnoses of livestock illnesses	A lack of adequate infrastructure to diagnose livestock illnesses and diseases results in incorrect diagnoses and treatment. Inadequate infrastructure persists as a result of difficulty accessing adequate infrastructure and/or a lack of understanding around what is adequate infrastructure.	<ul style="list-style-type: none"> Implementation constraints 	Lack of infrastructure required for provision of animal health services	This endangers smallholders' livestock as the spread of disease is not being controlled	Sub-Saharan Africa, South Asia	<ul style="list-style-type: none"> Cattle Small ruminants Poultry 	
7.	Fragmentation of policy/regulatory responsibility	Too many institutions are involved in the regulation of the animal health sector. This creates confusion about responsibility for particular policies/regulations and ultimately leads to policies falling out-of-date or not being fit for use.	<ul style="list-style-type: none"> Economically flawed policy 	Regulation of the standards of animal health products/services	Outdated or unclear policies and practices are not fit to support smallholders	Tanzania	<ul style="list-style-type: none"> Cattle Small ruminants Poultry 	
8.	Government provision of free vaccines limits private participation	The Government of India provides livestock vaccines free-of-charge and thus limits the incentive for the private sector to participate in the domestic market for livestock vaccines.	<ul style="list-style-type: none"> Disproportionate policy/ regulation 	Access to animal health products/services	Lack of private participation in the vaccine market limits smallholders' ability to access high quality vaccines at competitive prices	India	<ul style="list-style-type: none"> Cattle Small ruminants Poultry 	
9.	Inadequate delivery of animal health services to	Smallholders are unable to access animal health services given inadequate delivery and thus restricted availability of services.	<ul style="list-style-type: none"> Missing/ unclear policy 	Access to quality animal health products/	Exposes smallholders' livestock to higher risk of disease	India	<ul style="list-style-type: none"> Cattle Small ruminants 	

	Policy issue/ constraint	Description	Type of constraint	Technical categorisation	Impact on smallholders	Geography	Livestock sector	Institutions
	smallholder farmers	There is a lack of policy designed to facilitate delivery of animal health services.		services by smallholder farmers			<ul style="list-style-type: none"> Poultry 	
10.	Poor coordination, operation and maintenance of cattle dips	There is inappropriate government intervention in the construction, operation and maintenance of cattle dips. This restricts the effectiveness of the cattle dips.	<ul style="list-style-type: none"> Implementation constraints 	Regulation of animal health services	Poorly managed cattle dips are of limited benefit to smallholders because they do not effectively control the spread of ticks	Tanzania	<ul style="list-style-type: none"> Cattle 	
Genetics								
11.	Lack of access to artificial insemination services	Artificial insemination services are inaccessible or there is need for improvement in artificial insemination practices and corresponding policy (e.g. cross breeding policy in India) to incorporate emerging issues.	<ul style="list-style-type: none"> Economically flawed policy Implementation constraints Missing/ unclear policy 	Provision of bull semen	Smallholders have difficulty accessing artificial insemination services, let alone modern/ up-to-date artificial insemination services	Sub-Saharan Africa, South Asia	<ul style="list-style-type: none"> Cattle Small ruminants Poultry 	
12.	Lack of capacity to acquire/ maintain liquid nitrogen generation equipment and facilities	Governments and private sector lack capacity to acquire and maintain liquid nitrogen generation equipment and facilities. Waivers of importation fees for equipment and spare parts could improve the operation of livestock genetics markets.	<ul style="list-style-type: none"> Missing/ unclear policy 	Liquid nitrogen generation equipment and facilities	The supply of livestock genetics materials that smallholders can access is reduced by a lack of adequate long-term storage facilities	Sub-Saharan Africa	<ul style="list-style-type: none"> Cattle Small ruminants Poultry 	
13.	Government-maintained bull stud is favoured over frozen semen imports	Governments invest in bull stud rather than create an enabling environment for the importation of frozen semen (and embryos for more advanced herds) from global genetics markets. Government maintains bull stud in order to make cheap bull semen available to smallholders.	<ul style="list-style-type: none"> Economically flawed policy 	Provision of bull stud	Smallholders can access cheap semen but government policy retards genetic process	Sub-Saharan Africa	<ul style="list-style-type: none"> Cattle 	

	Policy issue/ constraint	Description	Type of constraint	Technical categorisation	Impact on smallholders	Geography	Livestock sector	Institutions
14.	Ineffective government intervention in the provision of bull semen	Ineffective government involvement in the production of bull semen results in either a complete lack of bull semen or provision of poor-quality bull semen.	<ul style="list-style-type: none"> Economically flawed policy Implementation constraints Missing/ unclear policy 	Production of germplasm	Smallholders have difficulty accessing bull semen and when they can access it, the quality is poor	Tanzania	<ul style="list-style-type: none"> Cattle 	
15.	Lack of government policy that promotes importation of poultry breeder eggs and day old chicks (DOC's)	Favoured interests and/or a lack of enabling policies restrict access to DOC's and breeder eggs, as well as equipment and materials. Governments should promote and enable the importation of DOC's and breeder eggs through licensing arrangements with suitable controls.	<ul style="list-style-type: none"> Missing/ unclear policy 	Access to DOC's and breeder eggs	Smallholders cannot access improved poultry varieties	Sub-Saharan Africa	<ul style="list-style-type: none"> Poultry 	
16.	Government's exotic germplasm programme for poultry has limited impact	The Government's poultry sector exotic germplasm programme has limited impact as a result of poor implementation. Implementation is weakened by a lack of financial and technical capacity.	<ul style="list-style-type: none"> Implementation constraints 	Production of germplasm	Smallholders lack the ability to use exotic germplasm effectively	Tanzania	<ul style="list-style-type: none"> Poultry 	
Markets								
17.	Lack of quantitative information in the livestock sector	There is a lack of data in the livestock sector and thus a lack of evidence-based policy making. For instance, the lack of information held about farmers in the dairy sector is weakening the ability of government bodies, (such as the Tanzania Dairy Development Board) to regulate the market effectively.	<ul style="list-style-type: none"> Implementation constraints 	Market data	Policy makers have inadequate evidence-base to develop effective policies leading to smallholders being subject to inadequately designed policies	Sub-Saharan Africa, South Asia	<ul style="list-style-type: none"> Cattle Small ruminants Poultry 	FAO, WB, BMGF, ILRI, IFPRI

	Policy issue/ constraint	Description	Type of constraint	Technical categorisation	Impact on smallholders	Geography	Livestock sector	Institutions
18.	Lack of regional policy harmonisation	Countries within the same RECs have varied livestock policies which proves detrimental to facilitating trade (e.g. EAC countries' trade policies require harmonisation to improve trade flows of animal products between countries; vaccine registration policies in UEMOA countries differ considerably).	<ul style="list-style-type: none"> Economically flawed policy 	Individual countries' trade policies	Restricts smallholders' ability to compete in regional markets for livestock products	Sub-Saharan Africa	<ul style="list-style-type: none"> Cattle Small ruminants Poultry 	FAO, OIE, AU-IBAR, GALVmed, ECOWAS, EAC, SADC, COMESA, PANVAC
19.	Lack of policy promoting expansion of growth corridors	There is a lack of government policy promoting expansion of roads, electrical grids, and potable water and sewerage to improve livestock growth corridors. This restricts growth of poultry, swine and dairy production, as well as egg and meat processing.	<ul style="list-style-type: none"> Missing/ unclear policy 	Expansion of roads, electrical grids, and potable water and sewerage	Smallholders' ability to access markets is limited by a lack of enabling infrastructure	Sub-Saharan Africa, South Asia	<ul style="list-style-type: none"> Cattle Small ruminants Poultry 	
20.	Restrictions on the movement of live animals	Restrictions on the movement of live animals both limit competition across markets and prevent improvements in gene pool.	<ul style="list-style-type: none"> Economically flawed policy 	Live animal movement/ disease control	Restricts smallholders' ability to compete in the regional market for live animals, as well as ability to access high-quality breeds	East Africa	<ul style="list-style-type: none"> Cattle Small ruminants Poultry 	
21.	High cost of cow and heifer feeds	The dairy sector in most African countries is at a competitive disadvantage due to the high cost of cow and heifer feeds.	<ul style="list-style-type: none"> Missing/ unclear policy 	Cost of cattle feed	Smallholders' cattle/ dairy production costs are high due to high input costs (i.e. feed costs), this limits their ability to compete	Sub-Saharan Africa	<ul style="list-style-type: none"> Cattle 	
22.	Barriers to trade of dairy products	The implementation of trade barriers on dairy products from non-East African Community (EAC) countries in EAC countries restricts market development.	<ul style="list-style-type: none"> Economically flawed policy 	Import restrictions on livestock products	Restricts non-EAC smallholders' trade opportunities, restricts the development of markets for the trade of	East Africa	<ul style="list-style-type: none"> Dairy 	ILRI

	Policy issue/ constraint	Description	Type of constraint	Technical categorisation	Impact on smallholders	Geography	Livestock sector	Institutions
					dairy products in the region, as well as inflating market prices within EAC			
23.	Lack of enforced regulation and restrictions on the trade and transport of raw milk	Regulation and restrictions on the trade and transport of raw milk are not enforced. Raw milk is available at a lower price than processed milk and thus impacts the competitiveness of processed milk. This is also a public health threat as it relies on stove-top household pasteurization to control zoonotic disease transmitted through raw milk.	<ul style="list-style-type: none"> • Implementation constraints • Missing/ unclear policy 	Restrictions on trade of raw milk	Has limited the growth of the processed milk market and inadvertently suppressed the quality of raw milk produced and allowed bad-practices to persist, smallholders engaged in the processed milk industry have difficulty competing with raw milk prices	East Africa	<ul style="list-style-type: none"> • Dairy 	ILRI
24.	Government intervention in milk pricing restricts smallholder participation	Government intervention in the setting of milk prices is restricting the growth of the market by preventing small-scale farmers from contributing to and benefiting from growth in the dairy sector.	<ul style="list-style-type: none"> • Economically flawed policy • Implementation constraints 	Development of the dairy sector	Small and marginal farmers are restricted from participating in and benefiting from the growth of the dairy sector	India	<ul style="list-style-type: none"> • Dairy 	
25.	High-quality maize and oilseed for poultry feed inaccessible	Government policy should support the access and use of modern, highly productive varieties of maize and oilseed by poultry producer groups. This will build capacity in the poultry sector through production of higher-grade poultry.	<ul style="list-style-type: none"> • Missing/ unclear policy 	Access to high-quality maize and oilseed for poultry feed	Improving access to and use of high-quality maize and oilseed varieties for poultry feed will improve poultry outputs.	Sub-Saharan Africa	<ul style="list-style-type: none"> • Poultry 	

	Policy issue/ constraint	Description	Type of constraint	Technical categorisation	Impact on smallholders	Geography	Livestock sector	Institutions
26.	Levy on poultry farmers	The Local Government Authority impose a levy on poultry farmers which adds to their costs of production and weakens their competitiveness.	<ul style="list-style-type: none"> • Economically flawed policy • Missing/ unclear policy 	Taxes/ levies on livestock products	Weakens competitiveness of smallholders in different parts of the country	Tanzania	<ul style="list-style-type: none"> • Poultry 	

2.2. Conclusions on the policy constraints that we have identified

Through the process of identifying the constraints noted in Table 2.2 we have identified a number of key issues that it is worth highlighting:

- **A number of policy constraints are not being addressed by any institutional project/ programme.** A scan of Table 2.2 shows that for the majority of the policy constraints there is currently no institution that is working to address the issues in a systematic manner. A number of our consultations have highlighted that livestock policy issues have been at best a marginal area of focus for development partners, which is reflected by the information presented in the table presented above.
- **Policy formulation and implementation issues.**² It is widely acknowledged across the sector that the lack of policy is not the issue, rather the principle issue is with existing policies and is twofold: a lack of evidence-based policy and weak or non-existent structures for policy implementation/monitoring. This is not to say that all the required policies exist; however where policies are missing or unclear (e.g. regulations on the importation of germplasm), this can often be tied back to one of two different things: poor formulation and/or implementation of more fundamental policy (e.g. a national livestock strategy document), or poor country-level application of regional/ international programmes (e.g. response to the H5N1 HPAI panzootic). Poor policy/ programme formulation and implementation can be the result of a variety of things, such as a lack of capacity in terms of financial or physical resources, or technical know-how, to physically implement the policy/ programme; or a lack of understanding of the policy/ programme by its end-users.
- **A lack of coordination/ harmonisation of activities may undermine the effectiveness of policy development in the livestock space.** Initiatives such as the EADP and the work of PPLPI in West Africa have demonstrated the effectiveness of coordination and harmonisation of efforts, policies and programs for improving the livestock policy environment. However, despite the fact that stakeholders continue to stress the importance of coordination and harmonisation, there continues to be a lack of both throughout the policy formulation and implementation processes. At a high level, this leads to market failures in the form of a lack of knowledge share, duplication of effort and restricted trade. More specifically, a lack of regional policy harmonisation across RECs has restricted the flow of both animal health products (e.g. vaccines) and livestock output products. Further, a lack of internal coordination between government ministries also restricts the effectiveness of government policy (e.g. national water policies often do not account for water-intensive livestock farming). Moreover, forthcoming climate change policies/legislation will impact the livestock sector but are not being accounted for by stakeholders.
- **A number of existing policies have not been ‘right-sized’ for market conditions, creating uncertainty and difficulties in policy implementation.** An important driver behind constraints in the livestock sector is when governments try to implement the ‘gold

² It is worth noting that through our research, we have learned that it is very difficult to separate poor policy formulation from poor policy implementation, and more often than not, the two go hand-in-hand.

standard' of livestock policy – either because they are required to meet international standards which may not be appropriate for their conditions; or because they have been influenced by international organisations. We present examples of this below:

- **Disease-free zones in Kenya:** The Government of Kenya is trying to implement disease-free zones (DFZ) in the north of the country in order for livestock to be reared for international exportation. Consultees stressed that the Government should instead focus on livestock production for domestic and regional markets – where production costs and barriers to market entry are far less, and where demand currently exceeds supply. Most importantly however, unlike countries with DFZs such as Botswana, Brazil and South Africa, Kenya does not have the financial resources to sustain DFZs and would be better placed to invest in livestock in other ways.³
- **The lack of pro-poor policy:** Many consultees stressed that livestock policy is not sufficiently pro-poor and concentrates on emerging or commercial farmers, rather than pastoralists or smallholders. For instance, trade policies in particular are not pro-poor and preclude smallholders from accessing anything but local markets.
- **Lack of pro-smallholder policy:** Through our consultations, we found that not only is there a lack of pro-poor livestock policy but there is a lack of pro-smallholder policy. As governments try to increase agricultural production, policy has a tendency to have been focused on the commercial rather than small-scale smallholder sector. This restricts smallholders' capacity to contribute to and compete in national and regional markets.
- **Climate change centric livestock policy:** Organisations in international livestock fora have been stressing the importance of climate change centric livestock policy. While such a focus may be appropriate for developed economies with well-functioning livestock sectors, it is not necessarily appropriate for economies in the Foundation's priority countries where there is a need for effective implementation of the most basic livestock policies. Despite this, given the influence of international organisations, Governments in sub-Saharan Africa are attempting to implement these policies.
- **Vanishing animal breeds:** Another key issue that emerged through our research and consultations is that animal breeds have been becoming extinct as a result of the weak policy environment. A lack of effective policy to conserve and promote animal breeds has contributed to genetic erosion. Farmers are not sufficiently motivated to conserve their draft breeds and there is gap in the policy space to address this issue.

³ We note that here has been some recent interest by the international community in commodity-based trade; which enables the export of the commodity itself thereby positing little risk of transboundary animal diseases (TADs) to the recipient country.

3. POLICY CONSTRAINTS AND PRIVATE SECTOR INVESTMENT

This section looks at the policy constraints that we have identified in Section 2 in more detail to focus on the impact that these constraints have on deterring private sector investment in the livestock sector. The following sub-sections:

- Present detailed case studies of selected policy constraints that describe the impact on limiting private sector investment.
- Summarise the key themes emerging from the constraints that limit private sector investment across the different elements of the value-chain.
- Consider the extent to which the main institutions operating in the livestock policy space have been active in addressing policy constraints that limit private sector investment, and where relevant highlighting existing interventions that might benefit from one of the Foundation's MIRA⁴ Livestock grants.
- Review the extent to which the private sector is a focus of livestock policy in Tanzania, using the findings from our visit to Tanzania and some additional desk-based research.

3.1. Case studies of policies impacting on private sector investment

This sub-section looks at more detail at selected policy constraints, explaining the nature of the issue and describing the theoretical impact on limiting private sector investment. This is useful to illustrate how the policy issues can hold back investments across different stages of the supply chain.

We look at the following issues:

- Impact of restriction on animal vaccine imports and lack of virologist capacity in Tanzania.
- Limited availability of appropriately qualified vets in Tanzania.
- Government intervention in production of bull semen.
- Government intervention in milk pricing in India.
- Local government taxes imposed on the poultry sector in Tanzania.
- Fragmentation of regulatory policy responsibility in Tanzania.

⁴ The Micro Reforms for African Agribusiness (MIRA) is a five-year circa \$10m initiative that seeks to provide Governments in Burkina Faso, Ethiopia, Ghana, Nigeria and Tanzania with access to technical assistance for identifying, prioritizing and reforming regulations that limit private investment in smallholder agricultural value chains.

Case study 1: Impact of restriction on animal vaccine imports and lack of virologist capacity in Tanzania

Policy constraint: Vaccine import restrictions and lack of virologist capacity in Tanzania		
Country: Tanzania	Sector: Animal health/ markets	Type of policy issue: Economically flawed policy/ implementation constraints
<p><u>Description of policy constraint</u></p> <p>There are two policy constraints here:</p> <ol style="list-style-type: none"> 1. Excessive vaccine import restrictions. At present, certain animal vaccines cannot be legally imported into Tanzania, despite private sector stakeholders thinking that particular vaccines are needed to protect their animal stock. The reason for this is that Government policy typically states that if a particular disease (for example, infectious bronchitis) is not yet present in the country, then it is not necessary to import the vaccine to control it. 2. Lack of Government disease monitoring and reporting capacity. Government lacks the capacity to identify whether certain viruses are present or not, mainly because there are currently very few qualified virologists in Tanzania. As a result, Government tends to conclude that certain viruses are not present in the country, despite the fact that animals are being imported from countries where a particular virus is known to already be present. 		
<p><u>Theoretical impact on private sector investment</u></p> <p><i>Impact on private investment in local SME input suppliers / agro-dealers</i></p> <ul style="list-style-type: none"> • Investment in local private vaccine production and distribution will be deterred if Governments do not perform the necessary function of disease outbreak identification and monitoring. Disease monitoring is a public good which the private sector will not itself invest in. However private vaccine manufacturers and distributors need Governments to monitor and report on disease outbreaks, so that they know which vaccine product lines to invest in, and how many vaccines to produce and distribute. <p><i>Impact on private investment in farms</i></p> <ul style="list-style-type: none"> • Commercial farm businesses require Governments to monitor and report on disease outbreaks so that they can accurately plan and manage livestock production. • Excessive import restrictions will lead to commercial farm businesses either: (i) purchasing vaccines at high cost from illegal sources; or (ii) leaving their animals exposed to a potentially harmful viruses - both of which impact the profitability of livestock production. • Smallholders will be less likely to be able to afford access to vaccines imported through the black market and will be more exposed to viruses, increasing their level of risk/uncertainty and reducing potential profitability of livestock production. <p><i>Impact on private investment in local SME traders / processors / value addition businesses</i></p> <ul style="list-style-type: none"> • Local private trading and processing businesses require Governments to monitor and report on disease outbreaks so that they can accurately plan and manage their expected throughput volumes of raw livestock produce – if Governments do not accurately and credibly report on the spread of diseases, there will be significant uncertainty about the level of future supply of raw animal produce supplying these businesses. • Similarly, the supply of raw livestock produce to local trading and processing businesses will be decreased (or face significant risk/uncertainty) if diseases are not being controlled through vaccination (because of a vaccine import restriction). <p><i>Other impacts</i></p> <ul style="list-style-type: none"> • By excessively restricting the import of vaccines for which there is demand, Government risk creating a ‘black market’ for vaccines, and will thus receive no revenue from import duties for any vaccines which do enter the market. As a result, Government is left with less revenue which it could use to help improve the business environment for the livestock sector. 		

Policy constraint: Limited availability of appropriately qualified vets (Tanzania)		
Country: Tanzania	Sector: Animal Health	Type of policy issue: Missing Government intervention / Policy implementation
<p><u>Description of policy constraint</u></p> <p>There are three main policy constraints limiting the availability of qualified vets:</p> <ol style="list-style-type: none"> 1. Lack of Government intervention in incentivising more qualified vets. The Sokoine University of Agriculture has few veterinary services graduates each year, with many of those who do get the qualification choosing to work in other sectors. Government has not intervened as para-vets make up for the deficit of vets; however it is reported that the curriculum of the para-vet qualification is not sufficient to cover needs e.g. of the poultry sector. 2. Lack of policy on roles and responsibilities of public and private vets. There is little clarification regarding the roles of veterinarians compared to para-vets, particularly regarding their practicing rights and limits. With the Government's gradual privatisation of animal health services, the difference in roles and responsibilities between private and public sector veterinarians is also poorly defined. 3. Lack of clarity about the limits of animal health accreditation mandates (i.e. where certain veterinarians and para-vets have the right to practice) and procedures for monitoring them. 		
<p><u>Theoretical impact on private sector investment</u></p> <p><i>Impact on private investment in local SME input suppliers / agro-dealers</i></p> <ul style="list-style-type: none"> The confusion caused by the ongoing public provision of veterinary services crowds out potential private involvement in the sector. There is uncertainty about the potential market opportunity because it is unclear where government workers can and will offer their services; further the continued presence of government in the sector weakens the willingness for farmers to pay for veterinary services, as they will see it as a public good. <p><i>Impact on private investment in farms</i></p> <ul style="list-style-type: none"> Animal health services are a key input into farm businesses. The under-provision of appropriately qualified vets increases the level of risk faced by individual farms through lower levels of both information and direct care which can be provided by qualified veterinarians. A greater quantity and quality of vets may also mitigate the risk of spreading of disease outbreaks, by enabling faster identification and by improving the speed and quality of the response. This is particularly true for the rural poultry sector, where the available veterinary services often administer out-dated vaccinations which limits their effectiveness. Poor quality animal health services also leads to a lack of confidence in, and therefore lower use of, whichever services are available. The risks created by poor provision and definition of qualifications are therefore enhanced. <p><i>Impact on private investment in local SME traders / processors / value addition businesses</i></p> <ul style="list-style-type: none"> The quality (and quantity) of supply of livestock produce to the value addition businesses can be adversely affected by a lack of animal health services at the farm level. 		

Case study 3: Government intervention in production of bull semen

Policy constraint: Ineffective government involvement in the production of bull semen		
Country: Tanzania	Sector: Genetics	Type of policy issue: Economically flawed policy/ policy implementation/ lack of clarity
<p><u>Description of policy constraint</u></p> <p>There are three main policies which affect the availability of bull semen in Tanzania:</p> <ol style="list-style-type: none"> 1) Government intervention of unsatisfactory standard. The Government of Tanzania has managed the production of bull semen since 1982 through the National Artificial Insemination Centre (NAIC). However, the centre is reported to be poorly run poorly, with reports that it breaks down regularly and does not produce sufficient quality or quantity. 2) Unclear policy on production restrictions. It is not clear whether the private sector is permitted to produce and supply bull semen in the local market. 3) Misguided trade policy. Despite the inability of the NAIC to produce sufficient quantity and quality, and without clear permission for the private sector to do so, there are restrictive limits on the importation of bull semen. 		
<p><u>Theoretical impact on private sector investment</u></p> <p><i>Impact on private investment in local SME input suppliers / agro-dealers</i></p> <ul style="list-style-type: none"> • The policy is too unclear to encourage private investment. Due to the unreliable supply from the NAIC there is a gap in the market which could be filled by private firm production within Tanzania. However, it is not clear whether private firm involvement is permitted, and so a gap in the market remains where there could be an area in which the private sector could invest. Further, even if private involvement is permitted its involvement distorts the market signals and weakening the ability of private firms to make profitable investment decisions. <p><i>Impact on private investment in farms</i></p> <ul style="list-style-type: none"> • The NAIC acting as the main producer in Tanzania affects the farm's ability to access quality supplies of bull semen. This lowers the quality of their stock and therefore their incomes and long-term ability to invest. <p><i>Impact on private investment in local SME traders / processors / value addition businesses</i></p> <ul style="list-style-type: none"> • Farm produce is likely to be of a lower quantity and quality than if there were a better range of genetics easily available in Tanzania. Therefore value adding businesses cannot accurately plan expected throughput volumes of produce. <p><i>Other impacts</i></p> <ul style="list-style-type: none"> • The restriction of private sector production creates a black market in which farmers may import higher quantities of, or different types of, germplasm for production. 		

Case study 4: Government intervention in milk pricing in India

Policy constraint: Government intervention in the setting of milk prices		
Country: India	Sector: Markets	Type of policy issue: Economically flawed policy/ implementation constraints
<p><u>Description of policy constraint</u></p> <p>There are two policy constraints that affect the development of the dairy sector in a number of States in India:</p> <ol style="list-style-type: none"> 1) Government intervention in setting milk prices. In India, cooperatives are responsible for setting the benchmark milk price. Of the fourteen major State cooperatives in the country, twelve have government officials as managers who have been appointed by the State⁵ (with the cooperative in Gujarat, known for the Amul brand, a notable exception) and hence there is some perception that political rather than market-based considerations may be an important determinant in the setting of milk prices. Often the price is set at a level that is too low for farmers to have an incentive to sell their milk to local traders through formal channels. 2) Lack of/ ineffective use of testing facilities. When setting the price of milk the State cooperative is meant to test the solid-not-fat (SNF) content of the milk. Many cooperatives lack adequate facilities to test SNF content – and many of those that do have the equipment available do not make effective use of it; as a result the price that is set does not reflect the quality of the produce. 		
<p><u>Theoretical impact on private sector investment</u></p> <p><i>Impact on private investment in local SME input suppliers / agro-dealers</i></p> <ul style="list-style-type: none"> • The market for improved inputs remains underdeveloped as farmers do not have confidence that they will receive a price for their product that is above cost and reflects quality, and hence they have limited incentive to invest in inputs to improve the quality of their dairy cattle. <p><i>Impact on private investment in farms</i></p> <ul style="list-style-type: none"> • Farmers face significant uncertainty in the price that they will receive for their milk, and may end up seeing the production of milk as a marginal source of income rather than as a potential business opportunity. <p><i>Impact on private investment in local SME traders / processors / value addition businesses</i></p> <ul style="list-style-type: none"> • Traders are reliant on the cooperatives for the provision of information regarding the price of milk, and lack the freedom to adjust prices to reflect demand and supply conditions and the quality of milk. • These policies potentially limit the amount of milk that is sold through formal channels for marketing and packaging. SMEs have limited information on the quality of milk available on the market, and would have to invest in their own testing facilities (which may not be commercially viable for SMEs). 		

⁵ <http://www.fao.org/docrep/011/i0588e/I0588E05.htm>

Case study 5: Local government taxes imposed on the poultry sector in Tanzania

Policy constraint: Levy imposed on poultry farmers by the Local Government Authority		
Country: Tanzania	Sector: Markets	Type of policy issue: lack of clarity
<u>Description of policy constraint</u> The policy constraint here relates to inconsistent implementation of taxes at the local government level, e.g. in coastal areas of the country. Private sector stakeholders reported that levies are being applied by the Local Government Authority (LGA) on each chicken sold on the market. There is a lack of clarity amongst private sector stakeholders as to whether the levy is a formal LGA policy, and why it is only being implemented in certain parts of the country.		
<u>Theoretical impact on private sector investment</u> <i>Impact on private investment in local SME traders / processors / value addition businesses</i> <ul style="list-style-type: none">• The implementation of taxes in an inconsistent manner, with inadequate information about the exact tax rate and circumstances in which the tax will apply, makes it difficult for farmers and local poultry businesses to plan and make effective investment decisions.• The implementation of the tax in specific parts of the country potentially distorts the market for chickens in the country. The levy potentially gives an incentive for traders to purchase chickens from other regions in the country, damaging the interests of chicken producers e.g. if levies are applied in the coastal regions as they will most likely get lower prices for their produce as traders seek to recoup the costs of the levy.		

Policy constraint: Fragmentation of regulatory policy responsibility in the animal health sector		
Country: Tanzania	Sector: Animal health	Type of policy issue: Disproportionate policy/regulation
<p><u>Description of policy constraint</u></p> <p>This policy constraint relates to the existence of too many institutions that have involvement in the implementation of regulations in the animal health sector in Tanzania. This creates particular constraints:</p> <ul style="list-style-type: none"> • Inefficient over-regulation and uncertainty over the exact roles of different government departments. Private sector representatives have reported that they have to deal with multiple and uncoordinated inspections from government. • Insufficient expertise on/ attention paid to livestock policy issues with government. Government ministries such as the Ministry of Trade (responsible for a number of issues relating to trade policy) and the Bureau of Standards (responsible for carrying out inspections of private sector companies) do not have the expertise/ understanding of the livestock sector necessary to implement policies that reflect the needs of the sector, because certain livestock specific-regulations are only a small and marginal part of the Ministry's and the Bureau's overall portfolio of regulatory responsibilities (but these regulations have important implications for the livestock sector). 		
<p><u>Theoretical impact on private sector investment</u></p> <p><i>Impact on private investment in local SME input suppliers</i></p> <ul style="list-style-type: none"> • The poor implementation of regulations and inappropriateness of the regulatory regime creates an environment in which poor quality and fake animal health goods can enter into the value chain. This will reduce domestic demand for products over time, reducing the potential market for a domestic supplier - overall this reduces the commercial viability investments to establish and operate domestic manufacturers of animal health products (any local farmers who can afford the inputs will just import them). <p><i>Impact on private investment in SME traders / processors / value addition businesses</i></p> <ul style="list-style-type: none"> • This constraint was reported as adding significant costs to private sector agribusinesses operating in the livestock sector, in terms of additional time spent dealing with government officials, and uncertainty regarding the costs/ time involved in trying to acquire new permits required to facilitate potential new investments in the sector. 		

3.2. Private sector investment-related policy issues

The policy constraints that we have discussed in the case studies above and more generally summarised in Section 3 of the report bring out a number of issues that have the potential to limit private sector investment across the value-chain. We summarise the key themes below:

- **Inputs/ service provision.** In terms of inputs into the livestock sector, we have identified a number of issues with regards to governments' genetics and animal health policies that restrict private sector investment by limiting the quality of inputs. In particular these relate to policies such as bans/ restrictions on the importation of exotic germsplasm and of vaccines has meant that smallholders have had to rely on inferior local alternatives. In addition the policy constraints caused by uncertainties with regards to the roles and responsibility of the private sector vs. government, such as in the veterinary sector, have further limited the quality of supportive services available to the private sector.

- **Processing/ manufacturing.** A review of the table shows that we identified fewer constraints that relate directly to governments' policies with regards to processing/ manufacturing facilities. The lack of development at this stage of the value chain probably reflects the more general lack of support/ investment in supportive and related infrastructure by government in the livestock sector – for example as we highlight in our findings from Tanzania, government expenditure on livestock is a very small proportion of total spending.
- **Distribution/ retailing/ marketing.** The constraints that we have identified show that there are a number of instances in which government at various levels is implementing ad hoc taxes and levies on different products (we have highlighted the examples from the poultry sector). These taxes create uncertainty for the private sector, increasing their costs of doing business and reducing their ability to compete in regional markets.

3.2.1. Private sector policies in Tanzania

The main livestock policy document in Tanzania is the 2006 National Livestock Policy⁶. Stakeholders referred to this policy document throughout our visit to Tanzania. The general consensus was that while many of the policies articulated in the policy document are the 'correct' ones, government has yet to make serious progress in implementing them, potentially reflecting a lack of government support for the sector.

The 2006 policy statement is quite explicit in stating that the role of government is to create a conducive environment within which the private sector can take responsibility for undertaking commercial activities such as production, processing and marketing. Throughout the document government states that its approach to addressing policy issues in the livestock sector is to promote and support private sector activity; e.g. 'government will encourage and support investment and rehabilitation of livestock infrastructure and facilities'; and 'the government will promote investments in livestock farm machinery'.

In 2011 the government published the Livestock Sector Development Programme⁷. The stated aim of this document is to provide a framework to operationalize the 2006 Policy. The document sets out a set of costed activities to be implemented over a five-year period, together with a monitoring and evaluation framework. The activities set out in the Programme are again consistent with the principle that government's role is to provide the environment required to support the private sector; the obvious challenge will be the extent to which more progress is made with the implementation of the programme.

An important general point to make, relevant to Tanzania but also across other countries in SSA, is that whilst the stated high-level agricultural and related manufacturing policies often appear pro-private sector, in practice the policies/ initiatives that often end up being implemented can both create uncertainty and discourage investment.

Some of the policy constraints that we have highlighted in the Tanzania country annex highlight the above point. For instance, it is difficult to square government understanding that it is

⁶ Ministry of Livestock Development (2006), National Livestock Policy.

⁷ Ministry of Livestock and Fisheries Development (2011), National Livestock Development Programme.

responsible for creating an environment designed to facilitate private sector investment, with its continued role in the distribution of germsplasm.

4. SUMMARY AND CONCLUSIONS

The purpose of this report was to provide the Foundation with analysis on the key policy constraints on smallholder and pastoralists' uptake of animal health technologies and improved genetics and access to output markets, to improve the Foundation's understanding of potential grant-making opportunities in the livestock policy space.

The main findings of our analysis are:

- **Livestock policy is an area that continues to be a marginal area of focus by governments in the Foundation's priority geographies:** There is currently a lack of institutions operating in the livestock policy space/ which have a track-record of achieving impact in addressing policy constraints. This partly reflects a lack of focus by governments in both SSA and South Asia on livestock issues – for example, one of our findings from our field visit to Tanzania was that government allocates just 0.5% of its expenditure on livestock despite the fact that the sector directly contributes over 5% to GDP, suggesting that it is not seen as being an important area of government policy.
- **A number of the constraints that we have identified are seemingly not being addressed in any systematic way by governments and/ or development partners:** Linked to the above point, based on the information that we have collected, there are a number of important policy constraints across genetics, animal health and markets issues that are not currently being addressed by any major policy intervention.
- **A number of the constraints that we have identified relate to policy implementation issues:** A number of the policy issues that we have identified relate to policy implementation issues, which in part reflect a lack of capacity amongst existing institutions at the country-level, but also reflects the problem that a number of existing policies have not been 'right-sized' for market conditions.
- **Policy issues may also be restricting the growth of private investment across the livestock value-chain:** Given the public finance constraints faced by governments across the Foundation's priority geographies, government priority is often to create an environment in which private sector investment can help stimulate growth. Our analysis presented in section 3 illustrates how government policy, often through unintended consequences, can have an impact on limiting the level of private investment across the value-chain.
- **Limited availability of data to quantify the impact of policy constraints:** As part of the process of compiling the policy constraints, we have sought to consider ways to quantify the potential impact of the different issues that we have listed in Section 2 and the selected constraints discussed in more detail in Section 3, which could help facilitate the process of identifying priorities, but have found that availability of relevant information is very limited. It is possible that as improvements are made to the available data on livestock over time (in particular as a result of the Foundation's data project) additional work could be done in this area.

Overall, the report suggests that there is an important gap in the livestock policy space that the Foundation's potential intervention in the livestock sector could help address in the coming years.

ANNEX A: TANZANIA COUNTRY ANNEX

This country annex presents the findings our three-day field visit to Tanzania during the week commencing 15th July 2013.

The annex includes a brief summary of the key observations from the country visit; an introduction to provide some context; a description of our understanding of institutional responsibilities within the livestock sector; and details of the Tanzania-specific policy constraints identified by stakeholders during our consultation process. It should be noted that given the limited scope of the assessment, CEPA has not had the scope to independently verify the information presented in the this section. The views are shared in this paper simply to inform and assist the Foundation, but they should be treated with caution.

A.1 Summary observations

The main observations about the livestock policy sector in Tanzania from our consultations with stakeholders are as follows:

- **Livestock sector may not be a priority area of focus for government.** Stakeholders were of the view that the livestock sector is seen as being a very marginal area of interest of policy makers in Tanzania. This is reflected in the low level of budgetary support given to the sector; according to figures from the Ministry of Finance in 2011/12 the Ministry of Livestock and Fisheries Development (MFLD) received **around just 0.5% of total government expenditure**⁸ - the agricultural sector as a whole received around 6.9%. This suggests that the livestock sector is underfunded both overall and even in comparison with the rest of the agricultural sector given the relative importance of livestock to the economy.
- **Limited policy focus of current interventions by development partners in Tanzania.** An important point to make up-front is that none of the stakeholders could point to a single existing intervention by a regional/ international non-government institution that is focused directly on addressing livestock policy in Tanzania. Some of the stakeholders were aware of AU-IBAR's activities in the livestock sector and of ILRI's interventions in the dairy sector but not specifically from a policy perspective. This suggests that there is an important gap in development partner funded interventions designed to support improvements to the livestock policy sector in Tanzania.
- **Fragmentation of policy responsibilities creates difficulties in the coordination and implementation of livestock policy.** A number of the key policy responsibilities in the livestock sector are split across a range of institutions, creating uncertainty among stakeholders about which institution is in charge of addressing specific issues. There is also a concern about the extent to which institutions such as the Ministry of Trade (responsible for a number of issues relating to trade policy) and the Bureau of Standards (responsible for carrying out inspections of private sector companies) have the expertise/

⁸ It should be noted that this does not reflect total expenditure on livestock issues, given that some livestock issues are covered by other Ministries.

understanding of the livestock sector necessary to implement policies that reflect the needs of the sector.

- **Implementation constraints cited as being the biggest policy issue across the livestock sector.** Stakeholders were almost universal in stating that implementation constraints are the biggest concern in the livestock policy space in Tanzania. In general stakeholders consider that the government's written policies (mainly in the form of the 2006 Livestock policy) are broadly fine; the problem is that many of the policies are not implemented, or in some cases the inconsistency with which they are implemented..

A.2 Introduction

The livestock sector continues to be an important part of the Tanzanian economy and a key source of employment and income for both smallholders and pastoralists. According to the MLFD, the country's total livestock population is estimated to include 18.5m cattle; 13.1m goats; 3.6m sheep; and 30m indigenous chickens, which in total give Tanzania the third largest livestock population in Africa. The MFLD estimates that the sector accounts for around 5% of total GDP; and according to the Tanzanian National Bureau of Statistics, around 40% of agricultural households keep livestock, with the majority of those involved in both crop and livestock production.⁹

In addition to its direct contribution to GDP, livestock continues to play a number of important roles within the economy, such as its contribution to the food supply and importance for food security. Furthermore, livestock can also play a key role for a number of households as a form of collateral against which they can obtain credit.

Despite the importance of the sector to the economy and wide range of economic activities, stakeholders were not confident that government is committed to the development of the Tanzania's livestock industry. This is demonstrated by the very limited financial support received by the sector, which means that sector development plans/ livestock policies have largely been left unfunded. Detailed information on government spending on the livestock sector is not readily available; however information from the Ministry of Finance suggests that the sector receives **around just 0.5% of total government expenditure during the period 2009/10 – 2011/12;** compared to the agricultural sector as a whole that receives around 6 – 7% of government spending. This suggests that the sector is underfunded compared to its contribution and importance to both the agricultural sector and the wider economy.

It is possible that the sector will achieve more attention in the run up to the Tanzanian presidential and parliamentary elections in 2015. Stakeholders were of the view that until 2015 government policy will be focused on implementing policy measures that show immediate results on the ground, which could benefit agriculture in general and the livestock sector specifically given the number of people engaged in the sector. Indeed some stakeholders believe that main intention behind the 'Big Results Now!' policy initiative that is currently being developed, is to help deliver tangible benefits to a large number of citizens by 2015.

The final details of the Big Results Now initiative are as yet unclear, but it is reported to be a considerable intervention (figures up to \$3bn were reported) and will most likely be central to any

⁹ The National Bureau of Statistics (2008), National Sample Census of Agriculture: Livestock sector – National report.

policy making activities over the next few years. We understand that the intervention will focus on delivering results in six priority sectors, including agriculture – the role of livestock within this has not been specified, and will receive support from development partners such as DFID, as well as drawing on technical assistance from the Government of Malaysia’s Performance Management & Delivery Unit (PEMANDU) to design and implement the programme, run the labs and establish a President’s Delivery Unit, based on the Malaysian model.

A.3 Institutional responsibilities

Overall policy responsibility for the livestock sector rests with the MLFD. It has overall responsibility for developing the livestock sector and for implementing the recently developed livestock policies such as the 2011 Livestock Sector Development Programme. Important livestock-related agencies/ units that come under the responsibility of the MLFD are:

- The Tanzanian Veterinary Laboratory Agency (TVLA), which is responsible for a number of important animal health issues such as investigating animal diseases, producing animal vaccines and analysing the safety of animal feed stuffs.
- The Livestock Training Agency (LITA), which is responsible for providing training on issues related to animal health and production. It awards a range of qualifications ranging from ‘Basic’ and ‘Technician’ Certificates in both animal health and in veterinary and laboratory technology; as well as offering Diplomas for topics such as animal health and animal production.
- Veterinary Council of Tanzania that has the role of overseeing/ regulating professionalism in the veterinary sector.
- The Tanzania Meat Board, and the Tanzania Dairy Board both of which are public sector organisations that are responsible for bringing together key stakeholders (including the private sector) in their respective sub-sectors to help identify and address policy constraints and support the development of the sub-sector.

In addition to the MLFD, stakeholders suggested that the following institutions have the mandate to carry out important activities of relevance to the livestock sector:

- Tanzania Food and Drugs Authority (TFDA), which is an agency that sits under the Ministry of Health and Social Welfare. The TFDA is responsible for registering new vaccines, issuing permits to all companies involved in the production of vaccines and is also involved in regulating the quality of food production.
- Tanzania Standards Bureau (TSB), which is responsible for carrying out inspections on all private companies involved in the production of food, in particular testing their facilities and any machinery used.
- Ministry of Industry & Trade (MIT), the Ministry of Finance and Local Government Authorities, each of which play an important role on issues related to trade and taxation policy in the livestock sector.
- National Environmental Management Council (NEMC), which carries out inspections to enforce and ensure compliance with Tanzania’s environmental regulations.

One of the key issues raised by stakeholders during the consultation was the fragmentation of policy responsibilities in the sector. The fragmentation of responsibilities is considered to be a problem because stakeholders often do not know which of the departments they have to go to in order to address constraints in the livestock sector. In particular, stakeholders in the poultry sector think that the lack of a specific department to cover poultry issues is problematic because most government officials are specialists in cattle/ dairy and often have limited understanding of the poultry sector.

A.4 Policy constraints in the livestock sector

Overall, the main message coming from the stakeholders with whom we met is that the main overarching policy issue facing the livestock issue is the inability of government to implement existing policies effectively. While there are some examples of policies that are not based on a sound public policy and/ or economic rationale, in the most part the view is that in general government's policies/ strategies for the sector are typically well intentioned.

According to the stakeholders that we consulted, the problem in many cases is how the existing policies and regulations are put into practice. The cause of this can often simply be put down to a lack of capacity/ resources within government departments and agencies. However, there are a number of instances where one questions why government is involved in a certain activity (for instance, in the policy constraint tables below we discuss below the case of government's role in the construction of cattle dips)? Further, there are also a number of instances where there is too much regulation in the livestock sector, with too many institutions involved in for instance registering animal health products, veterinarians etc. but with no single institution necessarily having the capacity to do the job effectively.

The main message coming from our discussions with stakeholders is thus that any policy intervention in Tanzania's livestock sector would have to focus on working with government to identify how it can use its limited resources more effectively to improve outcomes for smallholders and pastoralists.

It is also worth highlighting that some of the policy issues raised by stakeholders cut-across the livestock sector.

A.4.1 Cross-cutting policy issues

Before we highlight the policy constraints highlighted for the animal health, genetics and markets sections, it is important to note that stakeholders identified some cross-cutting issues that currently create significant constraints for the sector:

- **Land** - A number of stakeholders suggested that land policy, in particular land ownership rights for pastoralists, continues to be a significant issue for farmers, creating uncertainty and limiting their willingness to invest in the sector. Associated with this, there is a perception amongst stakeholders that there continues to be a low level of awareness amongst both pastoralists and smallholders on the importance of acquiring legal ownership of land and the lengthy and cumbersome procedures associated with the of acquisition of title deeds.

- **Lack of skilled professionals** – Many of the activities in the livestock sector require individuals with considerable expertise, particularly in the genetics sector, but also to provide animal health services (lack of qualified vets) and to set effective animal health services (e.g. qualified virologists). Nearly all the stakeholders suggested that there is a significant lack of individuals with the required skills to help the sector develop. The universities do not have the capacity to train adequate numbers of graduates and even the few individuals that do have the necessary qualifications often end up working in more lucrative sectors of the economy or taking jobs in international institutions.

A.4.2 Policy constraints

The tables below summarise the policy constraints identified by stakeholders across the animal health, genetics and market sectors. For each policy constraint we provide:

- A one sentence description of the issue.
- A more detailed summary of the issue as raised by different stakeholders in the sector.
- A description of what type of policy constraint it is i.e. the extent to which the issue is:
 - **Missing/ unclear** – a clearly defined policy/ regulation does not exist.
 - **Implementation constraints** – a relevant policy is in place, but government lacks the capacity to implement it effectively.
 - **Disproportionate policy/ regulation** - the policy imposes excessive constraints on the local market, or has not been effectively structured or tailored for on-the-ground application.
 - **Economically flawed** – the policy lacks an economic/ public policy rationale for stimulating private sector investment in the livestock sector.
- A technical categorisation of the policy constraint. For each of the policy constraints we provide a short sentence that describes the technical issue .
- Brief description of the impact of the constraint on smallholders and pastoralists.

Animal health

Table A.1: Policy constraints in Animal health

Description: There is no effective mechanism to enforce regulations relating to the standards of vaccination products.	
Summary: At present farmers and pastoralists continue to suffer from difficulties in accessing quality vaccines, in particular related to the standard of the animal health products that are available to them. Government lacks the capacity to enforce effectively existing standards and regulations, as a result a significant proportion of the animal health products are fake.	
Type of policy issue: Policy implementation issue	Technical categorisation: Regulation of the standards of animal health products

Impact of policy issue:

- Creates a significant problem with regards to the production of fake vaccines. Reported to effect farmers in remote parts of the country in particular, given the costs involved in monitoring the quality of vaccines produced in these areas.
- Will weaken demand for animal health products over time.
- Limits incentive for private sector organisations to get involved in the production and distribution of vaccines, private sector players do not believe that government can regulate effectively the sector and therefore potentially limited returns involved in the production of genuine vaccines.

Description: Fragmentation of policy/ regulatory responsibility in the regulation of the animal health sector.

Summary:

Regulatory burdens facing the dairy sector are too high, primarily as a result of the multiplicity of institutions involved in the regulation of private sector companies involved in the animal health sector, both in terms of vets and suppliers and distributors of vaccines. A variety of institutions including the Local Government, the TBS, the Occupational Health and Safety Agency, the National Environment Council and the TFDA are responsible for registering private sector providers, carrying out inspections and testing and for product registration. Stakeholders suggest that the inspections are often uncoordinated, highly time consuming and in practice tests are passed through opaque means. In addition stakeholders suggest that the tests carried out by government agencies are typically based on outdated practices/ requirements that are not fit for existing farmers.

Type of policy issue:

Policy implementation issue

Technical categorisation:

Regulation of the standards of animal health products/ services

Impact of policy issue:

- Increases the costs of doing business for the private sector of operating in the livestock sector, which will reduce their willingness to participate in the sector and restrict the availability of animal health services.
- Weakens the quality of government regulation of the animal health sector reducing the quality of animal health products.

Description: Limited private provision of animal health services away from urban centres.

Summary:

Tanzania has gone through a 'privatisation' process in which responsibilities for providing veterinary services has been transferred from the public to the private sector. However, in many parts of the country there remains a lack of clarity about the roles and responsibilities for public and private veterinarians, with many public veterinarians competing with the private sector because of the opportunity to supplement their incomes.

In addition, the exact limit of animal health accreditation mandates (i.e. where certain veterinarians and para-vets have the right to practice) and the procedures for issuing and monitoring them remain vague. Partly as a result of this the private veterinary market has yet to take-off and as a result a number of smallholders continue to lack access to services, particularly those that are located away from urban centres.

Type of policy issue:

Policy implementation issue

Technical categorisation:

Access to animal health products/ services

Impact of policy issue:

- Farmers lack access to animal health products, increasing the incidence of diseases.

Description: Limited availability of appropriately qualified vets

Summary:

The availability of qualified vets is a considerable constraint throughout the country. The relevant policy issues are the need for government intervention to get more of the graduates qualifying in animal health services to remain in the sector; and the need for government to work together with the universities to modernise the syllabus for the para-vet qualification.

Only around twenty graduates obtain degrees in veterinary services each year at Sokoine University; most of these either work in a more lucrative sector than livestock or find work in international institutions such as the FAO. As a result the sector relies heavily on individuals who achieve the para-vet qualification. While the syllabus for the para-vet qualification was reported to us as being adequate for the dairy/ cattle sector, it is said to be out-dated for the poultry sector.

Type of policy issue: Missing policy intervention	Technical categorisation: Access to quality animal health products/ services
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Impact of policy issue:

- Provision of animal health services does not reflect the needs of the poultry sector in particular, for example even in cases where veterinary services are made available in the rural areas, stakeholders reported that they are typically administer vaccines that are already out-dated, and thus of limited use to protect the stock of the poultry farmers.
- Over-time this reduces farmers' willingness to make use of animal health services, given the limited benefit for protecting the health of their animals, creating long-term problems for animal health in Tanzania.

Description: Import restrictions on vaccines**Summary:**

At present there are a number of vaccines which are not legally allowed to be imported into Tanzania, despite the fact that private sector stakeholders think that it is needed to protect their animal stock. The reason for this is that government state that, for example, infectious bronchitis is not yet present in the country, and therefore it is not necessary to import the vaccine. The problem is that government lacks the capacity to isolate the disease, because of a lack of access to skilled virologists (it was reported that there are currently only two qualified virologists in the country). Because of government's inability to isolate the virus they then conclude that it is not present in the country, despite the fact that animals are often being imported from countries where the virus, such as infectious bronchitis, is already present. According to private sector stakeholders this is a big problem, commercial farmers have to import the vaccines illegally at high cost whilst smallholder farmers are simply exposed to the given vaccine.

The suggested solution to this constrain was that government should remove the restrictions on the vaccines, taking account of the likelihood that the disease is present in the country given its presence in other countries from which Tanzania imports germsplasm and live animals.

Type of policy issue: Economically flawed policy/ implementation constraints	Technical categorisation: Regulation of animal health products
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Impact of policy issue:

- The import restrictions make it difficult for farmers to obtain vaccines for diseases that are likely to be present in the country.
- This leads to the spread of diseases across the livestock sectors, with poorer farmers in particular affected as they lack the resources to purchase 'illegal' vaccines on the black market.

Description: Inefficient government intervention in the construction of cattle dips**Summary:**

At present a significant proportion of government's budget is allocated to the construction of new cattle dips. Stakeholders report that this is having limited beneficial impact for the sector because of a lack of support for the operation and maintenance of the dips, as a result only 6% of existing dips are said to be

operational in the country. Even when these figures have been reported to government, they have been apparently unwilling to reallocate funds to ensuring that existing dips are working, seemingly because government wants to be able to report that it has provided new dips in certain parts of the country for political reasons.

Stakeholders have questioned why government continues to be involved in the construction of new cattle dips given the limited benefits available for farmers, and more generally the feedback loops within government, i.e. the monitoring and evaluation of how funds are used in the livestock sector and the responsiveness to new information.

Type of policy issue: Implementation issue	Technical categorisation: Regulation of animal health services
Impact of policy issue:	
<ul style="list-style-type: none"> • Government are potentially misallocating funds to construct new cattle dips, which could be more effectively used to make better use of the existing stock. • More generally it is questionable why government continues to be involved in the construction of cattle dips, as it is crowding out private sector investment. 	

Genetics

Table A.2: Policy constraints in genetics

Description: Limited impact of government's exotic germplasm programme in the poultry sector.	
Summary: In the poultry sector, government has a long-term programme to distribute improved varieties of germplasm at the village level. Instead of centralising their activities within a single more commercial organisation that would be able to manage the programme and ensure that the germplasm was used more effectively, government has been distributing the germplasm at local levels around a wide range of villages to smallholder farmers who often lack the capacity to utilise the improved inputs effectively. In addition there has been a limited level of understanding of the role of different players in the value chain can and should do, e.g. role of smallholders (as producers) vs. parent stock farmers. As a result the programme has had only a limited impact over time.	
Type of policy issue: Policy implementation issue	Technical categorisation: Production of germplasm
Impact of policy issue:	
<ul style="list-style-type: none"> • The ineffectiveness of the government's programme may be limiting the beneficial impact of distributing exotic germplasm. 	
Description: Ineffective government involvement in the production of bull semen	
Summary: Government continues to play a major role in the production of bull semen – there is some uncertainty about whether, and to what extent, the private can get involved in this market. There is only one centre that currently produces semen and it is reported that this breaks down regularly, is incapable of fulfilling demand, and produces a low quality product. Private sector players suggested that they resort to the 'illegal' import to get access to what they need, in particular from producers in Nairobi.	
Type of policy issue: Economically flawed policy/ implementation/ lack of clarity	Technical categorisation: Production of germplasm
Impact of policy issue	

- Government involvement creates uncertainty about the ability for the private sector to produce bull semen; this reduces private sector investment and therefore the quantity and potentially quality of semen available.

Description: Lack of access to artificial insemination services

Summary:

Government has withdrawn from the provision of artificial insemination services, leaving the private sector to fulfil the role. As with the provision of animal health services, stakeholders suggest that government has withdrawn its services too quickly while the private sector lacked the capacity to provide services to farmers throughout the country.

Type of policy issue: Economically flawed policy/ implementation/ lack of clarity	Technical categorisation: Provision of bull semen
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Impact of policy issue:

- Farmers in many parts of the country lack access to artificial insemination services.

Markets

Table A.3: Policy constraints in markets

Description: Levy imposed on poultry farmers by the Local Government Authority

Summary:

In regions close to the coast farmers are reported as being charged a levy of Tsh (300 – 400) per chicken sold on the market by the Local Government Authority (LGA). There is a lack of clarity as to whether the levy is a formal LGA policy and why it is, as reported by stakeholders, only being implemented in certain parts of the country.

Type of policy issue: Economically flawed policy/ lack of clarity around existing policy	Technical categorisation: Taxes/ levies on livestock products
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Impact of policy issue:

- Weakens the competitiveness of the poultry sector in the coastal regions of the country, limiting the growth and development of the sector.

Description: Implementation of trade barriers on dairy products from non-East African Community (EAC) countries.

Summary:

Trade barriers are in place for the EAC that are reported to impose a 60% common external tariff on extra-regional imports of dairy products.

Type of policy issue: Economically flawed policy	Technical categorisation: Import restrictions on livestock products
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Impact of policy issue:

- This is restricting the growth of intra-regional trade in dairy products in the wider East African region.
- Increases the price of dairy products for consumers in both Tanzania and the EAC region.

Description: Lack of information held about farmers in the dairy sector is weakening the ability of the Tanzania Dairy Development Board (TDB) to regulate the market effectively.

Summary:

For the TDB to fulfil its mandate of stimulating the growth of the dairy industry it will need to improve significantly the quality of data currently held about farmers, processors, milk traders and others regarding the types and number of dairy farm-holdings, their locations and production levels. This is a particular issue given the level of fragmentation in the sector.

Type of policy issue: Policy implementation issue.	Technical categorisation: Market data
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Impact of policy issue:
<ul style="list-style-type: none"> • Hinders the development of the dairy sector in Tanzania.

Description: Restrictions on the trade of raw milk.

Summary:

The trade of raw milk accounts for around 80% of milk traded in the informal sector. Governments in the East Africa region have sought to apply regulations to restrict the trade of raw milk, in part motivated by desire to avoid the perception that it is restricting the growth of milk processing companies. However, it is not clear if governments in the region have a clearly defined economic rationale for interventions in this area.

In Tanzania the TDB prohibits the sale of raw milk directly to consumers. The TDB has neither the capacity nor the level of information about the sector necessary to apply the restrictions effectively; as a result it is unclear that the restrictions are having much of an impact on deterring the trade of raw milk. This issue of non-implementation with regards to policies designed to manage the trade of raw milk is potentially prevalent across the region.

In addition there are concerns that government’s objectives in this area of policy making are not clear; while regulations have been introduced to protect the production of processed milk, there has also been a desire by some to facilitate the trade of raw milk because it is more cheaply available to poor consumers.

Type of policy issue: Policy implementation issue/ unclear policy	Technical categorisation: Restrictions on trade of raw milk
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Impact of policy issue:
<ul style="list-style-type: none"> • Creates policy uncertainty in the dairy sector, weakening incentives for private sector to invest in milk processing facilities. • Hinders the development of the dairy sector in Tanzania.

Description: Taxes on the production of poultry products

Summary:

Private sector stakeholders in the poultry sector believe that government’s VAT policies are damaging the competitiveness of their products and leaving the country open to imports from Zambia (where all inputs used in the poultry sector are zero rated), and also the risk of a flood of imports from the USA and Brazil (in West Africa, the domestic poultry sector has been reportedly been damaged by the import of cheap low quality poultry products from the two countries).

Initially, inputs used in the poultry sector, and in particular animal feed, were charged the full rate of VAT (16%). This created a huge problem for feed mills in the country, leading to the closure of a number of them and a general lack of investment over time. While government has recently zero-rated animal feed, a number of inputs used in the poultry sector are still charged VAT, which is damaging the competitiveness of Tanzania’s poultry sector compared to regional counterparts such as Zambia.

Type of policy issue: Economically flawed policy	Technical categorisation: Taxes/ levies on livestock products
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Impact of policy issue:
<ul style="list-style-type: none"> • Restricts the growth of the Tanzanian poultry sector.

Description: Restrictions on the movement of live animals

Summary:

At present government imposes restrictions on the export and import of live animals. In particular, Zambian meat processors want to import Tanzania cattle, but face restrictions from government on the amount of live animals that they can import from Tanzania.

Type of policy issue:

Economically flawed policy

Technical categorisation:

Live animal movement/ disease control

Impact of policy issue:

- Restricts the growth of the livestock sector and private sector activity in the country.

ANNEX B: SOUTH ASIA COUNTRY ANNEX

This annex presents a brief introduction to the South Asia livestock policy context, with a particular focus on India and Bangladesh. We then describe the India and Bangladesh specific policy constraints identified by stakeholders during our consultation process. This annex has been developed making use of the information obtained through consultations with the relevant stakeholders (mainly India-based, and also one Bangladesh-based), and has been complemented by some limited desk-based research. It should be noted that given the limited scope of the assessment, CEPA has not had the scope to independently verify the information presented in this section. The views are shared in this paper simply to inform and assist the Foundation, but they should be treated with caution.

B.1 Introduction

South Asia

The South Asia region houses approximately 16% of the world's animal population (excluding poultry), with 60% of the world's goat population residing in Asia. India accounts for 20% of this, with the population growing at around 1.6% per annum. Overall, India has 9.8% (182m) of the total small ruminants of the world, comprised of 61m sheep and 121m of goats. In Bangladesh, the small ruminant population is around 38,000 with 4.9% annual growth, the highest among all livestock.¹⁰

Poor infrastructure facilities and inadequate health services in the region lead to heavy economic losses for farmers due to high mortality (e.g. annual losses due to peste des petits ruminants (PPR) in South Asia account for an estimated US\$3bn per annum). In addition, the current system of livestock extension in South Asia - government-driven in Bangladesh, Bhutan and India - only reaches a minority of farmers, and extension staff are rarely trained to provide advice on small-scale poultry farming practices.¹¹

India

Agricultural policy is the responsibility of the state in India, and the State Department of Animal Husbandry, Dairying and Fisheries, within the Ministry of Agriculture, is responsible for the dairy activities.

India's livestock sector is one of the largest in the world. It has 56.7% of the world's buffaloes and 12.5% of cattle. In 2010-11, livestock generated outputs worth INR 2075bn (at 2004-05 prices) which comprised 4% of the GDP and 26% of the agricultural GDP. Livestock has been an important source of livelihood for small farmers, contributing about 16% to their income, particularly in states like Gujarat, Haryana, Punjab and Bihar.¹²

¹⁰ GALVmed, "Livestock Health Product Development and Service Delivery, South Asia Strategy Paper, 2012-17".

¹¹ GALVmed, "Livestock Health Product Development and Service Delivery, South Asia Strategy Paper, 2012-17".

¹² Report of the Working Group on Animal Husbandry and Dairying, 12th Five Year Plan (2012-17), Submitted to the Planning Commission, Government of India, New Delhi.

Bangladesh

Livestock plays an important role in Bangladesh with a direct contribution of around 3% to the agricultural GDP and providing 15% employment to economy. According to the Bangladesh Economic Review (2006), the growth rate of GDP in 2004-05 for livestock was the highest of any sub-sector at 7.2%, compared to 0.15% for crops and 3.6% for fisheries. These changes have been prompted by a rapid growth in demand for livestock products due to increase in income, rising population and urban growth. Bangladesh has one of the highest cattle densities: 145 large ruminants/km² compared with 90 for India, 30 for Ethiopia, and 20 for Brazil. Despite high cattle densities in Bangladesh, the current production of milk, meat and eggs are inadequate to meet the current requirements.¹³

B.2 Policy constraints in the livestock sector in India and Bangladesh

Consultations with stakeholders suggests that the despite its significant contribution to GDP, and to agricultural GDP, the livestock sector in India has not received due attention from the government. The sector received only about 12% of the total public expenditure on agriculture and allied sectors, which is disproportionately lower than its contribution to agricultural GDP. In addition, the share of livestock in total agricultural credit has rarely exceeded 4% in total.¹⁴

One of the key overarching constraints in the livestock policy space in India as noted by consultees, is that the people responsible for formulating policies lack awareness of the realities on the ground. Thus there is a need for a strong platform for bringing together people engaged in formulating policies, sector participants and those responsible for implementing them, in order for the benefits to reach the ultimate intended beneficiaries. In addition, clear cut policies/ regulations to address critical aspects of livestock development (such as ensuring small farmers' and pastoralists' access to essential inputs, unclear policies on administering vaccines at the state level) do not exist.

In India, while the Foundation is focussing on the States of Bihar and Odisha, consultations suggest that other states could be more appropriate for addressing livestock related issues, and also in terms of reaching out to the intended beneficiaries. For example, the states of Jharkhand and Chhattisgarh, and some States in the North East region have a larger proportion of marginalised and tribal population, who primarily rely on livestock for their livelihood, than can be found in Bihar, suggesting that interventions in those regions might have more of an impact on improving the lives of poor farmers. As a result according to some of the consultees there may be merit in reviewing the areas of focus within India for the Foundation based on relevance of livestock policy issues in the different states in India.

In addition, due importance has not been given to the development of the livestock sector in the past in Bangladesh, despite its significant contribution to the national economy. While the National Livestock Development policy was published in 2007 to address challenges and to an opportunity for comprehensive development of the livestock sub-sector, consultations suggest that document only provides a high level plan of action for the development of the livestock sector, rather than any concrete steps on how this will be done. Consultees also noted that the lack of an umbrella

¹³ Government of the People's Republic of Bangladesh, Ministry of Fisheries and Livestock (2007), "National Livestock Development Policy".

¹⁴ National Livestock Policy, 2013

organisation and a regulatory authority in this sector. For example, while the National Dairy Development Board and Executive Committee were established, these have not functioned in practice. In addition, policies in the livestock sector in Bangladesh are quite dated, and are thus rather redundant in dealing with the emerging issues and challenges in this space (e.g. policies around animal health vaccines, and artificial insemination).

B.2.3 Policy constraints

Tables B.1 to B.3 below summarise the policy constraints identified by stakeholders across the animal health, genetics and market sectors, and also supplemented with additional desk based research. For each policy constraint we provide:

- A one sentence description of the issue.
- A more detailed summary of the issue as raised by different stakeholders in the sector.
- A description of what type of policy constraint it is i.e. the extent to which the issue is:
 - **Missing/ unclear** – a clearly defined policy/ regulation does not exist.
 - **Implementation constraints** – a relevant policy is in place, but government lacks the capacity to implement it effectively.
 - **Disproportionate policy/ regulation** - the policy imposes excessive constraints on the local market, or has not been effectively structured or tailored for on-the-ground application.
 - **Economically flawed** – the policy lacks an economic/ public policy rationale for stimulating private sector investment in the livestock sector.
- A technical categorisation of the policy constraint. For each of the policy constraints we provide a short sentence that describes the technical issue.
- Brief description of the impact of the constraint on smallholders and pastoralists.

Animal health

Table B.1: Policy constraints in Animal health

Description: Import restrictions on vaccines (Bangladesh)	
Summary: According to the Government’s regulations for import of animal health vaccines, Bangladesh can only import vaccines registered in developed countries (e.g. Europe and North America), and not from developing countries.	
Type of policy issue: Economically flawed	Technical categorisation: Access to animal health products/ services
Impact of policy issue: <ul style="list-style-type: none"> • The policy restricts availability of certain animal health vaccines in the country, given that all developed countries may not be facing the same livestock diseases, and hence may not be manufacturing all vaccines required by Bangladesh. • The import restrictions make it difficult for farmers to obtain vaccines for diseases that are likely to be present in the country. 	

Description: Government provision of free vaccines, limits incentives for private participation in market	
Summary: In India, while there is no restriction on private sector participation in the animal vaccines space, the government provides vaccines free of cost to the farmers, which reduced the motivation of the private sector to operate in this space.	
Type of policy issue: Disproportionate policy/ regulation	Technical categorisation: Access to animal health products/ services
Impact of policy issue: <ul style="list-style-type: none"> Limited motivation and willingness for the private sector to participate in this sector, which in turn will restrict the availability of animal health products and the growth of the sector. 	
Description: Poor quality of veterinary services due to lack of regulations/ standards	
Summary: While access to animal products to India has improved considerably, there is still a considerable lack of qualified veterinary and para-veterinary manpower to administer vaccines to animals particularly, in rural and remote areas. A number of community health workers and untrained personnel administer vaccines, and do not maintain the standard protocols (e.g. lack of cleanliness, proper hygiene, etc.) while doing so. Thus, there is a need to have a clear policy/ regulation on how vaccines should be administered. Consultations suggest that there is a disconnect between the policy for this at the central level, and how these are implemented at the state level.	
Type of policy issue: Missing/ unclear policy regulation	Technical categorisation: Quality of animal health products/ services
Impact of policy issue: <ul style="list-style-type: none"> Administration of vaccines by untrained personnel leads to vaccines being administered wrongly, which has a direct impact on animal health, and can also have a severe impact on human food consumption. 	
Description: Inadequate delivery of animal health services to smallholder farmers	
Summary: In India, the Department of Animal Husbandry is responsible for providing essential input to farmers (e.g. seeds, feed, animal health services). However, consultations suggest that the smaller farmers in the rural and remote areas are not able to access these inputs, and the larger farmers (mostly in the dairy sector) get a larger share of these inputs. Thus, policies are needed to guide the procurement, storage and transfer of these services to the remote regions.	
Type of policy issue: Missing/ unclear regulation	Technical categorisation: Access to quality animal health products/ services by smallholder farmers
Impact of policy issue: <ul style="list-style-type: none"> Lack of access to inputs affects the productivity of smaller farmers. 	
Description: Inadequate infrastructure to ensure proper diagnosis of diseases	
Summary: <i>India</i> Inadequate infrastructure for diseases surveillance and monitoring, particularly for zoonotic diseases is another issue which created hurdles in effective diagnosis of diseases. For example, diagnosis of diseases requires a laboratory of appropriate quality to get the sample tested, and such laboratories are not available always at the district level in India. The sample also needs to be transported and released at a	

certain temperature at the lab. However, given that these requirements are usually not fulfilled, the veterinarians often prescribe treatment based on symptoms, rather than actually testing the sample.

Bangladesh

Inadequate veterinary services are one of the major obstacles for livestock development in Bangladesh, and there is no independent authority to check the quality of vaccines produced and imported. Also, there are limited disease diagnostic facilities. While District Veterinary Hospitals, Regional Field Disease Investigation Laboratory are responsible for providing diagnostic services, however, due to shortage of skilled manpower and non-availability of funds, they cannot provide the intended services.¹⁵

Type of policy issue: Policy implementation issue	Technical categorisation: Lack of infrastructure required for provision of animal health services
Impact of policy issue:	
<ul style="list-style-type: none"> Ineffective disease diagnosis leading to loss of animals. 	

Genetics

Table B.2: Policy constraints in genetics

Description: Need for improvement in cross breeding policy to incorporate emerging issues	
Summary:	
<i>India</i>	
<p>The limited availability of Artificial Insemination (AI) services due to deficiency in quality germplasm, infrastructure and technical manpower have been major constraints to the growth of the livestock sector. After almost three decades of cross breeding, the cross bred population is only 16.6% in cattle; 21.5% in pigs; and 5.2% in sheep.¹⁶ There is a need to develop clear policies/ regulations for incorporating the emerging livestock issues into cross breeding policies in India.</p>	
<i>Bangladesh</i>	
<p>In addition, we understand from consultations that indigenous cows in Bangladesh have low productivity and the slow/ appropriate replacement of genetically improved crossbred cows is one of the major constraints for low milk production in Bangladesh. Thus, a national breeding policy and action plan to progressively replace indigenous cows with more productive cross bred cows would be useful. There is no regulatory body or National Breeding Act to regulate breed imports, prices of breeding materials, quality of breeding, etc.</p>	
Type of policy issue: Policy implementation issue	Technical categorisation: Livestock productivity
Impact of policy issue:	
<ul style="list-style-type: none"> Lack of a clear policy to regulate cross breeding has a substantial impact on livestock productivity. The average annual milk yield of cattle is 1172kg, which is only about 50% of the global average, and the meat yield of most species is 20-60% lower than the world average. 	
Description: Vanishing Indian breed	

¹⁵ Government of the People’s Republic of Bangladesh, Ministry of Fisheries and Livestock (2007), “National Livestock Development Policy”.

¹⁶ Report of the Working Group on Animal Husbandry and Dairying, 12th Five Year Plan (2012-17), Submitted to the Planning Commission, Government of India, New Delhi.

Among the major Indian breeds of cattle, there are reported to be only four milch breeds which are maintained for milk production. ¹⁷ With modernisation of agriculture in India, and sub-division of land holding, bullock power is losing its importance in India. With less than 1 hectare of land holding, small farmers cannot make optimum use of bullocks and hence prefer to hire a tractor. Thus with diminishing demand for bullock power, the farmers are not adequately motivated to conserve these draft breeds. ¹⁸	
Type of policy issue: Missing/ unclear regulation	Technical categorisation:
Impact	
<ul style="list-style-type: none"> • In the absence of a clear policy and programme for conservations, these breeds are subject to genetic erosion 	

Markets

Table B.3: Policy constraints in markets

Description: Government intervention in the setting of milk pricing is restricting the growth of the market
<p>Summary:</p> <p><i>India</i></p> <p>There are several issues related to milk pricing policies that require review and reconsideration. Given that cooperatives are mostly managed by civil servants, there is some government influence in determining milk prices, however, the State cooperatives are supposed to base the price paid to farmers on the fat and solid-not-fat (SNF) content of milk. However, in practice, the village society president often wields a lot of power and determines the price arbitrarily, without testing the fat or SNF content. The cooperative price then becomes the benchmark price for other buyers (vendors and private dairy agents) and when it is low, so are the other prices paid. Thus, there is no incentive for farmers to sell to the other buyers; only about 15% of the milk is sold this way for the marketing of packaged milk and milk products. Policy efforts should focus on enforcing appropriate testing as the basis for milk pricing. This can be achieved by ensuring availability of testing machines at all milk collection centres, educating farmers to sell milk only based on testing and setting up policy norms for all players in the sector to collect milk only when it has been tested.¹⁹</p> <p><i>Bangladesh</i></p> <p>Milk imports in Bangladesh are continuing to undermine poor farmers, competing on unfair terms with locally produced milk and suppressing investments in the dairy industry. A key factor undermining Bangladesh's milk industry is imported powdered milk – whole milk is imported and marketed directly to consumers and skimmed milk powder is imported and used for production of dairy products. Milk powder imports increase competition with domestic milk producers and reduce incentives for domestic investment and expansion, and also deter small producers from producing more milk to meet the demand. While the Government of Bangladesh imposed a certain level of trade tariff on imported milk powder, however, tariff levels have fallen from as high as 75% in 2007 to a proposal in the last budget to reduce them to as low as 5%. Thus, the local industry was not getting the required momentum for growth due to the Government's liberal policy.²⁰</p>

¹⁷ The cows of milch breeds are high milk yields. Examples of Indian milch breeds are shahiwal, Red Sindhi, Gir and Deoni.

¹⁸ Dr NG Hegds, Livestock Development for Sustainable Livelihood of Small Farmers.

¹⁹ <http://www.fao.org/docrep/011/i0588e/I0588E05.htm>

²⁰ Actionaid (2011), "Milking the Poor, How the EU Subsidies Hurt the Dairy Producers in Bangladesh, September 2011".

Type of policy issue: Economically flawed policy/ implementation constraints	Technical categorisation: Development of the dairy sector
Impact <ul style="list-style-type: none"> Restricts the small and marginal farmers from participating in and benefiting from the growth of the dairy sector. 	
Description: Lack of Government support (e.g. subsidies) to support development of the dairy sector in Bangladesh	
Summary: Domestic milk prices are no longer controlled in Bangladesh, and the Government eliminated direct subsidies for farmers in 1996, and only temporarily reinstated smaller subsidies in 2002 before soon discontinuing them. The Government only provides subsidies to Milk Vita in the form of low interest loans, grants and project funds. Thus, the Government in Bangladesh should seek to employ a comprehensive strategy to ensure that its dairy farmers are appropriately supported and invest in the dairy sector so that it develops its potential and competitiveness. ²¹	
Type of policy issue: Economically flawed policy/ implementation constraints	Technical categorisation: Development of the dairy sector
Impact <ul style="list-style-type: none"> Preventing the domestic milk producers from competing effectively in the market. 	

²¹ Actionaid (2011), “Milking the Poor, How the EU Subsidies Hurt the Dairy Producers in Bangladesh, September 2011”.

ANNEX C: LIST OF CONSULTATIONS

This annex presents a list of stakeholders consulted during this assignment

C.1 List of consultees

Table C.1: List of telephone consultations carried out throughout the assignment

Organisation	Name and positions
Bill and Melinda Gate Foundation (BMGF)	Alan Rennison, Programme Officer, Agricultural Development
	Dr Donald Nkrumah, Senior Programme Officer, Genetics
	Samuel Thevasagayam, Senior Programme Officer, Animal Health
	Dr. Yi Cai, Programme Officer, Livestock team
	Windy Wilkins, Programme Officer, Agricultural Development
	Kristin Girvetz, Programme Officer
GALVmed	Lois Muraguri, Assistant Director, Policy and External Affairs
	Dr. Mamta Dhawan, Programme Manager: South Asia
	Dr. Hameed Nuru, Senior Director, Policy and External Affairs
Sidai	Dr. Christine Peacock, Chairman and Founder
World Bank	Francois Le Gall, Livestock Adviser, Agriculture and Rural Development
	Stéphane Forman, Livestock Specialist Africa Region
CIWF (NGO carrying out advocacy/ campaigning work in livestock policy space)	Dr Dil Peeling (Former Technical Advisor to the Livestock Pro-Poor Policy Initiative)
OIE	Dr Bernard Vallat, Director General
IFPRI	John McDermott, Director, CGIAR Research Program on Agriculture for Nutrition and Health
AU PANVAC	Dr Karim Tounkara
FAO	Dr Henning Steinfeld, Chief Livestock Information, Sector Analysis and Policy Branch
USAID	Joyce Turk, Senior Livestock Advisor
	Jennifer Maurer, Senior Agriculture Policy Advisor
Department for Environment, Food and Rural Affairs (Defra)	Dr Mirzet Sabirovic (formerly the Livelihoods Adviser, Agriculture Research Team, Research and, Evidence Division, UK Department for International Development)
Farm Africa	George Strunden, Director of Programmes
University of Sydney	Dr. Robyn Alders, Faculty of Veterinary Science
Adam Smith International Ltd / Kenya Markets Trust	Mike Field, Senior Market System Specialist
African Union Commission	Jonathan Nyarko Ocran, Policy Officer – Livestock, Rural Economy and Agriculture Department

Veterinary Inspections and Regulations, Ministry of Agriculture Uganda	Dr Wesonga Wanderema, Senior Assistant Commissioner
University of Nairobi	Dr Patrick Irungu, Lecturer in Agricultural Economics Department and Consultant on livestock policy issues - previously worked on Livestock Policy Initiative with IGAD, and with AU-IBAR and FAO on various assignments
ILRI	Dr Enahoro Dolapo, Researcher (Global Futures Project)
IGAD	Dr. Samuel Wakhusama, Dr. Adan Bika, Dr. Abdirahman Issack, Dr. Mohamed Moussa, Dr. Ameha Sebsibe
Care International	Farouk Jiwa

Table C.2: Consultations during the field visit to Kenya

Organisation	Name
AU-IBAR Vet-Gov Initiative	Dr. Barboucarr Jaw, AU-IBAR (Programme Coordinator for Vet-Gov)
OIE	Dr Walter Masiga, OIE (Head of Eastern Africa & Horn of Africa regional office)
International Livestock Research Institute (ILRI)	Dr Isabelle Baltenweck (Agricultural Economist) Dr Amos Omoro (Agricultural Economist)
Sole Agri (formerly the Regional Project Director at Heifer International tasked with running the EADD)	Moses Nyabila, SoleAgri, Consult Managing Partner

Table C.3: Consultations during the field visit to Tanzania

Organisation	Name
Rural Livelihood Development Company (RLDC)	Godfrey Bwana, Monitoring and Evaluation Officer
Muvek Development Solutions (Social development company working in poultry sector)	Ms Vera Florida Mugittu, Managing Director
BRAC Tanzania	Gunedu Roy, BRAC Country Representative Dr Abdus Salam, Programme Manager
Department of Veterinary Services, Ministry of Livestock & Fisheries Development	Dr Jjau Dr Abdu Hayghaimo, Assistant Director, Veterinary public health Dr Hassan Mruttu, Principal livestock research officer
Tanzania Veterinary Laboratory Agency (TVLA)	Dr. Raphael Sallu
Tanzania Milk Processors Association	Edmund Mariki, Executive Secretary
Tanzania Dairy Board (TDB)	Deogratus Mlay, Department Manager
Indicus (private sector genetics company)	Dr Shariff Hamad, Country Representative

Agricare Enterprises (private company working in genetics sector - provides some artificial insemination and extension)	Julius Elimuu Shoo
Vet – Agro (private sector veterinary company)	Dr Beppe Di Giulio
SNV (Dutch development agency)	Rinus Van Klinken, Acting Country Head Apollo M. Muyanja, Senior Advisor
Euro Poultry (private sector poultry company)	Mr Pietro Stella

Table C.4: List of telephone consultations carried out throughout the assignment for India

Organisation	Name and positions
Anthra	Dr Nitya Ghotge, Co-Director
BAIF Development Research Foundation	Mr G G Sohani, President & Managing Trustee
Boehringer Ingelheim	Dr. Brajesh Singh, Head Technical Services (formerly with Pfizer, India)
GALVmed	Dr Mamta Dhawan, Programme Manager, South Asia
Indian Council of Agricultural Research (ICAR)	Professor K.M.L. Pathak, Deputy Director General, Animal Science Division
International Livestock Research Institute (ILRI)	Purvi Mehta Bhatt, Head –Asia Region
Tamil Nadu Veterinary and Animal Sciences University (TANUVAS)	Dr. R Prabhakaran, Vice-Chancellor
CARE Bangladesh	Nurul Amin Siddiquee